

Table of Contents

GGDM Wholism Project	1
<i>Topology of Localized Type 1 Simulation of a Type 5 Simulation before Time Stop (aka Godview):</i>	2
• <i>Primal States: Set up, basic game procedures, game terminology, pregame inheritance, spaces, realities (The Big Bang, Beginnings, The Streams of Time, The Sidereal Stage, and Dreamtime).</i>	2
• <i>Persistence of Existence: Presence, worldviews, collapse of complex society and Concierge game tools (Constructural Elements, Entropy, and Disruptions).</i>	2
• <i>Around the Campfire: Culture, government, order, building civilization, core non-military functions (Taxation & Census, Culture, Writs, Colleges, Order, Government Titles, Construction).</i>	2
• <i>The Secret of Fire: Technology in the space opera setting because technology is the space opera setting (Technology, Patents, Eras, Stardrive, Temporal Technology).</i>	2
• <i>Cave Paintings: Moving outward, interstellar operations, conflict, living space and resource spheres (Movement, Expansion, Combat, Carriers & Fighters).</i>	2
• <i>Tribes in the Night Sky: Interstellar relations, stellar civilization, what can I do for you, or do to you (Diplomacy, Commerce, Corporations, Special Operations, Information).</i>	2
• <i>The Next Season: Next inheritance, pan-galactic civilization, game-end procedure, final arguments (Reformation, Kairotic Moments, Resolution, Wheel in the Sky, Fallen to Earth).</i>	2
The Big Bang and Beginnings	2
The Concierge:	2
Positions:	2
Fundamental Realities:	3
○ Type 1	3
○ Type 2	4
○ Type 3	4
○ Type 4	4
○ Type 5	4
• The Wanderers	5
Spaces	5
Government Titles	5
Native Population Type	6
Primal States	7
• The Primal States in GGDM (brevity list)	7
The Inheritance	7
The Streams of Time	8
Regular Turn Actions.....	9
Combat Orders	9
Regular Turn Processing.....	10
Halting the Game	10

Turn Cycle	11
Big History.....	11
The Sidereal Stage.....	12
The Public Space.....	12
Vital Powers.....	13
• The Vital Powers in GGDM (brevity list)	13
Acts & Scenes	14
Besieged Colonies.....	15
Dreamtime	16
Interpretations	16
News Events.....	16
Adverse News Events	17
Modification of News Events	18
Expose´ and Special Bulletin	19
Constructural Elements.....	19
Collective Consciousness.....	19
Constructural Elements	20
• The Constructural Elements in GGDM (brevity list)	20
Inactive Constructural Elements	21
Power Activation Failure	22
Entropy	23
Intervention Potentials:	23
Acts of Intervention:	24
• The Interventions available to the Concierge in GGDM (brevity list).....	24
Disruptions.....	24
Disruption Check at Colonies (Rockn´ the Casbah!).....	25
Colony Disruption Events.....	25
• List of ten general categories of Colony Disruption Events in GGDM (brevity list)	26
• Special Enhancements relating to the end of a Ground and Colony Combat (brevity list)	26
o List of enhancing factors for Colony Disruption Events (brevity list)	27
Intervention Potential Plus	27
Ship Disruption Events	28
Ship Flickering.....	28
Taxation & Census (Vital Powers)	29
Resources & Treasury	30
Taxation Power	31
Habitability Class & Maximum Habitability	33

Homeworlds and Colony Planets.....	35
Census Power.....	35
Culture (Vital Power)	36
Cultural Traits Pieces.....	37
Aspect Pieces.....	37
Proficiency Pieces.....	38
• The twenty Proficiencies available in GGDM(brevity list)	39
Fuzzy Groups.....	39
Cohering Purpose (a ‘getting on the same page meeting’).....	40
Writs (Culture Power).....	41
Zietrice.....	44
Expose’ News Event (the ‘deep blue think’).....	44
○ <i>The Place</i>	44
○ <i>The Facts</i>	44
○ <i>The Dirt</i>	44
Colleges (Culture Power)	46
Foundation.....	46
Endowments Game (aka ass-kissing rich Alumni).....	47
Faculties and Class Generation (and a good ‘ol College Try).....	48
Enlightenment.....	49
Institutions (for the ‘institutionalized’.....)	51
Native Intelligence.....	52
Doctrinal Template.....	52
Order (Vital Power).....	53
Capital Colony.....	53
Colony Politics.....	55
Conversion & Naturalization.....	57
Alien Nation.....	58
Maintenance.....	59
Government Titles (Order Power)	60
Structural Titles.....	61
• Unitary Structural Title.....	61
• Confederation Structural Title.....	61
• Dualistic Structural Title.....	61
World Powers Fall (Structural Title Disruption).....	62
Changing Structural Titles.....	63
Social and Estate Titles.....	63

Conflict Checks (Social & Estate Titles)	64
Restoration of Disrupted Social & Estate Titles	65
Into the Wastebasket of History (Abandonment of Disrupted Titles)	65
Winds of Change (voluntary addition of new or abandonment of undisrupted Estate and/or Social Titles).....	65
Emergent Titles (Social & Estate Title Generation)	66
Construction (Vital Power)	68
Units.....	69
Gross Domestic Product.....	69
Colony Enhancement	70
Ship Building	72
Supply & Enhancements.....	73
Scrapping	75
Technology (Vital Power).....	75
Research.....	76
• Research Areas in GGDM (brevity list).....	76
Development	78
Reverse Engineering (of Alien Technologies).....	80
Patents (Technology Power).....	83
Existential Patents.....	83
Patent Parts.....	83
Operational Qualities	84
• Physical Item Technologies	84
• Continuous Operational Technology	84
• Enhancement Technology.....	85
• Technological Devices.....	85
Connecting the Dots (Patent Prosecution)	85
Patent Ownership (Frankenstein!)	86
Eras (Technology Power)	86
The Matrix	86
Advanced Technology	87
Uber Alles (Era Progression)	89
Stardrive (Technology Power)	89
Stardrive Patent.....	89
Generic Stardrive (the ‘dumb drive,’ hereinafter “GSD”).....	90
Stardrive Patent Parts.....	91
Stardrive Patent Prosecution	92
Temporal Technology (Technology Power).....	92

Temporal Technology Patent	93
Temporal Ship (T-Ship for short!)	93
Surreptitious Entry	94
Movement (Vital Power)	96
Supporting Colony	96
Interplanetary Movement	97
Galactic Space	98
Disturbance Modifiers	98
Standard Interstellar Movement	99
Ship Systems (Operational Supply Limit/Operational Flight Limit)	100
Logistical Support Ships (“Log Ships”)	102
Combat Resupply	104
Expansion (Vital Power)	105
Wagon Train to the Stars (Expansion Existential Patents)	106
Looking	106
Through the Never (Scouting)	108
Colonization (Load Population)	109
Transport Population (“Mr. Chambers, don’t get on that ship! ... It’s a cookbook!”)	110
Unload Population (aka “Get off my ship!”)	111
Ticket to Ride! (and there are no free tickets)	112
Landing (aka, “The Million Year Picnic”)	112
Specialized Colonies	113
Combat (Vital Power)	114
Warships	114
Combat Movement (Interstellar Movement)	115
Initiate Combat (“Mom! He hit me!”)	116
Combat Alert (DefCon 1)	117
Warship Eras (“Float like a butterfly, sting like a bee!”)	118
Colony Defense Bases	118
Combat Types (Theatres or Spheres of Combat Operations)	119
Orbital Bombardment (No, the sky <i>really</i> is falling!)	121
Combat Procedure	122
Barroom Brawl & Roman Riot (multi-position riots/combats)	124
Combat Resolution (Combat Round)	126
The Big Runaway (Retreats)	128
Ground Units	130
“The price of a mile.” (Ground Combat)	131
Fix Bayonets, We Will Refuse the Line! (Ground Combat Resolution)	133

Fortifications	135
Occupation (“I’m your ice cream man, stop me when I’m pass’n by!”)	136
Morale & Surrender	136
Pacification Combat (aka ‘hearts and minds’ and dead civilians)	138
Suicide Attacks and Last Stands (<i>Resist et Mords</i>).....	141
Ramming and Boarding Combats	141
Ambushes in Space	141
Fighter Area Patrol (A FAP in the Night).....	143
Carriers & Fighters (Combat Power)	144
Carriers.....	145
Blacksheep (Fighter Combat Resolution)	146
Close-in Defense (‘down in flames’)	148
Combined Fighter Attacks (it’s a real gangbang!)	149
Combat Screening.....	150
Interception (without a pick six!).....	151
Dog Fighting (getting in your licks!)	152
Torpedoes at Trafalgar (Ship Missiles).....	153
World in Flames (Raid/Strike Combat)	155
Diplomacy (Vital Power)	158
First Contact (a bump in the night)	158
Treaties.....	160
Diplomatic Spaces	160
Meaning Interpretation (‘significant other’)	163
Shared Meanings (‘wedding of Meanings’).....	165
Minor Races (inviting pre-1 st Era Civilizations to lunch)	167
Commerce (Vital Power).....	168
Cargo Ships	169
Trade Mission	170
Enhanced Value (baseballs signed by Babe Ruth post-mortem)	171
Marketing.....	172
Hand Off	173
Uploading (Load RPs to Cargo Ship)	173
Downloading (the ‘dump’ in the ‘pump ‘n dump’)	175
Looting (always loot before you pillage and burn! ☺)	176
Trucking.....	178
Carting.....	180
Blockade Running (“Don’t ever tell me the odds!”).....	181

Corporations (Commerce Power)	184
Articles of Incorporation (where else but in Delaware!)	185
Corporate Operations (the “front office”).....	187
MegaCorporations (a bigger, badder Corporation).....	188
Starship Sales	190
Special Operations (Vital Power)	191
Temporal Special Operations (“You forgot to say ‘please.’”).....	192
Entropy from Special Operations (‘shit-stirring’).....	192
Special Operations Missions (SOMs & COMs)	193
Lodging Missions (on a long ‘vacation’ at an unknown location).....	194
Black Ops (“With cold steel magnum force...”)	197
Treason (Black-ops between Regular Turns).....	198
Plausible Deniability (like farting in a crowded elevator)	199
Counter-Operations Missions (COMs, and it’s not really funny at all!).....	200
Target Protection (Retail Theft Prevention Systems! ☺).....	201
Counter-Operations (not working in the ac(bean)counting dept.)	202
Information (like, watch out for the purple alien with the slouch hat and binoculars!)	202
Observation	203
Reconnaissance – Surveillance (Special Operations ‘Scouting’)	204
Reconnaissance – Alien Probing (I don’t need a psychic probe to know what you are thinking...)	207
Information Operations (Special Operations espionage, aka spying)	208
Bang-A-Gong (Mysticism, Magic & Psychic Powers in GGDM).....	209
Reformation (going long!)	212
Disputations (Thesis Statements).....	212
Ontic Numbers	213
A Reformation Coalesces (reap the whirlwind).....	214
Kairotic Moments (going deep!)	216
Hallowed Round (Terra Sancta)	217
Moving Dots	217
The Testing (‘Friendly’ Constructural Elements).....	218
Apostasy Plus (Alien Constructural Elements).....	219
Percolation Point (the coffee pot is boiling!)	220
Nine Landings (‘Friendly’ Aspects)	221
Hitting Bottom (Alien Aspects)	222
After the Fall (Changing Aspect Lists)	223
Resolution (The End of History)	223
Three Victories.....	224

Countdown to Extinction (the “wastebasket of history”)	225
Lords Temporal (‘lords of this moment, lords of the real world’).....	225
Objective Measures of Victory	226
• List of the objective measures of victory in GGDM (brevity list)	226
Lords Spiritual (‘lords in essence, lords of the greater realm’).....	226
Player Honors (Pulitzers, Golden Globes, Ig-Nobels and Razzies).....	227
Endnotes	228

GGDM Wholism Project

Wanna Play!? *This document is not a 'GGDM for Dummies' document, there are no 'dummies' in GGDM, GGDM is not to be 'dumbed-down' for anyone. Rather, GGDM is a wholism – or, more accurately, manages to be several things at once (at a length of 1,590 pages!) – and the GGDM game rules themselves are intended as a demonstration of the the axiomatic macrosocial structural arguments and approach of GGDM. Ok, that aside, because I don't want to go there in this document, the GGDM wholism project is a bullet outline of the GGDM rules – sans extensive commentary – for those who just want the rules.¹ The comparative size of this document to the full GGDM text is an admission that approximately 75% of the original GGDM text (not including appendices and tables) consists of quotes, commentaries and asides, a **cardinal sin** in game-rules writing but wholly (or 'holy' maybe ☺) necessary to what GGDM is...*

But why would I not include the commentaries and quotes and asides? Consider for a moment the entire 30-year adjunct industry of game-hobby magazines filled in part by designer notes and commentaries, articles on every topic imaginable; consider the AD&D Dungeon Master's Guide (DMG) – which I recall being something in excess of 300 pages long and consider the sometimes quite voluminous play example booklets that accompany complex modern hobby board games. But GGDM was not that sort of enterprise – it was free to mankind and alienkind alike and even catkind if they jumped out of their cardboard boxes – and GGDM wasn't strictly or narrowly a game even, so why not let the commentaries fly and spin through the work? I am mortal also.

*A reader may or may not be surprised to find that the combat rules in GGDM are quite extensive. The reason for this is debatable, it may be that the game designer started as a wargamer in the early 1980s, it may be attributable to the military dominance of simulation gaming for so long, it may also be an expected consequence of the prevalence of militant-power-domination fantasy in science fiction and fantasy literature (à la Spinrad). It may be that any faithful simulation of civilization (at least human civilization) must include war-making mechanics. But GGDM is not a 'wargame' – it is at the least a 'wargame plus' (sort of like 'apostasy plus' in the rules); **wholism is at the core of GGDM**, the game development was a rebellion against wargaming and the non-wargame parts of GGDM are more impressive and greater than the wargame parts. Like civilization.*

*In some cases, I found it necessary to slightly rearrange the presentation of the rules here because this outline format demands a different flow than the original text (or more likely, my original presentation of the rules was suboptimal). The corollary of this outline is that it is not the full thing, detail and commentary were sacrificed for brevity in many places; **when in doubt, gobsmacked or wonderstruck, consult the full GGDM text!** ☺*

Extraction and reduction are the poison to wholism – that one, in reading these rules, would regard GGDM as 'just a silly space game' to which the remaining 80% of GGDM is 'just commentary' is the risk I take here.

This outline is sort of writing GGDM backwards, this outline is how GGDM would have been written if I had written it without commentary! But that would not have been possible because the thinking-commentary shaped the rules, the process cannot be segregated moving in a forward direction; like history, that only works in hindsight. The point remains that whatever you think of my sociological and philosophical arguments, GGDM is a game, a simulation, with rules, procedures, player positions, scarcity of means, a definite beginning and ending condition, and the rules are original to a large extent, filled with surprising organic-grown developments such as Reformations, Constructural Elements, Kairotic Moments, and Expose', and the like of which you will find nowhere else on Earth. It would, on its own merits as a dynamic game, be fascinating to play.

I have debated throughout whether GGDM as a whole constitutes a treatise? But the first question is a treatise on what? The same could be asked of the Bible. I am not objectively capable of answering, I suspect that my contemplations of the question are an exercise in self-puffery more than anything else. Like genius, the answer to that question will be determined by the audience, not the author. But also, I note that the definition of 'treatise' seems to be a fuzzy concept; we know what it is, but the more it is defined, the less useful it is conceptually.

¹ For example, this adjunct document might be useful to a computer programmer who is writing a computer assistant for GGDM.

Topology of Localized Type 1 Simulation of a Type 5 Simulation before Time Stop (aka Godview):ⁱ

- *Primal States: Set up, basic game procedures, game terminology, pregame inheritance, spaces, realities ([The Big Bang](#), [Beginnings](#), [The Streams of Time](#), [The Sidereal Stage](#), and [Dreamtime](#)).*
- *Persistence of Existence: Presence, worldviews,ⁱⁱ collapse of complex society and Concierge game tools ([Constructural Elements](#), [Entropy](#), and [Disruptions](#)).*
- *Around the Campfire: Culture, government, order, building civilization, core non-military functions ([Taxation & Census](#), [Culture](#), [Writs](#), [Colleges](#), [Order](#), [Government Titles](#), [Construction](#)).*
- *The Secret of Fire: Technology in the space opera setting because technology is the space opera setting ([Technology](#), [Patents](#), [Eras](#), [Stardrive](#), [Temporal Technology](#)).*
- *Cave Paintings: Moving outward, interstellar operations,ⁱⁱⁱ conflict, living space and resource spheres ([Movement](#), [Expansion](#), [Combat](#), [Carriers & Fighters](#)).*
- *Tribes in the Night Sky: Interstellar relations, stellar civilization, what can I do for you, or do to you ([Diplomacy](#), [Commerce](#), [Corporations](#), [Special Operations](#), [Information](#)).*
- *The Next Season: Next inheritance, pan-galactic civilization, game-end procedure, final arguments ([Reformation](#), [Kairotic Moments](#), [Resolution](#), [Wheel in the Sky](#), [Fallen to Earth](#)).*

The Big Bang and Beginnings

This section will be very briefly summarized below only to the extent necessary to introduce game concepts and GGDM terminology.²

The Concierge:

- The Concierge is the human ‘warden’ or ‘gatekeeper’ who runs the game, in other genres of gaming, the Concierge would be called the game master (GM), referee, or Evil Overlord if you like. The term Concierge, in both its obsolete, historical and current meanings, better serves the idea of the game. A game of GGDM must always be run by a human Concierge (or team); while a program could be written to help with data and bookkeeping tasks, and to provide a three-dimensional view, GGDM will never be a ‘computer game.’ GGDM is intended to be the opposite of a computer game. (*Hand Reaching Out of the Stars*, 3 *The Big Bang*, p. 14)

Positions:

- Each position in the game is a star-faring civilization represented generally, as a single modern nation-state. Two positions may share the same Native Population type (*ut infra*), however, the majority of the time, each game position will represent a physiologically distinct intelligent life form. The game should play with at least three, and a maximum of ten positions. (*Positions*, 2 *Beginnings*, p. 34)
 - Like most civilization games, the position players collectively represent (in a godlike way) the highest level of organization in their civilization, and operate with full sovereignty.
- ‘Players’ and ‘positions’ are not exactly the same in GGDM. In the vast majority of all games that have ever been designed and/or published or played, the assumption is that each position is played by one player, who has exclusive control over their ‘player position.’ While it is possible that positions in GGDM could be played by one player, the complexity and creativity of this game lends itself to better play by teams of players playing each position as long as only one set of Regular Turn Actions is submitted each Regular Turn period for each position by the designated team member. (*Players and Positions*, 2 *Beginnings*, p. 34)
- Because this is not a ‘game of conquest’ *per se*, there is no reason why a player cannot be members of two or more player team-positions. No two positions should be run by exactly the same player team, nor should two position-teams share more than half of their membership. For example, Position A might be

² “GGDM” refers to Gestalt-Genesis/Day Million, a free macrosocial simulation game by Charles W. Phillips, U.S. Copyright May 2020. This adjunct document was derived from the original work – it is logically impossible for me to violate my own copyright! This supplemental document is free to download and share, like the rest of GGDM; *hopefully someone will want to play it.*

the team of Tom & Jerry while Position B is played by Jerry, Curley & Mo, and Position C is played by Mo and Jo. (*Tom, Jerry & Friends, 2 Beginnings, p. 34*)

Fundamental Realities:

- Fundamental Realities are a preexisting set of ‘cards’; the Concierge and players do not create or design Fundamental Realities used in a particular game. Fundamental Realities represent the cosmic luck of the draw, the grand joke of the gods (or whomever you want to blame for this mess); they are the ‘existential element’ of the game. (*Fundamental Realities, 3 Beginnings, p. 37*)
 - Fundamental Realities affect a position globally, and are the deep-seated historical, physiological, cultural, evolutionary, primal, and environmental imperatives that cannot be easily overcome and that shape the star-faring race coming into the game.
 - Fundamental Realities are inherited absolute truths (in the form of position-specific circumstances) which cannot be directly contradicted or ignored. Fundamental Realities function as axioms for game purposes – that is, they act as uncontroverted starting points for the story and all arguments relating to their position during the game. Fundamental Realities are what happened BEFORE the game that affect the game.
- Most Fundamental Realities will have a Major and/or Minor effect described. Each position must have at least three Major Fundamental Realities, and can have up to five Major Fundamental Realities. The effect of each Fundamental Reality is a set of special circumstances affecting the position holding the Fundamental Reality. The effects of the Major and Minor versions of the same Fundamental Reality are separate and cannot be combined. ... Not all Fundamental Realities have both Major and Minor forms, sometimes, a position will be ‘stuck’ with a Major or Minor. (*Major and Minor Realities, 3 Beginnings, p. 39*)
- Fundamental Realities do not exist in the Public Space, they do not occupy any part of the Public Space. They are considered to be ‘outside’ the Public Space, but still there nonetheless, and their effects, unless otherwise stated, apply equally to every Monad in the Public Space, if applicable. It is thus that Fundamental Realities cannot be disrupted or affected by anything that occurs in the Public Space (or in the Galactic Space). (*Reality Space, 3 Beginnings, p. 39*)
- Major and Minor Fundamental Realities cannot be altered once the game begins. Fundamental Realities will be displayed throughout the game in each position’s non-public information and the Concierge will – and must – be the final interpretive authority on the meaning of the Fundamental Realities during the game. The Concierge may refuse to process Regular Turn Actions or Combat Orders that violate the position’s Fundamental Realities. (*The Concierge Cometh, 3 Beginnings, p. 39*)
- Fundamental Realities are at the top of the logical hierarchy of game rules and concepts in GGDM. Fundamental Realities drawn during set up generally cannot be changed or contravened during the game; positions are ‘locked into’ the choices made before the game, and the luck of the draw. Changing Fundamental Realities is not impossible within the scale of the game (both time and space), but will be undertaken only with due care for the story arc (the process must include a story arc) and balance of the game. (*Fundamental Hierarchies, 3 Beginnings, p. 41*)
- There are 170 Fundamental Realities divided into five types described below plus five Truly Alien Fundamental Realities for the Truly Alien Primal State. (*Through Rose Colored Shades, 3 Beginnings, p. 41*)
 - Type 1’ Fundamental Realities are the usual sort of historical, evolutionary and cosmic events and situations that tend to limit each position operationally. They affect how the position ‘plays’ or ‘acts’ during the game (i.e. the operation of the position). Type 1s tend to be ‘negative’; the bargain is the acceptance of operational limitations in the game for Inheritance Points (IPs) during set up and Public Space during the game. (*Type 1, 3 Beginnings, p. 42*)
 - **Type 1s are inherently negative, satirical.** The implication of a Type 1 Fundamental Reality is that the position is accepting some operational hindrance for the duration of the

game. This is not always necessary; rather, it is sufficient that the Type 1 make the position operationally different without granting special or bonus abilities (which would be a double gain).

- ‘Type 2’ Fundamental Realities are the ‘positive’ sort, and opposite of Type 1, in that Type 2 Fundamental Realities do not grant IPs during set up, but grant some special operational characteristic to the position during the game. Type 2 Fundamental Realities do not have Major or Minor forms, however, beyond the benefit, positions are governed by the description (in both positive and negative implications) during the course of the game. Positions may only have one Type 2 Fundamental Reality and players should remember that each position must have sufficient IPs necessary to satisfy the Primal State requirements to begin the game (which is the purpose of IPs). (*Type 2, 3 Beginnings, p. 42*)
- ‘Type 3’ Fundamental Realities grant normal Major/Minor IPs during set up but impose a pregame drive or need that acts as a ‘Supra-Legitimacy’ requirement for whatever government the position chooses. This requirement exists above normal Conflict Checks for Government Titles, and is solely at the discretion of the Concierge when a violation occurs. During the course of the game, the Concierge may receive an Intervention Potential Plus (see Interventions Plus, 1 Disruption, p. 259, *infra*) for each failure to satisfy the drive, need or directive of the Type 3 Fundamental Reality. Positions agree to this by choosing a Type 3. (*Type 3, 3 Beginnings, p. 42*)
 - Type 3 Fundamental Realities differ from Conflict Checks in Government Titles (see Starch & Parchment, 3 Government Titles, p. 613, *infra*) in that they are not objective, fact-of-the-moment checks (despite how the wording may sometimes seem) but rather should be monitored by the Concierge on an ‘overall impression’ of the position’s conformity to the *sine qua non* of the Fundamental Reality – rather like the ‘artistic presentation’ score in competitive figure skating (which always causes controversy) as opposed to the technical elements of whether the skater did a triple-triple axel while eating a peanut butter & pickle sandwich. Additionally, no ‘disruptions’ result directly from the assessment of an Intervention Potential Plus against the position, but rather, the Interventions create or advance the position’s game ‘story.’
- ‘Type 4’ Fundamental Realities provide an outward ‘persona’ for the position during the game that should be reflected in News Events and in-game diplomacy and communications (i.e. role playing the position). Occasionally, the position may also find it necessary to do specific in-game actions to maintain the persona. Type 4 Fundamental Realities have neither Major nor Minor forms, but instead grant a fixed IP value during setup. Positions may have one Type 4 Fundamental Reality, even if dealt several possibilities. (*Type 4, 3 Beginnings, p. 42*)
 - A position with a Type 4 Fundamental Reality is expected to be ‘in character’ as much as possible during the game (as long as it does not impair vital communications in the game). This does bar other non-Type 4 positions from developing a persona as well.
- ‘Type 5’ Fundamental Realities represent alternate realities or alternate histories from before the game that can ‘leak’ or ‘ripple’ into the present, overwriting parts of the current position. How or why this can happen will never be known or understood, but it is theorized that perhaps it is caused by the invention of FTL travel (i.e. ‘stardrive’ in GGDM terms) that marks the beginning of the game. There is a 5% chance, plus 1% per Regular Turn processed that an alternate reality ‘leak’ will occur, instantly overwriting some of the position’s data at the end of the Regular Turn. When this occurs, there is a 50% chance that each Ripple in the Type 5 Fundamental Reality will be applied; the results can range from very bad to very good. The Ripples in each Type 5 are probably somehow connected. (*Type 5, 3 Beginnings, p. 43*)
 - The ‘leak’ event *paradoxically* does not affect the prior in-game history – GGDM is not designed for retroactive or retconning effects – it only affects the current and future state of the position and game. The Concierge may adjust the percentages before the game to

create stronger, more chaotic effects; it is suggested that only one ‘leak’ be allowed in each 10-turn period. By taking a Type 5 Fundamental Reality, the position is accepting a ticking time-bomb (like committing a crime) and should not complain when it goes off unexpectedly.

- All Type 5 Fundamental Realities are considered Major for counting purposes, and each position may only have one Type 5 Fundamental Reality, even if dealt several possibilities.
- The Wanderers are a special set of Fundamental Realities that affect *all positions*. Prior to drawing Fundamental Realities for each position, the Concierge will randomly draw between zero and three Wanderers for the game, and all positions will be informed of the Wanderers drawn prior to choosing their Fundamental Realities. The Wanderers slightly change the way the game plays for *all positions* by imposing universal physical laws and/or changing the underlying assumptions and/or processes of the game rules. The Wanderers are considered Fundamental Realities, but do not count against the number of Fundamental Realities held by each position and do not generate any Inheritance Points (The Wanderers do not have Major and Minor forms). The Wanderers are colored red (‘redshifted’), as they are moving away from the established game rules and procedures. (*Asteres Planetai, 3 Beginnings, p. 44*)

Spaces:

- The physical universe playing area of the game is an unexplored piece of three-dimensional galactic space starting with thirty stars with any number of planets, and whatever else might be found in a ‘typical’ section of galactic space. All positions begin in this unexplored area – a cradle of future interstellar civilization. The Galactic Space expands during the game as positions explore beyond the initial cluster by adding new stars. All stars in the Galactic Space of the game are assumed to be part of the same galaxy. (*The Galactic Space, 4 Beginnings, p. 46*)
 - The Starlog initially lists the names of thirty stars that form the Galactic Space playing area, with a set of three-dimensional Cartesian coordinates for each star in x, y, z format, the Stellar Class of the star. The details of what the information on the Starlog means will be explained in later sections. The Starlog will be chosen by the Concierge during the game setup. Through exploration, the positions may expand the Galactic Space as necessary (the Galactic Space gets crowded quickly!). The Starlog will be displayed to each position and will also contain planetary information known currently by the position. (*Celestial Cartography, 4 Beginnings, p. 47*)
- The Public Space is the other playing area of the game. The Public Space is where civilization defines its version of what is real and what it all means. Each position has only one Public Space, which is secret, and serves as the main part of each position’s civilization. The Public Space is a two-dimensional, abstract, usually irregularly-shaped representation of an interstellar civilization’s reality. Coordinates in the Public Space are described in A and B coordinates to differentiate them from the standard Cartesian coordinates used for Galactic Space. Public Space coordinates have no correlation whatsoever to the Galactic Space coordinates depicted in the Starlog. (*The Public Space, 4 Beginnings, p. 47*)
 - Distance on Public Space has nothing to do with any measure in Galactic Space, things far apart in Galactic Space may be placed adjacent on the Public Space.
- For game convenience, coordinates in the Public Space and Galactic Space are always expressed as integers (i.e. whole numbers). Any intersection of the A and B integer coordinates in the Public Space is called a Monad. Each Monad can only be occupied by one object at a time. Similarly, each integer intersection of X, Y, and Z coordinates in the Galactic Space can only be occupied by one ‘star system’ or nothing at all (with the exception of any unique, special objects the Concierge may insert). (*Integers and Monads, 4 Beginnings, p. 48*)

Government Titles:

- All positions must begin with at least three Government Titles and cannot have more than five Government Titles. Government Titles represent some combination of the central authorities of a civilization,

the groups and interests who hold power over those central authorities, and the identities and visions of the people over whom those far reaching authorities govern. Positions must begin the game with a central government. (*Those Who Stand Looking, 5 Beginnings, p. 50*).

- All positions must choose one (and only one) Structural Government Title and may choose, from a pool of ten randomly generated Estate and Social Titles called The Foresight, any combination of two or more additional Estate and Social Government Titles up to a maximum of five total Titles (incl. Structural Title). (*The Power to Choose, 5 Beginnings, p. 50*)
 - The number of Government Titles also determines the number of Powers a position may activate each turn and how many Acts and Scenes are received each turn during the game. Government Titles are a complex subject that is described in greater detail later in these rules, but like Fundamental Realities, more Government Titles tend to restrict the options available to a position, even as the position receives the ability to do more from having more Titles (five Titles really is a practical game limit).
 - Unlike Fundamental Realities, Government Titles can be changed during the game, but it is a disruptive and sometimes difficult process that should be undertaken with care. Therefore, the initial choice of Government Titles is important. The Foresight will remain after setup as a pool of Titles from which a position may choose during the game when changing Titles. The Concierge will not alter Government Titles choices submitted by the positions.
- All Government Titles consist of two parts, the large Government Title ‘piece’ which is placed on the Public Space and a corresponding Magna Carta describing the legitimacy requirements of the Government Title. Government Titles must be legally placed on the Public Space during the setup, as described in the Government Titles section. Once placed, the Government Titles cannot be moved, but can be removed during the course of the game if the Government Title is disrupted or changed. (*The Place of Government, 5 Beginnings, p. 51*)

Native Population Type:

- A Native Population Type is a unique intelligent species that has its own subjective and objective physiological and psychological identity as a distinct sapient species. In short, a Native Population Type is your biologically and/or mechanically distinct species: Your starting population and all population factors descended from them during the game. (*Native Population Type, 5 Beginnings, p. 51*)
- Each position represents a Major Native Population Type; two or more positions may represent different factions of the same Major Native Population Type, with related, but different sets of Fundamental Realities and Government Titles. Major Native Population Types are those that have achieved at least a significant in-system travel and colonization capability, and in most cases, have achieved interstellar flight capabilities or will soon, i.e. technologically-advanced races. The Native Population Type of each position begins with the initial populations and extends through all population factors grown from the original populations. All population factors of each position’s Native Population Type are affected, as appropriate, by the Fundamental Realities and the Primal State chosen before the game, the current Government Titles, all technologies completed, and share the Public Space belonging to their position while they are part of their Native Population Type’s position. (*Major Natives, 5 Beginnings, p. 51*)
- In addition to the Native Population Types of the positions (i.e. the Major Races), there may be a number of Minor Races located in the Galactic Space. Minor Races are discussed in 4 Diplomacy, p. 1140, *infra*. These Minor Races are civilizations distinguished from the Major Races in that they have not yet achieved either Stardrive or significant in-system colonization (and probably won’t anytime soon). The Concierge controls all Minor Races and determines their placement. Players will generally not know the location of Minor Races until they discover them. (*Minor Races, 5 Beginnings, p. 52*)
- There may also be other Major Races or ‘special races’ that are not Minor Races, which are introduced, defined and controlled by the Concierge for game purposes (e.g., the ‘Sea Peoples’ who plagued the late Bronze Age Mediterranean). (*Special People, 5 Beginnings, p. 56*)

Primal States:

- At the beginning of play, all races represented by the positions exist in the Galactic Space (i.e. within the area represented by the initial Star Log) in some original state. The Primal State is a frozen moment in time just before the game begins in which the circumstance of each Major Native Population Type are determined, for which there are only two major options: Either the Major race is established in Galactic Space prior to the game (i.e. Home Positions: Homeworld, Lost Colony and Outposter Primal States), or they just arrived (i.e. Invader Positions: Expedition Leader, Nomadic Warfleet and Truly Alien Primal States). (*Primal States, 6 Beginnings, p. 61*)
- Primal States are only determined and applied during the set up.... There are six possible Primal States, the first three representing those who were already there, and the last three represent ‘invaders.’ (*Start It Up, 6 Beginnings, p. 62*)
- **The Primal States in GGDM are:**
 - Homeworld Position
 - Lost Colonist
 - Outposter
 - Expedition Leader
 - Nomadic Warfleet
 - Truly Alien
 - *The Primal States are only listed above for brevity, see GGDM text for additional details.*
- Planets and stars in Galactic Space that are currently in view of a position and occupied in any way are part of that position’s current ‘reality’ and must occupy some portion of the position’s Public Space. Each star and planet must occupy a separate Monad in the Public Space, and all planets (whether colonized or not) must be adjacent on the Public Space to either their star or another planet that is part of the same starsystem. Thus, the qualifying stars and planets in the position’s initial view must all be legally placed in the Public Space during setup, after the placement of Government Titles. (*Laying It Down, 6 Beginnings, p. 66*)

The Inheritance:

- The Inheritance represents the sum of what a civilization brings to the game from its pregame ancestry. After completing all of the previous setup steps, each position receives a one-time only ‘inheritance,’ in the form of Inheritance Points (‘IPs’), which are spent to obtain starting technologies, populations, ships, and industry and other items. (*The Inheritance, 7 Beginnings, p. 70*)
 - The Inheritance Points must first be used to satisfy the requirements of the chosen Primal State, then second must be spent to satisfy the legitimacy requirements, if possible, of the Government Titles chosen by the position. It is not required that all Government Titles pass all Conflict Checks before the game, but if the Primal State cannot be satisfied by the Inheritance, the Concierge will choose a suitable new Primal State and/or new Fundamental Realities for the position.
- Inheritance Points (IPs) are spent to purchase the items listed on the Inheritance & Primal States Tables prior to the start of the game. The prices listed on the Tables are only used for purposes of setting up the game and once the game is in progress, these Tables are not used for any purpose; you cannot ‘buy’ things from the Inheritance Table during the game. Inheritance Points cannot be ‘created’ or used during the game. (*Inheritance Table, 7 Beginnings, p. 71*)
- Players may not introduce anything new to the game during the set up process; there is no mechanic for the introduction of new Patents, Writs, Doctrinal Templates, or foundation of Colleges during the set up process; positions are limited to ‘purchasing’ only the items listed on the Inheritance & Primal States Tables. (*Nothing New Under The Sun, 7 Beginnings, p. 71*)³

³ It is absolutely critical to understand that the inheritance is a **special process** that applies only to game set up and cannot be used once the game begins; regular game play is governed by other rules and processes.

- The setup process is the only time when a position may ‘buy’ populations, which is a mechanic designed solely to give positions flexibility in their starting positions; all subsequent populations must be ‘grown’ from the original starting populations of that position’s unique Native Population Type. Positions may only purchase populations of their own Native Population Type during set up. (*Purchasing Populations, 7 Beginnings, p. 71*)
- All Existential Patents may be ‘purchased’ during set up at a flat rate, but a position is only required to purchase those listed in its Primal State Requirements. For each Existential Patent purchased during set up costing 60 IPs or less, the position’s choice of one Application listed in the Theory of the Patent is placed on the 1st Era Matrix, for Existential Patents costing more than 60 IPs, two Applications are received (as above), placed adjacent on the 1st Era Matrix and are connected automatically. The Applications are placed on the 1st Era Matrix wherever designated by the position, but must have been adjacent on the Theory of the Existential Patent. (*Patents for Sale, 7 Beginnings, p. 72*)
- Prior to purchasing any starship Existential Patents, a position must first purchase the Generic Stardrive Existential Patent (GSD) and the Ship Systems Existential Patent (not required for Scouts). The GSD Patent is available for a flat rate of 100 RPs, the Inheritance Points from a Major Fundamental Reality while Ship Systems costs 45 IPs. All positions should try to begin with GSD, right after satisfying their Primal State requirements. (*Star-Driven, 7 Beginnings, p. 72*)
- Positions which begin with the Homeworld, Lost Colony or Outposter Primal States ***may not begin the game with ships, except Scout Ships***, unless the position has obtained the Orbital Shipyard Existential Patent and bought at least one Orbital Shipyard. (*Shipyard Blues, 7 Beginnings, p. 72*)
 - Invader positions (Expedition Leader, Nomadic Warfleet and Truly Alien) must begin the game with the required ships and may buy any ships they can legally obtain, but will need to *first* find a place to colonize and *then* build an Orbital Shipyard (if they have the Existential Patent) to build more ships in the game. They will be unable to build new ships until then.
- Only during the set up may ‘Home’ positions ‘purchase’ Cultural Traits Pieces (Proficiencies and Aspects) and Research Pieces, which must be legally placed in the Public Space. Research is not required to be initially placed to form Research Groups. (*Social Fiction, 7 Beginnings, p. 72*)
- All ships purchased during the set up must begin in an initial starsystem drawn as the starting position for the ship’s owner; ships purchased during the set up may not simply be placed anywhere in the Galactic Space. All population ‘purchased’ during the set up must either be on a planet or Colony Transport as required by the Primal State. All Industry, orbital platforms, and colony defenses purchased must be on/at a colony before the game. (*Launch Pad, 7 Beginnings, p. 72*)
- Acts and Scenes may be purchased by Inheritance Points (IPs) and placed on the Public Space and Powerstrip to start the game. A position isn’t doing anything on the first turn without Acts at least, and possibly a Scene; it is highly recommended that positions start with Acts and possibly a Scene on a starting world or star, or the first turn will be a sit and spin. See 2 and 3 The Sidereal Stage, generally, *infra*. (*Lift Off, 7 Beginnings, p. 73*)

The Streams of Time

- GGDM is a turn-based strategy game that is designed to run continuously. Each position submits Actions which are regularly batch processed in the order they were received, as long as the Actions were submitted in the time period allocated to each position for submitting their Actions. The Actions must, of course, be submitted by a representative of the position (i.e. a known team member). (*There is a Season, 1 The Streams of Time, p. 76*)
 - *Game Actions represent some combination of orders from higher up, and individual initiative and actions ‘on the ground’ within the framework of mission, operational procedures, training, intelligence, and command hierarchy... (FTL Communications, 1 The Streams of Time, p. 77)*

Regular Turn Actions:

- Each position will have a set time period within which to submit their Actions. Each position may only submit Actions once during that period, to avoid the confusion of multiple partial and complete sets of Actions and various amendments. Actions may not be amended once submitted; the Actions received by the Concierge within the turn period are final for each position. Actions received outside the allowed period are void, and will not be considered by the Concierge. Because of the manual effort required to process Regular Turn Actions and the continuous streaming nature of the game, these rules must be strictly enforced. (*The Law of Periods, 2 The Streams of Time, p. 84*)
- The period for submission of Regular Turn Actions will be based on the calendar system and time zone used by the Concierge. Each position will have a period of specific days to submit one set of Actions. For example, Position A might have the period of Monday, Tuesday, and Wednesday to submit their Actions. Actions for Position A would not be accepted before 12:00 a.m. on Monday and after 11:59 p.m. on Wednesday, based on the time zone where the Concierge resides. (*Three Daze, 2 The Streams of Time, p. 84*)
- Because of the continuous action principle, all days of the week will be used for running the game to keep it continuous; that is, there are no ‘off days’ or weekends off when the game is not running. Any position that fails to submit their Regular Turn Actions within the time period will have no Actions run in the Turn Cycle, however, ships that are in transit will continue moving toward their destination (law of conservation of momentum) until they arrive and the position will be subject to the effects of the Actions submitted by all of the other positions. (*Forward Fumble, 2 The Streams of Time, p. 84*)
 - To the extent that processing requires manual handling by the Concierge, the Concierge’s schedule will also become a factor in determining the length of turn periods.
- While each position has a specific period during which it may submit Actions, the periods during which positions may submit Actions will overlap. ... Note that Regular Turn Actions will be processed in the order they are received, therefore, if, in the above scenario, Position B submitted their Actions on Tuesday, and Position A submitted theirs on Wednesday, Position B’s Regular Turn Actions would be processed before Position A’s Actions. Some players may find this advantageous. (*Lapping Effect, 2 The Streams of Time, p. 84*)

Combat Orders:

- Combat is fought in rounds, with each side submitting Combat Actions for each Combat Round. Combat Rounds are run at any time that the Concierge receives sufficient Combat Actions based on the type of combat being fought (see Combat Categories, 2 Combat, p. 959, *infra*). Several Combat Rounds may be processed in one day, or a combat may continue indefinitely (as long as there are combatants) with nothing happening. Players are never required to submit Combat Actions, other than during the first round of a combat. (*The Claw and the Clock, 2 The Streams of Time, p. 85*)
- Combat Rounds are run independently of, and concurrently with the Regular Turn cycling of the game. The rest of the game does not stop for the resolution of combats. While a combat is in progress, it will or may be affected by events associated with player positions taking their Regular Turn, including, but not limited to, diplomacy, news events, the arrival of additional forces, shipbuilding, and supply and other logistical issues. Units involved in combat may not move away or execute any other Regular Turn Actions until they are either victorious or successfully withdraw from the combat. (*Relativity, 2 The Streams of Time, p. 85*)
- Combat Actions will only be accepted for one Combat Round at a time. The Concierge will process each position’s Combat Actions and resolve the Combat Round. Random die rolls will be handled by a random die roller, with the results being emailed to all combatants (out of fairness). Once the results are received and applied, the combatants may submit the next Combat Actions. In this way, it would be possible, with everyone online, to process four or five Combat Rounds in one evening, if desired (most combats will be over in less than five Combat Rounds). (*Bells Rung, 2 The Streams of Time, p. 86*)

Regular Turn Processing:

- All Actions received by the Concierge within a day will be processed the next day if possible. For example, the Regular Turn Actions received between 12:00 a.m. and 11:59 p.m. on Wednesday, will be processed sometime on Thursday (as the Concierge's schedule allows). Ideally, the schedule should be set such as to avoid a backlog or piling up of unprocessed Actions, which disadvantages the positions whose Turn Periods come after, because of results they could not possibly know when submitting their own Actions. (*Turn, Turn, Turn, 3 The Streams of Time, p. 90*)
- All turns received in a day period will be processed together, not consecutively, based on the order they were received, as follows: All Power Activations requiring one Act, *will process first*, then all Power Activations requiring two Acts and/or an Act and a Scene will process second, and so forth until all Actions are processed (see also Managing Act, 3 The Sidereal Stage, p. 123, *infra*). Power Activations also requiring a Scene will process after other Power Activations requiring the same number of Acts without a Scene, Scenes act as tiebreakers in the processing sequence. If two Power Activations are tied in Acts without any Scenes, or require the same number of Acts and Scenes, they will be processed in the order of Powers listed in 2 The Sidereal Stage, Table of Contents. (*Clockwork Universe, 3 The Streams of Time, p. 90*)
 - For example, Players A and B both submit Actions on Tuesday, and Player B's Actions arrive first. Player B's Power Activations requiring one Act will process before Player A's Power Activations requiring one Act. However, if Player B has a Power Activation requiring an Act and a Scene, it will process after Player A's Power Activation requiring one Act and no Scenes.
 - Actions costing *no Acts and one Scene* will process before those costing one Act.
 - One Act is **added** to the cost of Power Activations that are not associated with an undisrupted Government Title, if those are used in the game, see Associates & Acquaintances, 1 Government Titles, p. 580, *infra*. This is an optional rule in the game that can change the processing sequence of a position's Power Activations with any disruption or change in Government Titles, representing differing priorities of a succession of governments. It could be really fascinating and really annoying.
 - Finally, a special 'exception' has been created (of game mechanical necessity) when Unloading RPs at a colony from Cargo Ships shares a Scene with a Construction Power Activation at the colony on the same Regular Turn: Normally, the Construction Power which requires an Act and a Scene will process before the Commerce Power activation for the purpose of Unload RPs which also requires an Act and a Scene by virtue of the order in which the powers are listed in 2 The Sidereal Stage, Table of Contents, *infra*. However, as they are sharing a Scene (see Material Handling, 1 Construction, p. 664, *infra*), and the unloaded RPs must be used that turn or are lost, the Unload RPs action is processed before the Construction Power so that they may be used that Regular Turn.
- Each Power Activation requires an Interpretation. The default Interpretation is a News Event for most Power Activations. Players submitting Actions for their positions are required to provide the Interpretation (including the text of a News Event, if necessary) to go with each Power Activation and to make it clear to the Concierge exactly what the players desire to do. Any Power Activation without an Interpretation will not be processed. Players will not post News Events to the forums (though players are free to make other appropriate posts to the forums), rather, the Concierge will post all News Events to the forums when the turns are processed. Note that there are other kinds of Interpretations which may be used sometimes to accompany a Power Activation. (*The Mouse in the Clock, 3 The Streams of Time, p. 91*)

Halting the Game:

- While the game is designed to run continuously, the game is nothing without the players, and consideration will always be given to halting the game for genuine emergencies. However, the established turn period for each position to submit Regular Turn Actions, and the possibility of multiple players playing each position, should be sufficient to work around most real-world emergencies that might interrupt the

game. Therefore, an emergency in this game would be something that cannot be fixed or resolved shortly by reasonable efforts, which might then prevent a position from entering Regular Turn Actions (this is not the same as simply not entering Actions without explanation). Emergency halts will be considered on a case by case basis and will be granted sparingly. (*Emergency Halts, 3 The Streams of Time, p. 92*)

- Whenever any halt to the game is called (i.e. the game is placed in ‘temporal stasis’), the turn calendar will be adjusted accordingly and the players will be informed of when the game restarts. (*Time Stop, 3 The Streams of Time, p. 92*)

Turn Cycle:

- A **Turn Cycle** is defined as the game period from a position’s Regular Turn to its next Regular Turn, during which all other positions will have an opportunity to process a Regular Turn during their set time period (see The Law of Periods, 2 The Streams of Time, p. 84, *supra*). Turn Cycles are thus relative to positions. (*Buzzing Lightyears, 4 The Streams of Time, p. 101*)

Big History:

- There is no correlation between a ‘turn’ or ‘Turn Cycle’ and ‘actual’ or ‘real’ time elapsed in the game universe. That is, a turn may represent a century, a decade, or a year, or months. Some Regular Turns (or even Combat Rounds) may not represent the same amount of time as others; it is entirely possible that a turn filled with crucial events may represent a year or two, and the following Regular Turn, the aftermath, may represent the following decade or century of peace or chaos. Thus, a Regular Turn (and/or Combat Round) represents whatever amount of real time is required for some task, process or event(s) to happen, run their course, and/or complete that is important to the game. The only ‘real’ measure of time in the game are Regular Turns and Turn Cycles. (*Buzzing Lightyears, 4 The Streams of Time, p. 101*)
 - Likewise, there is no actual distance assigned to the physical distances between stars in Galactic Space.
 - The only measure of ‘distance’ in the game is the difference between coordinate locations in Galactic Space, and ship speed is measured solely in the turns required to transverse between them.
- Unless Regular Turns represent short periods of time, or the players’ species are extremely long-lived, the story told in a GGDM game is a story without literary characters. Little is known about individual Huns until they reached the Roman Empire, for example. Therefore, players should refrain from developing literary characters in their News Events and other communications. GGDM plays on a scale similar to Mike Resnick’s *Birthingright: The Book of Man* (1982), which tells the story, in an anthology of short stories, of the rise and fall of human interstellar civilization over the period of 18,000 years. (*A Story without Characters, 4 The Streams of Time, p. 102*)
- The Concierge can assign actual distances to any objects in the game if necessary for the story, such as if certain pregame distant astronomical events became visible during the game. (*A Story that Goes the Distance, 4 The Streams of Time, p. 102*)
 - For example, the unusual and previously unseen dimming of KIC 8462852 (later dubbed Tabby’s Star during the Kickstarter Project, but formally called Boyajian’s Star), located 1,480 light years from Earth, observed in 2015, occurred in about 535 CE, about 55 years after the death of the last Roman Emperor (about which very few people cared at the time or even now). In space we study old news.
- It is not likely, however much time the participants think a Regular Turn represents, that the game will ever actually witness a super nova, natural formation of a black hole, or the birth of new stars. Even if the participants think that a turn represents centuries, or a millennia, the entire game would not even be a ‘second’ in the cosmic scale where the lives of stars are measured in billions of years (e.g., Carl Sagan’s cosmic calendar, *Cosmos*, Ep. 1), such that our sun is but a third generation star since the Big Bang. (*A Story in Unreal Time Scale, 4 The Streams of Time, p. 102*)

- The Concierge in GGDM is *Pontifex Maximus*. Given the choice, the Pontifex Maximus chose political convenience over astronomy. Not much has changed there.

The Sidereal Stage

The Public Space:

- The Public Space is the main playing area of the game for each position. The Public Space is composed of a continuous set of points, called Monads, forming a finite, probably irregularly-shaped plane that is generated during set up. Each position's Public Space will not be seen by or viewable by other positions. (*The Stage is Set, 1 The Sidereal Stage, p. 108*).
 - Each Monad (for game purposes) is either occupied or unoccupied, used or not used, at any specific point in time. A Monad is occupied or being 'used' by things placed on that Monad in the Public Space, a Monad that is currently occupied cannot be used for another placement until it is vacated. Most things placed in the Public Space will occupy a single Monad. The game also calls for 'formations' and 'arrangements' of adjacent things in the Public Space. Formations and arrangements of any sort in the Public Space are not considered 'solid objects'; if there are open Monads within their area, arrangements and formations can overlap or interlock in the Public Space as long as each Monad is being occupied or used by only one thing at a time. Interlocking formations are defined as two formations that share a common Monad, whereas overlapping formations are those that use Monads in each other's 'space.' (*Standing on Spots, 1 The Sidereal Stage, p. 108*)
 - Government Titles will take up more than one Monad on the Public Space; Government Titles will fill a significant amount of the Public Space for the entire game. Government Titles must be legally placed in the Public Space prior to the game. The legal placement of Government Titles is explained fully in Structural Government Titles, *et seq.*, 2 Government Titles, p. 595, *infra*. (*The Big Actors, 1 The Sidereal Stage, p. 108*)
 - ... the axis of the Public Space 'wrap around,' such that the last Monad of an axis is considered to be adjacent to the first Monad of that same axis. Thus, if the A axis of the Public Space runs from A1 to A14, A14 would be considered adjacent to A1 (this effect does not occur in the Galactic Space; x1 is not adjacent to x14). Note then, that by expansion and mutability, things that were adjacent in the Public Space may lose their adjacency. When this occurs, adjacencies will be lost. (*Over the Edge, 1 The Sidereal Stage, p. 108*)
 - All edges of the Public Space must meet their opposite, regardless of whether it fits or not in terms of shape, it is just assumed to happen. Due to the probable irregular shape of the Public Space, the sour cream donut (Yum!) created from wrapping the Public Space will look like one that had a bad trip from the bakery to home!
 - Only one 'thing' can occupy each Monad at any time, i.e. there is no 'stacking,' and once something is placed in the Public Space (and its relationships established), it cannot be moved except by the Concierge. (*Turnover, 1 The Sidereal Stage, p. 109*)
 - It is possible, through Expose' News Events, Conversion and Naturalization of **alien colonies**, advancing Technology Eras, and Reformation, to obtain additional Public Space, but it will not occur often.
 - The arrangement and the relationship of things in the Public Spaces represents exclusively the mental structure, consciousness, cultural schema, collective cognitive schema, or epistemology of the civilization that is the Public Space. The arrangement of stars and planets in the Public Spaces bears little or no relationship at all to the actual location of those stars, planets and ships in real space (that is, the X, Y, and Z coordinates, in Galactic Space) and therefore, the Public Spaces should never be used for calculating distances in Galactic Space. (*Spatial Dissonance, 1 The Sidereal Stage, p. 109*)
 - It is entirely possible for two planets, a thousand light years apart, to share adjacent Monads in the Public Space indicating that in the consciousness of the civilization, those two

places are thought to be closely related, interconnected, regardless of physical or temporal (distance). It is also possible, and probable, that the same stars and planets will appear on the Public Spaces of different positions at the same time, for example, if two positions have colonies on the same planet, both would have that planet on their respective Public Spaces. Having a planet or star in your Public Space also does not mean you ‘own’ the planet or star, only that you are ‘present’ there and the planet or star currently has a ‘presence’ in the consciousness of your civilization. (*Living in Public Space, 1 The Sidereal Stage, p. 109*)

- Whenever a position no longer has a colony or a ship at a star, the star is removed from the Public Space along with any associated planet(s). Whenever a colony is captured by another position, the previous owner of the colony must remove the colony’s planet from the Public Space, which may also cause the removal of the star. The new owner must immediately place the planet and/or star of the newly captured colony on their Public Space. If there is no legal place to put a new captured colony, or planet, or star or anything from the Galactic Space that must be placed on the Public Space, non-Galactic Space pieces will be removed by the Concierge to make room as required. Objective reality trumps all. (*Lost Places, 1 The Sidereal Stage, p. 109*)

Vital Powers:

- The various areas of authority which governments traditionally exercise over their societies are divided in this game into twelve Vital Powers or hereafter, “Powers,” which collectively, can be considered the elements of sovereignty. Each position may, each Regular Turn, activate *one Power for each currently undisrupted Government Title*. A position may have up to five Government Titles, meaning that each position could potentially activate five of the twelve Powers (40% of the possible Powers) each Regular Turn. (*Exercise in Vital Powers, 2 The Sidereal Stage, p. 114*)
 - Activating a Power allows the position to issue Regular Turn Actions for and do the purposes that are specific to that Power as described in later rules sections. The actions which may be taken by activating a Power are called “purposes”; some Powers have only one purpose while others have many purposes to the Power Activation. When activating a Power that has multiple possible purposes, the position must specify for which purpose the Power is being activated.
 - *Except for Census and Taxation*, the same Power may be activated multiple times in a Regular Turn, for the same or different purposes.
- **The Vital Powers in GGDM are:**
 - Taxation
 - Census
 - Culture
 - Order
 - Construction
 - Technology
 - Movement
 - Expansion
 - Combat
 - Diplomacy
 - Commerce
 - Special Operations
 - *This is a quick reference list for brevity, see GGDM text for descriptions. These Vital Powers are the actions that positions take on their Regular Turn through Power Activations.*

Acts & Scenes:

- While Vital Powers represent the authority of the government over its society, Acts and Scenes measure, in large part, the political will (and organization) of the government to act and to some extent, the popular support for government action. ‘Acts’ are markers which represent the ability to act, specifically, the ability to activate a particular Power to which they have been previously allocated by placement on the ‘Powerstrip’; while Scenes represent specific places where Actions take place. (*Acts & Scenes, 3 The Sidereal Stage, p. 121*)
 - Powers whose activations are location-specific require Acts and Scenes to activate the Power, whereas Powers whose activation is general throughout the civilization (such as Taxation, Research, and Census) only require Acts to activate the Power. So, the activation of Powers is governed not only by the number of undisrupted Government Titles held by the position, but also by the allocation and placement of Acts and Scenes.
- The Powerstrip consists of two rows of squares, with one square labeled for each Power. The purpose of the Powerstrip is to keep a record of the Acts currently allocated to each Power. At the end of each Regular Turn, each position *receives a number of Acts and Scenes in any combination* desired equal to the number of currently undisrupted Government Titles held by the position. Acts received must immediately be allocated to a specific Power and are added to the Acts currently in that Power’s box; while Scenes must be immediately assigned to a Monad which must contain *a star or colonized planet* at the end of the turn (if not, the Scene is lost). Thus, during the Regular Turn, a position is operating with Acts and Scenes received previously, there is no ‘borrowing’ into the future in terms of Acts and Scenes. One cannot use political will, events, or opportunity that has not yet manifested. (*On the Soapbox, 3 The Sidereal Stage, p. 122*)
 - There is no provision for moving placed acts/scenes.
 - Power Activations require planning, and each position’s Actions sent to the Concierge must specify the allocation of Acts and Scenes expected to be received at the end of the turn. Acts and Scenes will be received in the order listed by the position, in case of a disrupted Government Title, the last Acts/Scenes listed may be lost. Thus a position can prioritize the list.
- When a position activates a Power, a number of Acts will be removed from the Powerstrip and Scenes removed from the Public Space as the cost of the Power activation. The specific number of Acts and Scenes required are described in each of the sections detailing the Powers, however, no Power requires less than one Act to activate, and no Power requires more than three Acts and a Scene (i.e. Found College) in combination to activate. In case of error or other unforeseen events that cause a position to be short of Acts/Scenes for a Power Activation; the desired Power Activation will be cancelled and no Acts or Scenes will be removed (the Concierge will not interrupt Regular Turn processing to contact the players). (*Managing Act, 3 The Sidereal Stage, p. 123*)
 - A position with five Government Titles would receive five Acts and/or Scenes per Regular Turn and could activate Powers five times. There is a 15% chance at the end of each Regular Turn (or Turn Cycle if Regular Turn Actions are not submitted or processed), before new Acts are placed that each remaining Act on the Powerstrip will ‘age-out’ as political will dissipates, opportunities are lost and political theatre distraction sets in...
 - Remember that, *except for Census and Taxation*, a position may activate the same Power multiple times in a Regular Turn (but not multiple Construction Powers at the same location), if they have sufficient Acts and Scenes. Insufficient RPs will not prevent a Power Activation. Each Activation costs separately, depending on purpose.
 - Many Power Activations may also require sufficient Resource Points (RPs) be in the Treasury at the time of activation, for example, building Starships. Resources are required in addition to will and organization. (*Box Office Receipts, 3 The Sidereal Stage, p. 123*)

- Scenes do not occupy or use a Monad in the Public Space, but must be placed instead on stars and planets in the Public Space. Access to Scenes on a star or planet is lost if the star or planet is removed from the Public Space. (*Lost Scenes, 3 The Sidereal Stage, p. 123*)
 - A star may have a number of Scenes equal to one *plus* the number of colonies currently in the star system maximum. A colonized planet may have one Scene *plus* one Scene for each colony on the planet. Scenes will be lost if they are attempted to be placed on a star or planet that is not added to the Public Space at the end of the Regular Turn in which they are generated. For example, if exploration of a starsystem fails due to the Scout being destroyed or failing to arrive, that star would not be placed in the Public Space as there is no ship there. Any Scenes that the position might assign to that star at the end of the Regular Turn, are lost. This is a risk a position might take to hurry development.
 - Scenes never ‘age-out.’ However, all Scenes on stars and planets will be lost if the star or planet is no longer on any position’s Public Space at the end of any Regular Turn.
 - Scenes do not have owners, no one owns the Scene; *they are unaffected by capture of the colony* and simply pass with the sovereignty. Scenes are placed on planets and stars, not on colonies, *ut supra*. If a Scene is placed on a planet or star, all positions that have *presence* on the planet or in system will see it and may become the ‘scene stealer’ in theatre-speak. It thus is possible in a Balkanized colony planet situation for positions to snatch each other’s Scenes for activations at that location, e.g., see discussion in 1 Commerce, pp. 1186, 1189, *infra*. It is also possible for positions to help each other with Scenes at shared locations by placing Scenes there to be picked up later. The economy of Acts and Scenes in GGDM is such that this is a fairly major effort and an area for horse trading or allied cooperation. (*Scene Snitching, 3 The Sidereal Stage, p. 124*)

Besieged Colonies:

- A ‘besieged colony’ is a colony that is currently under attack and the only thing that is preventing the colony from being captured is the colony’s defenses and/or the attacker’s lack of will and/or insufficient combat power. A colony is besieged on Regular Turns only to the extent that the opposing warship(s) can enforce a blockade of normal space around the colony (see Blockade Running, 4 Commerce, p. 1233, *infra*). A Besieged Colony cannot act as a Supporting Colony for ships (see Supporting Colony, 1 Movement, p. 840, *infra*), thus a colony may be besieged to deprive the owner of a Supporting Colony. Otherwise, there is no other effect on a besieged colony, that is, blockading warships cannot cause a colony besieged to lose Constructural Elements or Scenes, and cannot directly prevent the colony from executing most Power Activations (see Rousing the Rabble, 2 Disruption, p. 271, *infra*). (*Besieged Colonies, 3 The Sidereal Stage, p. 124*)
 - A colony which has enemy Ground Units on the surface of the planet, i.e. a potential ongoing Ground Combat situation, is not a besieged colony and can be a Supporting Colony. Ground Combat is however a Disruption Event at the colony, see Downfall, 2 Disruption, p. 275, *infra*.
 - Note, however, that a colony might suffer disruption of Constructural Elements on the Regular Turn it becomes besieged due to loss of a Ship Combat in the same starsystem. See The Burning Sky, 2 Disruption, p. 275, *infra*.
- A siege condition exists after the first round of a Colony Combat when:
 - 1) The attacker does not issue any further Combat Orders, except Raid/Strike orders (see World in Flames, 4 Carriers & Fighters, pp. 1083-1088, *infra*),
 - 2) The attacker has units present that can initiate combat,
 - 3) The colony defenders have not retreated or cannot retreat, and
 - 4) The defenders have not or cannot Seize the Initiative (see 3 Combat, p. 971, *infra*) (*High Guard, 3 The Sidereal Stage, p. 125*).

Dreamtime

- In GGDM, the acts of the players via Interpretations become the universal laws of the game, even if only history – history may be regarded as a universal law in the same way as gravity: history will always exist, ever-present because of the directional flow of time (though there is a question of whether it is history if no one is there to record it?), see Temporal Constructural Elements, 1 Constructural Elements, p. 173, *supra*. (*Universal Legislator*, 2 *Dreamtime*, p. 150)
- **Group storytelling** in GGDM is a collective emergent narrative, which is more powerful than a single-person emergent narrative created by video game play (see Emergent Narrative discussion, 3 Constructural Elements, p. 205, *infra*). With some professional postgame tweaking, the GGDM collective emergent narrative might raise to the level of a sci-fi work without characters (or maybe like Mike Resnick's Birthright: The Book of Man (1982)). (*White Gold Wielder*, 2 *Dreamtime*, p. 153)

Interpretations:

- Within this game, there are six (or seven, it's a bit fuzzy) 'game mechanics' or 'game devices' that are officially considered Interpretations: Fundamental Realities, News Events (including Expose' special News Events), Writs, Patents, Interventions, Meanings (including Shared Meanings), Collage. An Interpretation must accompany each Power Activation and the default Interpretation is the News Event, for example, if Patent Prosecution fails. (*Official Interpretations*, 1 *Dreamtime*, p. 130)
 - A Thesis Statement issued by one position against another (see Disputation, 2 Reformation, p. 1391, *infra*) is not an official Interpretation. A Collage issued in resolution of a Reformation (see Here I Sit and A Soul from Purgatory Springs, 3 Reformation, pp. 1399, 1401, *infra*) is an Interpretation by the Concierge of Thesis Statements.
 - A Patent is only an Interpretation on the turn in which the Patent is successfully prosecuted. Thereafter, the Patent becomes part of the reality of the game. Thus, a position may not cite the use of the Patent on any subsequent turn to fulfill the requirement of having an Interpretation paired with each Power Activation. (*Technodreams*, 1 *Dreamtime*, p. 130)
- Official interpretations should generally be regarded as facts within the current game in the same way that events in a story become facts to the characters in that story and to the audience even though they know or believe it is a work of fiction. Interpretations become 'official' by the process of:
 - 1) Fitting within the definition and format of a particular interpretation type in the game,
 - 2) Being accepted by the Concierge (a liberal judgment call),
 - 3) And, *if necessary*, by also being 'published' in some form within the game. (*Flavors of Fact*, 1 *Dreamtime*, p. 134)
- Of necessity, official Interpretations are 'facts' or 'laws' in the game universe, they are not just another position's *opinion*. They must be respected as facts. (*Five Types of Facts*, 1 *Dreamtime*, p. 137)

News Events:

- A News Event is the *default Interpretation* related to each of the source positions' Power Activations that is 'broadcast' to all of the players in the game through the use of the News Event game forum (each new News Event is a top level thread). (*No Noose is Good News*, 2 *Dreamtime*, p. 143)
 - There are some instances in GGDM where another Interpretation substitutes for the News Event on the Regular Turn the Power Activation occurs. These allow 'invisible' Power Activations that may be deceptive to the 'card counting' type players who watch to see how many Powers are activated by each position each Regular Turn.
 - The player submitting the Regular Turn Actions for their position will provide the full text of all required News Events in the correct format, which will be posted to the forum by the Concierge when the Actions are processed. While many online games have a forum where players can post comments about and discuss the game, the forum in this game is part of the game, not just about the game...

- Each News Event must contain the issuer, i.e. the name of the position from which it originates. The issuer of the News Event will be published on the forums with the text of the News Event (for the purposes of retaliation – err, reaction to the News Event by other positions). It’s like an official press release – they can’t be anonymous. News Events cannot have fake issuers – if you want to blame something on someone else, see Plausible Deniability, 3 Special Operations, p. 1314, *infra*. (*The News Brothers*, p. 143)
- Each News Event must indicate to which Power Activation it applies. This does not have to be in the text of the News Event, and it will not be published on the forums (as that would constitute unnecessary ‘free intelligence’ for the rest of the players). (*Power News Hour*, 2 *Dreamtime*, p. 143)
- Each News Event must include an indication as to whether it is being presented as (absolutely) True or False by the issuer (aka, ‘spin’). This component will be published on the forums as it is information necessary for other positions to react to the news. (*Truth or Dare*, 2 *Dreamtime*, p. 144)
- The News Event must contain a short text blurb which describes the news and is reasonably related to the Power Activation to which the News Event relates. A News Event may be as simple as ... text which simply states what occurred during the Power Activation ... or it may be something a little less truthful/more creative/artful. The presentation of a News Event as absolutely true or false has little bearing on the actual truth or falsity of the event described in the text message (the Concierge may exercise discretion here). (*Text Message*, 2 *Dreamtime*, p. 144)
 - So here’s the headspin: News Events in GGDM report ‘facts’ (i.e., Power Activations or even in some sense, made-up game facts for storytelling) and must be reasonably related to the Power Activation with which they are paired ... but they are also official Interpretations, *imposed* as ‘facts’ on the game universe, see Official Interpretation and Flavors of Fact, 1 *Dreamtime*, pp. 130, 134, *supra*. The tail that wags the dog. *Check?*
- A News Event must describe a concrete effect on the game, which is immediately applied to the game. The ‘effect’ of a non-adverse News Event that simply reports the Power Activation to which it is related is the Power Activation, and nothing else (a feedback loop). The further a News Event deviates from the Power Activation to which it relates, the more likely it will require some kind of an effect description. Adverse News Events targeted at other positions always require an effect. The effect should be clearly described in the text of the News Event. The effect of the News Event is considered immediate. (*News Effect*, 2 *Dreamtime*, p. 144)
- News Events are eigenstates in the game. A die roll result or blind card draw is also an eigenstate in whatever game is being played. It creates a value *that is for that moment*, the known, determining value/state in the game. The state of the game changes on the next action taken by the players. Before that, it is a cloud of probabilities. Humans have been playing with eigenstates since the beginning, sometimes it’s been part of religious-mystic ritual. GGDM just does something a little different, News Events inject conscious choice into the eigenstate. (*Eigenstates*, 3 *Dreamtime*, p. 163)

Adverse News Events:

- The subject or target of the News Event does not always have to be the issuer of the News Event, it may be adversely targeted at other positions. But it must always be related to a specific Power Activation (in terms of subject) of the issuer of the News Event, even if that Power Activation has no relation or effect on the target of the News Event (but it’s a fuzzy kind of thing, you know, a judgment call, an interpretation). The Concierge may reject or modify News Events targeted at other positions, based on his superior knowledge, if those News Events are deemed to be either impossible based on the Fundamental Realities and other factors of the targeted position, or if they are inconsistent with the evolving storyline of the game. The Concierge will exercise this authority *as rarely as possible*, preferring to give the most liberal possible interpretation to News Events. (*News You Can Use*, 2 *Dreamtime*, p. 144)
- Although players can and most likely will use News Events as weapons against each other (these are called adverse News Events throughout GGDM), the News Event is not ‘caused’ by the issuer, rather, players should treat News Events as merely being reported by the issuer, whatever the outcome. News

Events are neutral in nature, they represent entropy in the universe, and serve as a vehicle for players to create part of the background of the game and even engage in ‘storytelling’ (even if that story is the use of News Events as a weapon). Because News Events are not ‘caused’ by the issuer, they therefore, cannot be considered as inconsistent with any Meanings or Shared Meanings (see 3 Diplomacy generally, *infra*) that are held between the issuer and the target (though using News Events against Shared Meanings might be considered passive-aggressive behavior...playing outside the lines...stepping out). (*The Nature of News Events, 2 Dreamtime, p. 146*)

- Retaliation against a News Event should only be in the form of a News Event and should not occur ‘in the game’ (by activation of the Combat Power to attack the issuer, to ‘kill the messenger,’ for example) as the *issuer* of the News Event is not the *cause* of the News Event (such actions should be considered poor decorum). (*A Story of V, 2 Dreamtime, p. 146*)
 - However, a distinction must be made between: 1) retaliation in-game (e.g., Combats, Break Treaty, etc.) *against issuers* of News Events and 2) perceived retaliation *by issuers* of News Events against in-game actions.
 - For example, Position A launches a Raid or Strike against civilian targets at Position B’s colony (see 4 Carriers & Fighters generally, *infra*), it is *colorable* for Position B to subsequently issue a News Event indicating that some peaceniks of Position A’s government or population object to killing civilians, with a reasonably-related effect
 - This would actually be part of the natural storytelling flow of the game. Again, Position B is not the *cause* of the News Event (actually, Position A is) and should not suffer in-game retaliation by any other position for it.
- It is strongly suggested, as an insulation against game silliness, that News Events never be allowed to work *dues ex machina* effects.... (*Keep the Sand in the Sandbox, 2 Dreamtime, p. 147, see list of prohibitions in GGDM section text*)
- A position that is the target of a News Event may file a Diplomatic Protest with the Concierge against the issuer within 24 hours of the posting of the News Event by sending an email. The Diplomatic Protest will not be posted to the forums, unless requested. (*Diplomatic Protest, 2 Dreamtime, p. 148*)
 - A Diplomatic Protest does not require the activation of the Diplomatic Power, or any Power, and is not an Interpretation. Upon *acceptance* of the Diplomatic Protest, the Concierge will assess an Intervention Potential against the protestor and an Intervention Potential Plus (IP+) against the issuer of the News Event (another feedback loop of sorts).
 - *Hostility is not an argument.*
 - Any other position may second the Protest by sending an email within 24 hours of the original Diplomatic Protest email. A second to a Protest will cause the Intervention Potential assessed against the original protestor to be removed. A third to the Protest will add one Intervention Potential against the original issuer of the News Event. All subsequent support for the Protest will be ignored. (*Seconding That, 2 Dreamtime, p. 149*)

Modification of News Events:

- News Events are absolutely true (or false, depending on the spin assigned to the News Event) at the moment they are published on the forums (and this bears no relationship at all to what players believe is true or false about the game), and their effects are immediate and permanent. From that point on, however, the truth is negotiable as other positions are allowed to modify (but not contradict) the absolute true or false statements of the News Events. (*The Absolute Truth, 3 Dreamtime, p. 159*)
- Any News Event may be subsequently modified – but not directly contradicted (sort of a Rashomon effect) – by any position, including the source position, however, the source position may not be the first to modify its own News Event (otherwise, it wouldn’t be absolutely true or false at the moment of publication). Positions may modify News Events until such time as all positions have had a turn since the News Event was originally published (i.e. a Turn Cycle), at which time, it is closed and becomes history. (*And Nothing But the Fuzzy Truth, 3 Dreamtime, p. 159*)

- A position may only modify each News Event or a modification of a News Event once.
- Modifications to News Events by any position that is eligible to and desires to modify the News Event are posted on the forum by the Concierge in the thread for the News Event. The modification to the News Event must be submitted with the position's next turn actions, is considered a News Event for Power Activation purposes, must bear some reasonable relation to the News Event or the most recent modification, and may not directly contradict the original News Event or most recent modification (the Concierge exercises ultimate discretion). Like the original News Event, the modified News Event is absolutely true or false (for game purposes) at the time of the modification and the effects are immediate and permanent. Modifications can be legally modified, *ad nauseam*, until they become history. (*The Modified Truth, 3 Dreamtime, p. 160*)
 - Modifications can only be submitted with turn actions, so opportunities are limited.
 - A modification cannot be used to 'undo' a Power Activation (which would then undo the News Event based on the Power Activation) or manipulate, nullify, return, or reduce Acts and Scenes required for a Power Activation; News Events should (but are not prohibited from), for game sanity, avoid giving free Acts and Scenes. Don't ever wish for more wishes.
- *A modification News Event is a News Event in its own right.* Like the original News Event, all modifications to the News Event must contain the required elements and must specify which posted News Event is being modified. For the purpose of modification only, the prior News Event on which the modification is based replaces the Power Activation requirement, for all purposes, in the News Event that modifies a prior News Event. (*Forms of Truth, 3 Dreamtime, p. 160*)
 - Modifications of adverse News Events are automatically adverse News Events even if intended to help the original target position. The game makes no distinction. A non-adverse News Event cannot modify an adverse News Event, but must be its own top thread. Modifications of non-adverse News Events may be adverse News Events.
- Because a News Event is an Interpretation, a modification of a News Event may not modify or destroy the original News Event in the sense that it cannot directly contradict the original News Event or completely nullify the game effects of the News Event. However, since the 'modification' is itself a News Event, it carries its own equal force, it is a 'modification' of the original News Event in the sense that it is a continuation of the News Event upon which it is based. (*Subplots and Twists, 3 Dreamtime, p. 160*)
- ***I may have a tendency to over-explain, repeat myself, restate my points...but just in case, there is also an extended example of adverse news events and modifications in 3 Dreamtime based upon the history of the Red Army Purge.☺***

Expose' and Special Bulletin:

- A Special Bulletin is a News Event posted by the Concierge with an Intervention (see 2 Entropy, p. 235, *infra*). A Special Bulletin may be in any form desired, and may have any effect, or no effect; and may not be altered by the players. (*Expose' and Special Bulletin, 3 Dreamtime, p. 164*)
- An Expose' is an inviolate News Event posted by a position that is the result of the Reification of a Zeitice (see 4 Writs generally, *infra*). An Expose' may not be changed or altered in any way by other positions, and the Expose' may only affect the position posting it in reasonable relationship to the Zeitice that was reified. An Expose' does not require a Power Activation and does not report on a Power Activation. Expose' and Special Bulletins are both considered singular Absolute Truths in the game. (*The Expose', 3 Dreamtime, p. 164*)

Constructural Elements

Collective Consciousness:

- Put another way, the Public Space can be characterized as 'everything we can talk about in any real sense.' (*The Collective Consciousness, 1 Constructural Elements, p. 171*)

- The Public Space as used in GGDM is thus the phenomenological experience of a civilization (see Avi Sion feature quote, Epistemological Constructural Elements, p. 175, *ut infra*). Notably, well over half of what is in the Public Space has appeared to us *from our own minds*; most of what we call culture has little or no objective reality beyond us but is one of the ultimate realities to us. In this sense, this discussion has circled back to the definition of reality offered in Spaces, 4 Beginnings, p. 46, *supra*. (*Public, 1 Constructural Elements, p. 171*)
- ‘Spaces’ is a term used to denote a significant area of importance to which a civilization devotes real estate and economic and cultural activity, spaces feature prominently in urbanist studies, e.g., Edward Soja. It is not a shallow term of goods and services; once recognized, spaces tend to develop meaning reaching to the core of civilization. For example, each civilization has a ‘dead space’ in terms of real estate dedicated to cemeteries and public monuments to the dead (the subject of Ray Bradbury’s 1948 short story “Pillar of Fire”), plus all of the material and services related to burial or disposal of the dead, but beyond that, there is also a massive cultural significance and meaning attached to the whole process from individual persons to religion to insurance, civil and criminal legal resolution, to medical and philosophical issues. (*Spaces, 1 Constructural Elements, p. 172*)
 - Spaces may overlap depending on how they are defined, but the Public Space must necessarily be all inclusive and overlap over all of the other spaces in a civilization, it must be the entire sphere of a civilization.

Constructural Elements:

- All *appearances* to an individual consciousness or the collective consciousness of a group, civilization, have four innate/necessary qualities that connect them to everything else within the sphere or realm of consciousness. These are called Constructural Elements. In game terms, this means *that all ships and friendly/naturalized/converted colonies* have four potential innate qualities that ‘fit’ or ‘place’ them within the structure of civilization. (*Constructural Elements, 1 Constructural Elements, p. 172*)
 - The four ‘types’ of Constructural Elements – Temporal, Epistemological, Symbolic and Ideological – are the intrinsic qualities of all objects within our consciousness (or at least for game purposes), whether active or not. (*Innate Qualities, 1 Constructural Elements, p. 173*)
- **The Constructural Elements in GGDM are:**
 - Temporal
 - Epistemological
 - Symbolic
 - Ideological
 - *The Constructural Elements are only listed here for brevity sake, the discussion of them in 1 Constructural Elements is quite extensive and important to game play concepts.*
- Newly constructed ships have the same Constructural Elements as the world where they are constructed, on the turn they were completed. (*New Ships and Lost Worlds, 3 Constructural Elements, p. 204*)
- Population loaded onto Colony Ships (and Orbital Cities) will retain the Constructural Elements present on the source world at the time of their departure. Any new colony established by the Colony Ships will continue the Constructural Elements of the population on the Colony Ships and thereafter, become subject to the normal processes for activation or deactivation of Constructural Elements. When colonist are added to existing colonies that do not have matching active Constructural Elements, it is completely within the discretion of the Concierge as to the effect on the colony, whether some Constructural Elements on the combined Colony population might be activated or deactivated. (*Wet Paint, 3 Constructural Elements, p. 204*)
- The only way a colony world can lose its Temporal Constructural Element is by being removed from the Public Space. This should not be equated with removal from the Galactic Space, though that may occur as well. Colonies that are destroyed, completely evacuated, or are lost to another position or power and/or for whatever reason, are no longer subject to the sovereignty of their former position, are ‘lost’

from the Public Space. Generally, captured colonies should pass to the new owner with the same active Constructural Elements they had at the time of capture, though there is much room for interpretation and discretion by the Concierge and participants as to what that means; for example, the active Ideological Constructural Element of a captured colony likely will not be the “same” as the Ideological Constructural Element of the new owner’s position. *Emergent narrative is story. (Lost Worlds, 3 Constructural Elements, p. 204)*⁴

- A besieged colony is not a ‘lost world’; see discussion of Besieged Colonies, 3 The Sideral Stage, p. 124, *supra*.

Inactive Constructural Elements:

- All objects in the game have four Constructural Elements which connect them to their position in the game. Each Constructural Element of each object is considered to be either active or inactive at any time in relation to each position. The state of a Constructural Element for any object relates to one position in the game (the owner), is independent of all other positions, and cannot be shared. Constructural Elements of a position cannot be seen by another position – can you look into my mind and see what I believe? – thus they are secret, but hints may be received – as in the real world – from diligent observation of actions. (*Presence, 2 Constructural Elements, p. 189*)
 - Constructural Elements are activated by an activation of the Culture Power and are typically deactivated by a Disruption event; once activated, a Constructural Element cannot be ‘turned off’ voluntarily (and there would be no reason to do so) while the object remains within the position’s Public Space. However, the Temporal Constructural Element is automatically activated by placing the object in the Public Space and is always the last Constructural Element to be deactivated, which would cause the object to be removed from the Public Space. The Temporal Constructural Element cannot be deactivated by Disruption Event; the only ‘deactivation’ is by removal from the Public Space, i.e. loss or destruction. The Temporal Constructural Element is the English “to be” verb in its existential form, “to exist.”
- Active Constructural Elements affect the game, inactive Constructural Elements have no effect. (*When the Lights are On, 2 Constructural Elements, p. 190*)
- All Homeworlds and starting colonies and ships begin with all Constructural Elements activated. *Each successful Power Activation at a location has a 10% chance of making each active Constructural Element on sovereign ships and colonies at that location become inactive.* The less actives you have, and the less local activities, the less chance ... the universe punishes you if you stay in bed, the universe punishes you if you get out of bed. (*Power On, 2 Constructural Elements, p. 190*)
- The Host World of a College must have an active Epistemological Constructural Element; if it becomes inactive, the operation of the College is suspended. (*Skool Tyme, 2 Constructural Elements, p. 190*)
 - Any object – ship or colony planet – that does not have an active Epistemological Constructural Element may not (50% chance) be able [to] receive the effects of College Faculties (i.e. Enlightenment, whether for use in die rolls, including Combat, or Institutes on that colony). This applies to rerolls of Power Activation failures as well.
 - A Research Group (see 2 Technology, p. 700, *infra*) that is not adjacent to a colony with an active Epistemological Constructural Element becomes *disrupted* and cannot be Developed to the Era Matrix, but is not removed from the Public Space.
- The Capital Colony of a position must have the Symbolic Constructural Element activated; if it becomes inactive, the *Capital status* of the colony is suspended. (*Waving the Flag, 2 Constructural Elements, p. 190*)
 - A Capital Colony must have a Symbolic Constructural Element to serve as a connection to a Diplomatic Space; without it, the Diplomatic Space is inaccessible.

⁴ A ‘captured colony’ is synonymous with Conquered Colony political status; Conquered Colonies were originally called Captured Colonies but the terminology was changed at some point to make it clearer and to differentiate them from generic uses of ‘capture.’

- And since symbols drive sapience – think of political slogans and advertising, active Symbolic Constructural Elements are also a required part of Fuzzy Groups (for Writs) and Zeitrice (for Exposé) formations. See Fuzzy Formations, 4 Culture, p. 405, *infra*.
- Most activations of the Diplomatic Power are unavailable while the Capital colony's status is disrupted, as well as the inability to access Diplomatic Spaces. See Stepping Out, 1 Diplomacy, p. 1096, *infra*.
- An active Ideological Constructural Element is required for any object to be effected by the activation of a Writ. Because of the number of possible different situations that might occur, the Concierge will judge and rule on specific situational requirements. In the alternative, the Concierge may determine that Writs may affect objects with inactive Ideological Constructural Elements to a lesser extent than they would if an active Ideological Constructural Element were present. (*Body Politic, 2 Constructural Elements, p. 191*)
 - An active Ideological Constructural Element is also required on any Friendly or Naturalized colony planet adjacent to a Fuzzy Group in the Public Space to form the Fuzzy Group.

Power Activation Failure:

- Colonies and ships have a base 5% **plus** 15% chance per inactive Constructural Element of *not obeying each Power Activation* (including Cultural Activations for the purposes of Cohering, see 5 Culture, p. 421, *infra*) that applies to them. (*Power Off, 2 Constructural Elements, p. 193*)
 - For example, a colony might not respond to Taxation or a ship may not respond to a Combat Power activation.
 - However, colonies will *always follow a Census Power Activation* and units will always defend themselves (defense in Combat is never a Power Activation anyway).
 - Some Power Activations require only one activation failure check of ships or a colony, some require checks of both the ship and colony involved. Power Activations that *fail* any check **will not execute**.
- Acts, Scenes and RPs *are not used* for location-specific Power Activations that fail. This blanket rule may or may not be realistic, but for game purposes, it avoids having to distinguish global Power Activations that can fail at each planet, such as Taxation or Cohering... It simply means rainchecks have been issued. (...*But Nobody is Home, 2 Constructural Elements, p. 194*)
 - As mentioned previously, loss of the Temporal Constructural Element means that the object is no longer in the Public Space (and potentially the Galactic Space as well) and cannot be affected by Power Activations; Temporal Constructural Elements cannot become inactive due to Disruption Events, so there is always a 50% chance [of Power Activation success]....
- Not every Power Activation is capable of failing due to inactive Constructural Elements. Constructural Elements apply to *location-specific activities*, i.e. those that occur at colonies or on ships; they apply to units in GGDM (see game units discussion, View from a Height, 1 Construction, p. 660, *infra*). Power Activations that target specific ships and colonies can fail, but global or positional Power Activations often fly over the checks. (*Decentralized Resistance, 2 Constructural Elements, p. 194*)
 - Enlightenment, discussed in 2 Colleges generally, *infra*, can serve as a sort of 'band-aid' for Power Activation failures due to inactive Constructural Elements by forcing rerolls of failed Power Activations. It is a matter of priorities and demands, but generally, constant use of Enlightenment for this purpose is not best practice.
- Power Activation checks only occur on Regular Turns, thus units in combat will not fail to obey their Combat Orders each Combat Round due to inactive Constructural Elements (see Relativity, 2 The Streams of Time, p. 85, *supra*; Regular Turns and Combat Round run independently of each other). However, they may be unable to benefit from Enlightenment in Combat due to inactive Epistemological Constructural Elements. This may make some units heroic or elite as compared to others who cannot benefit from Enlightenment in Combat. (*Traitors Will Be Shot, 2 Constructural Elements, p. 195*)

Entropy

- Entropy is the pervasive natural tendency of the universe, it is the chaos that exists just beyond order. Order and systems are imposed by intelligent life and some other natural forces of the universe, but as any system expands, as the universe continues to expand (and become less and less absolute), entropy seeps in and breaks down order. (*Entropy Is...*, *1 Entropy*, p. 214)
- The Concierge applies Entropy creatively in different ways for the benefit of the game. (*Entropy Is Not Constant*, *1 Entropy*, p. 214)
 - Interventions should rely significantly upon and frequently reinforce the position's **Fundamental Realities** either as historical echoes or as reactions to departures violations by the position during play. During the game, it is probable that many players will forget about their Fundamental Realities, they will fade into the background. ... It is the providence of the Concierge to keep the Fundamental Realities *in play* alongside Interventions based on the unfolding events of the game and the storytelling arc.
- Entropy as used in GGDM is primarily an application of Social Entropy Theory salted with a little 'stupid crap happens' for storytelling purposes. (*SETiGGDM*, *1 Entropy*, p. 220)

Intervention Potentials:

- Entropy is the 'player position' of the Concierge; it is the means by which the Concierge can participate in the story of the game. The Concierge interacts with players in various ways while running the game (such as processing turns, News Events, and Patents), but Interventions provide a special ability for the Concierge to influence the game directly. Perhaps you guessed that Interventions happen without warning or permission of the position players...? (*Interventions*, *1 Entropy*, p. 227)
 - **Fundamental Realities** are an important part of the Concierge's position in the game. Some Intervention Potentials should be used to prod a position to act within their Fundamental Realities and when the position is acting in ways inconsistent with their Fundamental Realities, these Interventions would be deemed helpful and good and not entropic and harmful [to the game]. For example, a position whose Fundamental Reality says that its' Native Population Type has a 'migration urge' might receive 'helpful' Interventions by the Concierge when Loading Population on Colony Ships. The Load Population mechanics (see Sardine Tins, 3 Expansion, pp. 911-912, *infra*) provide no bonuses or variance for Fundamental Realities, and thus it would be incumbent on the Concierge to possibly give a little boost so the Fundamental Reality has real effect. (*Indifference*, *1 Entropy*, p. 229)
- The Concierge receives one Intervention Potential each time a Regular Turn is processed. Interventions should be used when appropriate but may be retained from turn to turn, indefinitely (i.e. they never 'age-out'). The Concierge may use any number of available Interventions in a Regular Turn or Turn Cycle. Interventions may be used freely and do not have to be directed to the position from which they were generated. They *should* be used, however, as there are few good reasons not to intervene regularly. (*Interventional Potentials*, *1 Entropy*, p. 228)
- Each use of an Intervention requires a Special Bulletin news posting. All Special Bulletins by the Concierge are considered to be absolutely true, with the exception of Prose Bulletins. Of course, when using Interventions the Concierge will operate from their superior knowledge of the game. (*Intervention Bulletins*, *1 Entropy*, p. 228)
 - Interventions should fit the *scale of the game* and advance the story or keep the game interesting with new twists. (*Intemperance*, *1 Entropy*, p. 228)
 - Interventions are not always negative, destructive, or 'bad' nor are they required to be. An Intervention can be positive, negative, or neutral, good, bad or just ugly; and the view depends on the observer. (*Indifference*, *1 Entropy*, p. 229)
 - The daily news provides plenty of examples and inspirations for Interventions by the Concierge; knowledge and understanding of history and historical conditions adds nearly infinite options

and ideas. Most good fiction comes from or is based more or less on history and reality; it helps with suspension of disbelief... (*Inspiration, 1 Entropy, p. 230*)

Acts of Intervention:

- Each Intervention Potential equates (in most cases) to one Intervention act at a later time, a potential is subtracted each time an Intervention occurs. The following five types of Intervention Actions should provide the Concierge with the tools needed. It is possible that other types of interventions may be invented later as necessity dictates. (*Acts of Intervention, 2 Entropy, p. 235*)
 - GGDM is a macrosocial simulation; because of this, the divergence of local interests and cultures on colony planets isolated and separated by light years is diminished and minimized in favor of a broad picture of the largescale civilization. This is one deficiency of the game where the intervention of a human Concierge can improve the game and keep it interesting.
 - At the bottom of *every* adventure story is a sense of *divine intervention*; unusual events need to happen, things have to appear in convenient places and times to special people (the protagonists) to move the story along. Fiction writers are gods.
- **The Interventions available to the Concierge in GGDM are:**
 - Push
 - Pull
 - Plot
 - Poke
 - Prose
 - *These acts of intervention are listed here for brevity purposes, see original GGDM text for descriptions.*
- The tools given to the Concierge are not autocratic, though admittedly, sometimes in the GGDM text, the tone seems as if they are intended to be or may need to be – *all participants* must have equal standing to weave the crazy game story. (*Punch in the Nose, 2 Entropy, p. 236*)
 - There is room within the powers and imaginations of the Concierge to introduce into the game all manner of subcultures ... GGDM is designed to simulate civilizations and historical process at a generally macro-level, and without such Interventions by the Concierge at least, or even with a little cooperation from the players or among the players, GGDM's civilizations might seem rather mechanical, bland and banal. It is thus the task of the Concierge to understand generally the narrative and dynamics of the game, and to not be afraid to toss in the monkey wrench (e.g., Joan of Arc, Hong Xiuquan, Marisa Coulter) at opportune and dramatic times and locations during the game; the Concierge needs to not only be thinking with the game, but also, ahead of the game. (*Human Driftcourse, 3 Entropy, p. 246*)
 - **Examples of local or subcultural drift included in this section:** Frontier Drift, Cultural Drift, Language Drift, Oligarchic Drift, Spatial Injustice, Economic Inequalities, Political Drift, and Bureaucratic Drift. *These are listed here only for brevity sake, see original GGDM example quotes and text.*

Disruptions

- A Disruption Event is a game term for events that loosely and generally include:
 1. Hostile aliens (oh my goodness!), especially the technologically advanced kind;
 2. Population loss, colony loss or damage, Raids and Ground Combat on Colonies;
 3. Voluntary or involuntary removal of colony populations and industry;
 4. Loss of colony and trade ships;
 5. Sieges;
 6. Changes in Government;
 7. Loss of institutions, including Colleges, MegaCorporations, Corporations;
 8. Diplomatic isolation, economic isolation;

9. Wars and battles. (*A Disruption, 1 Disruption, p. 255*)

- Disruption is the term used in GGDM to represent the various aspects of societal collapse, systemic and government changes and population movement. “Disruption check” refers to specific game procedures to be followed in situations where disruption is triggered. (*Disruptive Nature, 1 Disruption, p. 258*)

Disruption Check at Colonies (Rockn’ the Casbah!):

- Whenever a Disruption Event occurs at a colony, at the moment of the Disruption, one check is made for each active Epistemological, Symbolic and Ideological Constructural Element (Temporal Constructural Elements are not checked). The check is always made in the form of a percentage chance that each *active* Constructural Element will become *inactive* at the site of the Disruption Event (sorry, it never works the other way!). (*Interesting Times, 2 Disruption, p. 272*)
 - The percentage is calculated as a base percentage (‘chance’), which varies by situation, plus 3% per Government Title over three (that is, plus 3% for four Titles and plus 6% for five Titles) regardless of the Title’s current status.
 - Additionally, 5% is added per currently disrupted Government Title.
 - Finally, 2% is added if the position had any Disruption Event the previous Turn Cycle and 8% is added if the same colony had a Disruption Event the previous Turn Cycle.
- Constructural Elements may also be inactivated by adverse News Events, which is not a Disruption Event. (*Interesting Times, 2 Disruption, p. 272*)

Colony Disruption Events:

- In specific game terms, a Disruption Event has two effects. First is an immediate ‘check’ to see if any Constructural Elements have been rendered inactive at the site of the disruption. Additionally, the event generates an Intervention Potential Plus attached to the position that suffered the Disruption Event, which the Concierge may use later, hopefully in a creative exploration of the continuing effect of the disruption and its interactions with Fundamental Realities (see discussion 1 Entropy, p. 215, *supra*). (*Stewed, Brewed, Boiled, Baked or Fried, 1 Disruption, p. 285*)
 - Failed Power Activations cannot by themselves, for game logic reasons, be Disruption Events – that would create a vicious cycle (or negative feedback loop).
- Unsurprisingly, the main source of Disruption Events is population. Disruption Events in GGDM are only normally caused by or applied [to] population on colonies (and Government Titles). A Disruption Event occurs:
 - Whenever population is removed from or added to an existing colony (either voluntarily or involuntarily, excluding the initial Landing of Colony Ships to establish the colony, see Sardine Tins, 3 Expansion, p. 911, *et. seq., infra*) or colonized planet,
 - Whenever population is alarmed or in fear for their lives,
 - Whenever population is lost by any destructive or non-destructive means (for example, population lost due to exceeding the Maximum Habitability of the colony planet, see Dayworld, 3 Taxation & Census, p. 315, *infra*), and/or
 - Whenever a colony or colony ships are captured or destroyed (see Planet Narn, 3 Taxation & Census, p. 316, and Combat generally, *infra*).
 - Any of these Disruption Events may result in inactivation of Constructural Elements (that is, it is considered a Disruption Event regardless of whether any Constructural Elements are inactivated as a result), plus secondary effects, and generation of a single Intervention Potential Plus (IP+) for the event. Each Disruption Event can only occur at each colony once per Turn Cycle (see definition in Buzzing Lightyears, 4 The Streams of Time, p. 101, *supra*); that is, the time from the owner’s last Regular Turn to the end of the owner’s current Regular Turn.
 - A Besieged Colony’s Constructural Elements cannot be effected by the blockading warships during a Turn Cycle where the colony began besieged (see Besieged Colonies, 3 The Sidereal Stage, p. 124, *supra*), however, the besieged colony can suffer a *Disruption Event* as a result of the loss

of a Ship to Ship combat on the same Regular Turn it becomes besieged; additionally, a colony that begins the Turn Cycle besieged may be affected by *other Disruption Events* resulting in the loss of population, industry and such from Raids/Strikes (see World in Flames, 4 Carriers & Fighters, pp. 1083-1088, *infra*), Special Operations Black-ops (see 2 Special Operations, p. 1297, *infra*) and so forth. A colony that has a current, ongoing Ground Combat situation is not a besieged colony. A Besieged Colony can also be affected by Concierge use of Interventions (in fact, that's half the fun of it!☺). (*Rousing the Rabble, 2 Disruptions, p. 271*)

- **List of ten general categories of Colony Disruption Events in GGDM:**
 - Population Factors Loaded to Colony Ships: Base 2% (*Highschool Friends, 2 Disruption, p. 272*)
 - Population Unloaded to colony of same population type: Base 5% (*The New Neighbors, 2 Disruption, p. 273*)
 - Landing colony on planet that already has an **alien colony**: Base 4% or 8% (*Forced Balkanization, 2 Disruption, p. 273*)
 - Surface population growth lost during Census due to exceeding Maximum Habitability or due to reduction of Maximum Habitability and/or Habitability Class: Base 3%, 5% or 8% (*Peaches for Mad Molly, 2 Disruption, p. 273*)
 - Population lost due to destruction of Colony Ships or Orbital Cities that were loaded at that colony: Base 2% and 4% or 3% and 10% (*Vesta and Tellus, 2 Disruption, p. 274*)
 - Destruction of surface population due to hostile action: Base 15% (*Mars Bombing Run, 2 Disruption, p. 274*)
 - Loss or retreat from ship combat in same system as colony, loss of all colony defenses or alien warships at colony with no defenses: Base 10%, 20%, First Contact +5% (*The Burning Sky, 2 Disruption, p. 275*)
 - At the end of each turn where there is an ongoing Ground Combat at the colony: Base 20% (but there are a plethora of modifiers to apply) (*Downfall, 2 Disruption, p. 275*)
 - Removal, destruction, dissolution of College or Corporate/MegaCorporate Headquarters from Host Colony or failure to Endow the College: Base 5% or 10% (*Extinguishing the Light, 2 Disruption, p. 275*)
 - Taking greater than normal RPs from colony during Taxation: Base 10% (*Borrowing the Future, 2 Disruption, p. 276*)
 - *This list is a summary for brevity, to give the reader a general idea, for specific details of application, see GGDM rules text.*
- **Special Enhancements relating to the end of a Ground and Colony Combat:**
 - At the end of any Ground Combat in which the defending colony was victorious, there is a 15% chance of each Constructural Element becoming inactive (*ut supra*) at the colony. (*The B-Team, 3 Disruption, p. 281*)
 - At the end of any Colony Combat in which the defending colony was victorious, a 5% chance that each Constructural Element becomes inactive at the colony.
 - These latter two are in addition to any preceding or subsequent Disruption Events that may have occurred as a result.
- Any Constructural Element inactivation rolls applying to a colony at the time it is captured (or reverted) are applied *before* transfer of sovereignty. The Constructural Elements of a Conquered Colony are aligned with those of either their former owner or of the position representing their Native Population Type (this is a judgment call for the Concierge), and thus, the Conquered or Converted Colony doesn't automatically assume the ideology, symbolism or epistemology of the new owners; even if captured (or liberated) by the previous owners or the position representing their Native Population type, the colonist outlook will be different, especially if a long period has passed since the last capture and/or the colony has been significantly altered. (*'Til We Meet Again, 2 Disruption, p. 276*)

- A colony whose population *is completely destroyed* by hostile action or environmental (habitability class) failure still generates an Intervention Potential Plus (IP+) attached to the former colony's owner and the position representing the Native Population Type (one IP+ if same), but obviously loses all of its Constructural Elements, including the Temporal Constructural Element and thus there is no necessity for deactivation rolls. (*The Way of the Dodo, 2 Disruption, p. 276*)
- Below are special circumstances that adds to the Base Percentage of or triggers additional Disruption Event for those populations. For Naturalized Population, this acts as an additional Disruption Event to whatever other events may affect them. One Intervention Potential is assessed against the current 'owner' (sovereign) of the populations **and** one Intervention Potential Plus against the position representing the Native Population type. (*Expatriation, 2 Disruption, p. 278*)
 - **List of enhancing factors for Colony Disruption Events:**
 - Population removed from Conquered or Converted Colony: +5% to Base Chance (*Eviction Notice, 2 Disruption, p. 278*)
 - Looting a Conquered Colony: +25% to Base Chance (*Hager's Faucet, 2 Disruption, p. 278*)
 - In the case of Minor Races, the Concierge may make a judgment call regarding assessing the IP+ against any position. Example, if a Major Position has placed the Minor Race under its protection; an Intervention Potential Plus may be assessed against that position due to loss of prestige from allowing the Minor Race to be forcibly removed from their Homeworld. In other situations, if the removal is repugnant to the position making the eviction, an IP+ might be assessed against that position. In many cases, where the Minor Race has no relationship to anyone, the Concierge may instead generate Intervention Potentials. (*Trail of Tears, 2 Disruption, p. 278*).
 - *This list is presented for brevity purposes, for details, see GGDM text.*

Intervention Potential Plus:

- Normally, one Intervention Potential is generated for each time Regular Turn Actions are processed and the Intervention Potential can be used for one Intervention Action (from the previous list) at a later time. ... The 'plus' means that the Intervention Potential must be used for two Intervention Actions at the same time (e.g., perhaps two Pokes, like the Three Stooges) directed to the position that generated it. Additionally, it follows that the Intervention Potential Plus (IP+) is forever tied to that position that generated it, and cannot be used to affect any other position directly. (*Interventions Plus, 1 Disruption, p. 259*)
 - On any Regular Turn when a position has a Disruption Event (whether voluntary or involuntary), an Intervention Potential Plus (IP+) is generated instead.
- Each Regular Turn that a Social or Estate Title is disrupted generates an Intervention Potential Plus attached to that position. Further, each turn in which a voluntary or involuntary change of Government Titles occurs or is in process, an Intervention Potential Plus attaches to that position. Participants may choose to limit this to one per turn. (*Changing the Gardener, 2 Disruption, p. 271*)
- Where possible, an Intervention Potential Plus (IP+) *should be used to generate two related Interventions* (which may also echo into other events such as Government Title disruption and diplomatic actions). (*Double Your Troubles, 1 Disruption, p. 259*)
- GGDM places a heavy burden on the Concierge, which the players can make lighter by keeping the game fun and interesting. Still, it is likely that the Concierge will not always have great freak'n ideas for Interventions (along with News Events, Reformations, Kairotic Moments, Patents, Writs, Special Operations, Special Planets, Fundamental Realities) and a significant number of unused Intervention Potentials may buildup – rather defeating the purpose of Interventions as part of GGDM. (*Too Late for the Pebbles to Vote, 1 Disruption, p. 261*)

Ship Disruption Events:

- Ship Constructural Elements are affected mainly by two sources: Combat losses in crew and psychological fatigue (i.e. attrition) and by contact with colony populations (both friendly and alien). (*Schwarze Kappelle, 3 Disruption, p. 281*)
 - Whenever a ship survives a combat – that is, the combat ends with the destruction of all enemy units and/or a complete retreat of one side – there is a 15% chance that each Constructural Element on the surviving ships (except the Temporal Constructural Element) will become inactive. This is not the same as The Burning Sky, 2 Disruption, p. 275, *supra*, which applies only to any sovereign colonies left behind. (*The B-Team, 3 Disruption, p. 281*)
- Any *ship* that Unloads, Loads or Transfers Cargo, Population, *Supplies* or any Enhancements (including Looting and Trucking) to or from a non-sovereign **alien colony** planet (including Orbital Cities – regardless of whether the colony is owned by the position that controls its Native Population Type or whether there is also a sovereign colony on the planet – or *ship or Ground Unit* that participates in Pacification Combat on a Conquered Colony or Orbital Bombardment of any colony, has a chance at the end of the Regular Turn of having one or more active Constructural Elements become *inactive*, regardless of the status of Constructural Elements on the **alien colony**. (*Alieney Apostasy, 3 Disruption, p. 283*)
 - This effect cannot occur if the Power Activation failed due to inactive Constructural Elements because the acts never occurred. Sometimes bad luck is a good thing.
 - Landing Colony Ships (see 4 Expansion, p. 920, *et seq., infra*) on a planet that has an existing non-sovereign **alien colony** (i.e. ‘forced Balkanization’) does not fall within the categories listed above. Additionally, the Colony Ship no longer exists after the Landing (unless participants have modified the basic technology).
 - **Alien colonies** for this purpose include both Minor Races (see Mathó Thípila, 4 Diplomacy, p. 1140, *infra*) and even colonies of Native Population Types related to the position as a Lost Colonist Primal State (see 6 Beginnings, p. 63, *supra*) and Conquered Colonies being Looted.
 - The chance of each *active* Constructural Element (except the Temporal Constructural Element) becoming *inactive* on the participating ship(s) is 10%.
- Constructural Elements converted to *inactive* by contact with a non-sovereign **alien colony** or a Looted Conquered Colony may not be changed to active status by any means until a Census Power activation has occurred for the owning position (probably should be marked in **red** or **glowing green**). As the ship Constructural Element checks do not occur until the end of the Regular Turn, activation of the Census Power on the same Regular Turn as contact with the **alien colony** is ineffective. (*The Apostasy, 3 Disruption, p. 284*)
 - **Note that this condition of inactive Constructural Elements that cannot be made active until the Census Power is activated is referred to throughout GGDM as ‘apostasy,’ which generally only affects ships. Apostasy becomes contagious during a Kairotic Moment event.**
 - There are costs to activation of the Census Power beyond Acts, Scenes and use of a Power Activation; some proficiencies may also be lost and some colonies near Maximum Habitability could suffer Disruption Events, see Peaches for Mad Molly, 2 Disruption, p. 273, *supra*, And the Cradle Will Rock, 3 Culture, p. 382, *infra*. Activation of the Census Power represents a turnover of generations in the civilization. (*Don’t Hand Me No Lines & Keep Your Hands to Yourself, 3 Disruption, p. 284*)

Ship Flickering:

- A newly constructed ship has the same Constructural Elements status as the origin colony, the population from whence the original crew is drawn. (*Mutiny on the Bounty, 3 Disruption, p. 282*)
 - A ship located in-system with a Friendly, Naturalized or Converted sovereign colony at the end of any Regular Turn whose inactive Constructural Elements are opposed by matching active Constructural Elements on the colony has a 5% chance that the inactive Constructural Element will change to *active* status.

- A ship located in a system with a Friendly or Naturalized sovereign colony at the end of any Regular Turn whose active Constructural Elements are opposed by matching inactive Constructural Elements on the colony has a 8% chance that the active Constructural Element will change to *inactive* status.
- A ship located in a system with a Converted sovereign colony at the end of any Regular Turn whose active Constructural Elements are opposed by matching inactive Constructural Elements on the colony has a 10% chance that the active Constructural Element will change to *inactive* status.
- Multiple checks may be made if multiple colonies are in the system (resulting in a flickering of Constructural Elements on ships) even if they are the same planet (e.g., a planet with both a Friendly colony and a sovereign Converted **alien colony**).
- Checks for non-sovereign **alien colonies** are made before checks for sovereign colonies that may be in the same system or on the same planet. As above, multiple checks may be made if there are numerous qualifying colonies in the system. (*Alieney Apostasy, 3 Disruption, p. 283*)
- Note that the widespread ‘cure’ for inactive Constructural Elements is by activation of the Culture Power for the purpose of Cohering and that the only means of ship Constructural Elements becoming inactive are combat and exposure to (i.e. ‘infection by’) being located at colonies that have inactive Constructural Elements, with the chance that the process could work the other way as well.
- It is only the opposition of Constructural Elements that causes change, and the changes here only apply to ships, not the colonies; matching Constructural Elements statuses do not invoke these rules. If a ship remains in a system long enough, there likely is a point at which the status of the Constructural Elements of the ship and colony will come to match.... Cohering successes can cause a ripple effect to ships at colonies in addition to the possibility that the ships may be directly ‘corrected,’ ‘reeducated,’ by the Cohering Culture Power activation. (*Gilligan Won’t Go Home, 3 Disruption, p. 283*)

Taxation & Census (Vital Powers)

- Activation of the Taxation Power allows a player to collect resources from *all* eligible colonies on the turn of the activation. (*Life, Taxes, Death, and Taxes, 1 Taxation & Census, p. 296*)
 - Activation of the Census Power allows the position’s native and naturalized populations to ‘grow’ on *all* eligible colonies on the turn of the activation.
 - The Taxation and Census Powers may each only be activated once per turn, but both could be activated in the same Regular Turn.
- Activation of the Census Power requires two Acts and no Scenes, while activation of the Taxation Power requires either three Acts, or two Acts and a Scene placed on the Capital. (*Life, Taxes, Death, and Taxes, 1 Taxation & Census, p. 296*)
 - Additionally, activation of the Census Power likely will cause the loss of Proficiencies on the Public Space (see *And the Cradle Will Rock, 3 Culture, p. 382, infra*) as a new generation turns over, thus activation of the Census Power also has a wider effect on the Public Space.
 - The Taxation Power is the second most expensive Power activation, and will usually be processed last in the sequence (see *Clockwork Universe, The Streams of Time, p. 90, supra*) *except* when the Culture Power is activated to Found a College (see *Foundation, 1 Colleges, p. 457, infra*). The ability to either use three Acts or two Acts and a Scene on the Capital Colony provides flexibility.
- Taxation and Census Power Activations are not targeted to specific colonies or do not affect just a single colony (unless the position has only one colony). Activation of the Taxation and Census Powers, unlike many other Power Activations, is a global event that affects *all eligible* sovereign colonies of the position, even if they cannot grow or contribute (eligibility will be discussed in 2 & 4 Taxation & Census, *infra*). (*Tax Revolt and Revolting Taxes, 1 Taxation & Census, p. 297*)

- Each colony is checked during Taxation to see whether it obeys the Taxation Power activation (i.e. due to inactive Constructural Elements, see Power Off, 2 Constructural Elements, p. 193, *supra*), some colonies might not pay their taxes. Failure of the Taxation Power activation at any colony does not count as a Power Activation failure for Government Title Conflict Checks (see 3 Government Titles, pp. 613, 615, *infra*) *unless* all eligible sovereign colonies fail Taxation (this could be really bad if you only have one colony...).
- However, *the Census Power is immune to inactive Constructural Elements* and thus requires no checks at each colony (they will never fail to reproduce) but may result in loss of Proficiencies (*ut supra*).
 - Population on Colony Ships do not grow during the Census Power activation.

Resources & Treasury:

- It is assumed that all colonies are basically self-sufficient, being as they are, isolated islands separated by vast interstellar space. But all colonies also desire goods and services from other places and will work to make a profit. (*Resources, 2 Taxation & Census, p. 301*)
 - It is also assumed that colonies must look first to their own infrastructure, civil safety and order, and domestic subsistence, therefore, the amount received in taxation from the colony or any resources carried away in trade activities represents the excess production of the colony, ***above and beyond current culturally accepted levels of comfortable living*** that is available for the building of an interstellar civilization.
- The ‘money’ of the game, the resources immediately available for the use of the interstellar government, are measured in the form of Resource Points, hereafter, “RPs.” While RPs do share many of the same functions as money in the real world, it would be a mistake to think of RPs as simply ‘money’ in the traditional sense. RPs represent instead, all of the kinds of resources available, from raw materials to intellect to time and the faith of the population. RPs represent some things that cannot be obtained with money (such as intellect and population) while ‘money’ only represents the holder’s potential to obtain the resources available at that time in his society, and a rough relative measure of the value of one resource against another. Resources are whatever a culture needs to do a job. Resource Points without people is a pile of rocks in the middle of a field of ragweed. For game convenience, RPs are always measured, added, subtracted, and used in whole units, any fractional units are lost. **RPs must always either be in the Treasury or on a Cargo Ship** (or in some cases, reserved for a specific purpose, but still technically in the Treasury). (*What You Got, When you Get, 2 Taxation & Census, p. 303*)
- RPs collected during Taxation are kept in an *imaginary* floating pool of resources called the Treasury. The Treasury is purely fictional, it has *no actual location* and it can’t be captured, looted, or robbed (unlike Ft. Knox). (*Treasury, 2 Taxation & Census, p. 303*)
 - The Treasury represents the flow of the economy, the ability to trade information on developments and technologies, the work ethic of the population, and the ability of goods and services to flow along a developed infrastructure in the way that makes a nation and a civilization. Resources from the Treasury are used for activities when Powers are activated, such as for cultural traits pieces, endowing Colleges, researching technologies, and planetary development. However, there are limits to which the resources from the Treasury can be channeled to any particular colony due to the local limitations of time, manpower, and the arrival of materials. Thus, a colony cannot build 500 RPs of ships in a single Regular Turn because your position has 500 RPs in your Treasury! Time and planning are necessary to this game.
 - As a general guide, positions must have RPs in the Treasury before most Power Activations that require RPs because most actions are processed before Taxation in the normal Regular Turn Actions processing sequence.
 - Unlike in the real world, ‘taxes’ in GGDM are paid in resources.
- Resources don’t last forever; you have 50 apples today, a month from now you will have 50 rotten apples crawling with bugs. While resources are accumulated as ‘points’ in an imaginary pool called the

Treasury, at the end of each Regular Turn (or Turn Cycle if Regular Turn Actions are not submitted or processed), between 10% and 30% of RPs *in the Treasury* will be automatically lost due to various general entropic effects (this is not a Concierge Intervention). Five percent will be added to the loss for each disrupted Government Title at the end of the Regular Turn. Even ‘money’ while it arguably lasts forever, will eventually decrease in value due to natural inflation. (*Aging Resources, 2 Taxation & Census, p. 304*)

- RPs on Cargo Ships do not ‘age-out’ so it is possible to end-run the aging process by storing RPs on Cargo Ships. Presumably, they represent hard RPs, not soft RPs, however, RPs loaded onto Cargo Ships become immediately less useful (e.g., you cannot use them to fund Technological Research or recruit Special Operations Missions). If this becomes an abuse in the game (and players should never seek to abuse the mechanics of the game), there are ways of dealing with it in-game, e.g., Interventions.
- As automatic entropic effects are already built into the game system through aging of resources, the Concierge should act cautiously in applying Interventions against position Treasuries (e.g., to simulate corruption). Additionally, direct loss of RPs from the Treasury should probably not be allowed as effects in adverse News Events, for the reasons cited above, plus that it is problematic based on the abstract concept of the Treasury. This does not mean that catastrophes cannot happen to good planets, locally affecting RPs.
- Unlike money, resources are not redeemable or transferrable for anything; you must have the correct resources in the right place at the perfect time. GGDM is intentionally rather blurry on that subject, using a very expansive definition of RPs and generally assuming that the resource conditions are correct when RPs are used for Power Activations. Thus, RPs seem like money in the game, but there is room for interpretation and Interventions. Additionally, RPs in GGDM age, whereas money never does generally (it isn’t around long enough!).

Taxation Power:

- Taxation is the process of ‘making’ the colonies produce RPs for the Treasury for use in other activities (or collecting RPs from colonies for use in other activities). (*The Taxman Cometh, 2 Taxation & Census, p. 306*)
 - All population factors (native or alien) on all colonies owned by the taxing player, *except* for Conquered Colonies (see Colony Politics, *et seq.*, 2 Order, pp. 538-539, *infra*), produce 1 RP for every five factors of population on colonies. Resources from population factors generally represents ‘man hours’ and non-material mental resources rather than the kind produced by hard core Industry, but for the purposes of the game, they all go into one undistinguished pool of resources. Income from populations are calculated per colony (colonies cannot combine); odd or leftover factors are dropped (truncated) and produce nothing. Therefore, a planet with 62 population factors would produce 12 RPs, which then go to the Treasury. (*Resources from Population, 2 Taxation & Census, p. 306*)
 - Technology (i.e. Patents) cannot be used to directly improve the resource production of population factors during Taxation. All of the means by which production is increased, including automation, personal computers, cyborg implants (if your species is into that sort of thing), telecommunications, transport systems, and such, are classified under the *Industry Existential Patent*; therefore, Industry Installations on colonies do not only represent ‘factories’ and production centers, but the entire infrastructure by which a civilization produces the raw materials, food, manufactured goods, and services needed. However, it is possible to temporarily increase the resource production of population factors by use of Writs, College effects, and possibly other Interpretations, which address non-technological, non-material subjects, such as beliefs, ethics, education, organization, and national and social will. (*Cyberia, 2 Taxation & Census, p. 311*)

- Unlike population, all of the Industry of the position (excluding Conquered Colonies) is totaled and then multiplied by the production value per Industry and that amount is added to the Treasury in RPs. So, if a position's current Industry Patent (with COTs that improve industrial production, see Continuous Operational Technology, 2 Patents, p. 740, *infra*) allows Industry to produce .5 RPs per Industry installation, and that position has 30 industry, then the position receives 15 RPs from Industry during Taxation. Industrial production depends entirely on development of technology and the industrialization of colony worlds. (*Resources from Industry, 2 Taxation & Census, p. 306*)
 - The production of Industry is based on the state of the position's industrial technology (measured in RPs produced per Industrial installation) as of the end of the last Regular Turn (that is, a position may not use improvements in industrial technology in the current turn to boost industrial output during Taxation).
- Colonies on Special Planets produce more RPs because there is something special about their planet that allows them to produce something unique and vital to the interstellar civilization. On a Special Planet, production of RPs is increased by 30 to 50%. As players will note, Special Planets are often Hostile Planets and/or are difficult or dangerous to colonize, thus they may require development of Controlled Environment Technology (see Colony Cans and Building Up, 1 Expansion, pp. 879-880, *infra*). The Concierge may impose other requirements. (*Resources from Special Planets, 2 Taxation & Census, p. 307*)
 - Special Planets should not be confused with Specialized Colonies, which are described in 4 Expansion, p. 925, *infra*. It is possible though that Special Planets may be the site of or require Specialized Colonies.
 - Generally, Special Planets are Unpleasant or Hostile places (what else would you expect?), so come prepared. They may also be inhabited already. Yeah, it can get complicated. (*Salusa Secundus, 3 Taxation & Census, p. 316*)
- It is possible during taxation to make a planet produce or 'give' more RPs than it normally would. This would take away from the comfort level of the population and deprive the colony of resources for maintaining and building infrastructure, education, civil security, etc. Because the game system is based on resources and not money, the only means of 'deficit spending' is to take resources from the domestic subsistence of the colony in the now; to essentially take from the present and future of the colony in the present, as the colony's infrastructure will deteriorate and will have to be replaced at greater expense later. (*Red Planet, 2 Taxation & Census, p. 307*)
 - Collecting or taking more or less resources than normal during Taxation can only be accomplished by activation of a Writ (based on the Taxation Power) during Taxation that also acts as the Interpretation accompanying the Power Activation. Activation of the Writ (for example, emergency war powers) to take additional resources during taxation will result in an increase in entropy because machines and infrastructure are not maintained and repaired, or education suffers, or civil order is not maintained – any number of 'breakdowns' due to the lack of resources. (*Political Will, 2 Taxation & Census, p. 310*)
 - Conversely, it is also possible, by use of a Writ, to take less during taxation than normal, leaving more resources for the colonies (i.e. 'bread & circuses') – but if the position doesn't need the resources, it's probably better to save the Fuzzy Group and the Acts, and not activate the Taxation Power until the government needs the RPs.
 - Note that there is a limit even to this, as you cannot take resources that are not there or are not ready; so each colony has a finite level of resources that can be taken by the interstellar government in any case. (*Red Planet, 2 Taxation & Census, p. 307*)
- The collection of RPs by Taxation Power Activations is non-specific, it may or may not, or may likely, reflect some aspect of mining in the system. If a game is played where certain very rare resources are of paramount importance, participants could use the Special Planets and/or Specialized Colonies to reflect

mining of that specific resource, and if it something that can be mined out, then the Concierge could impose a maximum number of Taxation Power Activations at that location as part of the Special Writ. (*Mining Operations, 2 Taxation & Census, p. 308*)

- In GGDM there is no provision or mechanic where a planet or system becomes ‘mined out,’ though that is an ‘exhausted resources’ trope used in science-fiction, reflecting the wood-framed ghost towns of the American Old West period.

Habitability Class & Maximum Habitability:

- Like the Resource Point (RP) the exact measurement of the population factor is not specific in the number of entities or population density it represents. ... And there is no indication that there are, in fact, *any human populations* in this game, and with so many variables, who knows what exactly a population factor represents or why it is important? The GGDM game definition is that one population factor is a ‘unit’ capable of producing .2 RP when the Taxation Power is activated and .2 new population factors of the same Native Population Type on an Optimal Planet when the Census Power is activated. (*The Great Abacus in the Sky, 3 Taxation & Census, p. 314*)⁵
 - One universal rule that applies to all living creatures, no matter how their population factors are composed: They have to live somewhere. At all times during the game, population factors must be either on a colony (or Homeworld) or on a Colony Ship. Population factors are recorded with the colony or ship information. (*Living Spaces, 3 Taxation & Census, p. 314*)
- All planets are classified, for colonization purposes, based on two criteria: Habitability Class and Maximum Habitability. The information on each planet’s Habitability Class and Maximum Habitability (and other information) is subjective and is displayed on the position’s information. (*Habitability, 3 Taxation & Census, p. 315*)
 - The Habitability Class and Maximum Habitability of each planet is determined when the starsystem is first explored. There is a relationship between Stellar Class (i.e. ‘star color’ in GGDM) and Habitability Class that is explained in detail in Looking Through, 2 Expansion, p. 900, *infra*. The game does not need or include any details of the appearance of a planet, or the planet’s surface, land masses, weather, atmosphere, or a hundred-thousand other eco-geological details. The only relevant factors are Maximum Habitability and Habitability Class, and that is all the game looks to discover for each planet. (*Cloud Shrouded Surfaces, 3 Taxation & Census, p. 315*)
 - Habitability Class refers to the *relative* natural environment of the Planet and are divided into six self-explanatory Habitability Classes: Optimal, Hospitable, Habitable, Unpleasant, Hostile, and Uninhabitable (think Venus, or Earth in 200 years). Populations can be landed on any Optimal, Hospitable, or Habitable planet without any additional technology, however, Controlled Environment Technology (CET) is needed to colonize Unpleasant and Hostile Planets. It is also possible, through great effort, to slowly improve the Habitability Class of a planet, while, conversely, pollution and other entropy events will slowly decrease the Habitability Class of planets. (*The Air that I Breathe, 3 Taxation & Census, p. 315*)
 - Despite Controlled Environment Technologies in the game, a percentage of planets, about 10%, will have an Uninhabitable Habitability Class. While CET might establish colonies in those places, the viability of the colony is short (in GGDM terms) and the cost is too much, and there are many other places far better; positions will shortly have knowledge of hundreds of planets in the Galactic Space. (*Everyone Has a Venus, 4 Taxation & Census, p. 328*)
 - Though largely irrelevant for Uninhabitable planets, Maximum Habitability will also be generated.

⁵ In short, this intro discussion of population factors fits the following Habitability rules discussion because the game is not asking the question of ‘how many humans could live there?’ and ‘is the environment safe and suitable for humans?’ That would be absurd.

- GGDM stops just short of absolutely prohibiting colonization of Uninhabitable Class planets. But it will have to be a special situation, perhaps costing extra RPs, Acts, and/or maintenance, and with the potential for catastrophic loss of the entire colony (or significant loss in population) each Regular Turn. (*No Mars Light, 4 Taxation & Census, p. 329*)
 - Maximum Habitability is the maximum number of population factors that can be on the planet surface. No population can be added to or grown on the *surface* of a planet that is at Maximum Habitability. Orbital Cities (via the Orbital City Existential Patent), costing 20 RPs each, will extend the colony beyond the surface Maximum Habitability of a planet by 15 population factors each by placing populations in orbit (see Orbital Platforms, 2 Construction, pp. 666-667, *infra*, for more on Orbital Cities, moons, and Orbital Platforms) up to half of the planet's *original* Maximum Habitability (all of this can be improved by later Patents). (*Dayworld, 3 Taxation & Census, p. 315*).
- Planets may be damaged by Orbital Attack or Bombardment, or Ground or Pacification Combats when they are conquered. For every 25 population factors destroyed in Combat, the planet is *reduced* by one Habitability Class *and* 25 Maximum Habitability. Maximum Habitability is not affected until the loss of Habitability Class and then both are reduced at the same time; however, the accumulation of damage leading to the loss of Habitability Class and Maximum Habitability will be recorded until the event happens. A planet may reach zero surface Maximum Habitability before it is completely reduced to an Unpleasant or Hostile Habitability Class. A planet may lose any Special Status due to bombardment. (*Planet Narn, 3 Taxation & Census, p. 316*)
- The data for each planet is relative to the owner's Native Population Type, that is, each Native Population Type will see each planet slightly differently, so 'damaging' a planet may improve the planet's Habitability Class and Maximum Habitability for other Native Population Types or it may reduce it for all Native Population Types. Other positions may learn through game actions of the change in Habitability Class and Maximum Habitability of previously-discovered planets. (*Alien Agenda, 3 Taxation & Census, p. 317*)
 - A position's planetary data, exploration information could be 'stolen' or learned in-game by Information Operations, see 2 Information, p. 1349, *infra*.
- One Pollution Potential is assigned to each Optimal, Hospitable, Habitable or Unpleasant class planet, each time the owner of a *surface* colony with Industry activates the Taxation or Census Powers, even if the colony does not grow population during the Census. Pollution Potentials differ from Intervention Potentials because they are assigned to a specific planet. Thereafter each time the Taxation or Census Power is activated at a colony on the planet, there is a 5% chance per Pollution Potential that an event will occur on the colony planet. A random number of the Pollution Potentials are converted to a single Intervention Potential (not an IP+) which *must be used* on the planet by the Concierge in that turn to reflect environmental degradation. Alternatively, normal Intervention Potentials could simply be used for this purpose as fits the game story. (*Pollution Potentials, 3 Taxation & Census, p. 320*)
 - Pollution Potentials is damage to the *planet* which is not specific to a colony or Native Population Type. There can be some grey areas. But any species that had a favorable Habitability Class will see the planet less favorably after industrial pollution.
 - **Note that Pollution Potentials are an OPTIONAL RULE.**
 - Colonies that produce no RPs due to low population and no industry should not be assigned a Pollution Potential in most instances. These are low population and probably low eco-impact colonies. Colonies consisting of only orbital platforms probably will cause minimum pollution, and no Pollution Potentials, on the planet below unless they are strip mining the planet. (*Low Carb Colonies, 3 Taxation & Census, p. 320*)

Homeworlds and Colony Planets:

- Homeworlds are, or were, Optimal planets for the species that evolved on them. Prior to the game beginning, there may be Fundamental Realities that reduce the Habitability Class and Maximum Habitability of a Homeworld, but barring that, the default assumption is that a Homeworld is automatically an Optimal Planet with a Maximum Habitability of approximately 100 population factors (which can be shorthand written as Optimal 100). (*Homeworld Habitability, 3 Taxation & Census, p. 321*)
- Each Native Population Type may have only *one colony* per planet, *all* factors of a Native Population Type on a planet surface and in orbit (i.e. Orbital Cities) are considered *one colony*. Any number of different Native Population Types may colonize a planet – which becomes a **Balkanized Planet** – which is to say that the only way to prevent aliens from Landing on and colonizing [a] planet is combat. When two or more species occupy the same planet, the Maximum Habitability of the planet for each population type is reduced by the percentage of the planet occupied by all of the other races. (*Lebensraum, 3 Taxation & Census, p. 321*)
 - For example, Populations A and B occupy a planet. Population A sees the planet as a Habitable Planet with 40 population Maximum Habitability, while Population B sees the planet as an Optimal Planet with 100 population Maximum Habitability. Population A has 30 population factors on the planet, therefore, they occupy 75% of the planet, leaving only room for 25 population factors of Population B.
 - **This is the “One-Colony-Per-Planet Rule” that is key to many parts of the game. It does not mean there can be only one colony on each planet!**
 - A position may, through conquest, come to own more than one colony on a Balkanized planet, each with a different Native Population Type; this does not violate [the] rules. For all purposes in GGDM, each colony on a Balkanized Planet *is treated separately* even if owned by the same position, including in defense. Cooperation may be developed in-game by means such as Trucking, Carting (4 Commerce, *infra*) and Writs.
 - Any game mechanic that is dependent upon the number of population factors on a colony is prorated on Balkanized Planets where appropriate. One purpose in activating the Census Power might be to fill remaining spaces on Balkanized Planets, squeezing the aliens.

Census Power:

- The Census only affects [sovereign] Friendly and Naturalized Colonies owned by the position that activated the Census Power. Conquered and Converted Colonies never ‘grow’ population (Converted Colonies *do produce* during taxation), nor do populations currently located on Colony Ships or Orbital Cities grow during the Census. (*What Comes Naturally, 4 Taxation & Census, p. 325*)
 - The growth of populations during the Census depends on the Habitability Class of the colony planet and the amount of population present at the beginning of the Census. Additionally, for the purposes of Naturalized Colony growth, it is important to remember that Habitability Class depends entirely on the Native Population Type of the colony. Thus, while the owner of the colony might see their planet as Unpleasant, the alien population might regard it as an Optimal Planet and grow accordingly. [*this latter observation does not and is not to imply that Census affects non-sovereign populations on Balkanized colony planets, it was only a habitability example*]
 - Population located on planets that their Native Population Type considers Optimal will increase at a rate of one per 5 population factors present at the beginning of the Census (i.e. 20%). (*Optimal Planets, 4 Taxation & Census, p. 325*) [**for example, Earth’s population doubled between 1950 and 2000**]
 - Population located on planets that their Native Population Type considers Hospitable will increase at a rate of one per 10 population factors present at the beginning of the Census (i.e. 10%). (*Hospitable Planets, 4 Taxation & Census, p. 325*)

- Population located on planets that their Native Population Type considers Habitable will increase at a rate of one per 20 population factors present at the beginning of the Census (i.e. 5%). (*Habitable Planets, 4 Taxation & Census, p. 325*)
- Population located on planets that their Native Population Type considers Unpleasant will grow by 1 population factor, regardless of the total population of the planet. On Hostile Planets, no population growth occurs; living in camps and domed cities doesn't encourage growth, at best, those populations simply replenish their numbers and deliberately maintain a zero-growth condition to avoid overburdening the precious environmental systems. Zero growth in this situation is not a Disruption Event. (*Unpleasant & Hostile Planets, 4 Taxation & Census, p. 326*)
- Colonies whose total *planet surface* population at the beginning of the Census is below the threshold level for growth based on their Habitability Class will grow at half the normal rate each Census until they reach the threshold. Fractions will be rounded up. For example, a colony on a Habitable planet that has 10 population will grow one population factor each Census, until the colony reaches 20 population and then will continue growing at the standard rate set for the Habitability Class of the planet. (*Low Population Colonies, 4 Taxation & Census, p. 326*)
 - Population in GGDM is not defined in genetic terms, nor does it represent any fixed number except resource production. Further, population in GGDM might not even be human, but one must assume universally that reproduction requires some sort of information pattern that can be both replicated and corrupted. As such, inbreeding effects could occur or be introduced for very small, isolated colonies, with the participants deciding what population level and isolation period falls below the 'minimum viable population' for the species. (*Minimum Viable Population, 4 Taxation & Census, p. 329*)
- Population located on an Orbital City (or Colony Ship, see Colonies in a Can, 3 Expansion, p. 913, *infra*) during activation of the Census Power does not grow. This is **not** a Disruption Event, see Peaches for Mad Molly, 2 Disruption, p. 273, *supra*. Orbital Cities both allow a colony to exceed the planet's Maximum Habitability (see Dayworld, 3 Taxation & Census, p. 315, *supra*) by up to half of the original Maximum Habitability and as a means to stymie runaway population growth if the position is required to frequently activate the Census Power (as a result of either a Fundamental Reality or Government Title). (*Cabin Fever, 4 Taxation & Census, p. 326*)
- In the game, positions may, of course, develop some technologies to increase, decrease, or mutate populations, however, the game makes the assumption that the ability to do so efficiently exists within the technology of the 1st Era (without having to create the technology in-game – unless players desire to develop the game in that way), so that mainly population growth is properly controlled by first, the frequency of the activations of the Census Power (and Maximum Habitability), and second, by use of Writs (which express the social and political will – see It is Written, 1 Writs, p. 435, *infra*) related to the activation of the Census Power. (*Brave New World, 5 Taxation & Census, p. 343*)

Culture (Vital Power)

- Culture is a Vital Power of the government or central authorities of each position in the game. ... the Culture Power may be activated by positions for the following purposes:
 1. Exposing Aspects,
 2. Perfecting Proficiencies,
 3. Cohering,
 4. Introduce Writs (see Writs, *infra*),
 5. Found College (see Colleges, *infra*),
 6. Amend College Charter (see Colleges, *infra*),
 7. Endow Colleges (see Colleges, *infra*),
 8. Develop Doctrinal Templates (see Colleges, *infra*).

- Activation of the Culture Power for the purpose of Develop Doctrinal Templates requires a concurrent activation of the Combat Power for any purpose. (*Gemini Dream, 1 Culture, p. 356*)
- Activations of the Culture Power for the purposes of Exposing Aspects, Perfecting Proficiencies or Cohering require two Acts. Additionally, Perfecting Proficiencies and Cohering also require the expenditure of Resource Points (RPs) because money talks and ... (you know it already), see Perfect Proficiencies, 3 Culture, p. 381, and The ‘Getting on the Same Page’ Meeting, 5 Culture, p. 422, *infra*. These three purposes of Culture Power activation will be fully explained in this section, while introduction of Writs, Foundation and Endowment of Colleges, and Amended Charters, and Doctrinal Templates are the subject of the following sections. (*Gemini Dream, 1 Culture, p. 356*)
 - Exposing Aspects, Perfecting Proficiencies and Introduce Writs cannot be affected by inactive Constructural Elements and will never fail for that reason. Cohering is attempted at each colony and ship that has inactive Constructural Elements and can potentially fail at any colony or ship due to inactive Constructural Elements. (*Undersea Glow, 1 Culture, p. 357*)
 - Many Power Activations throughout GGDM have multiple possible purposes – that is a subset of actions to choose from under the Power Activation. Taxation and Census Power Activations only have single purposes, the Culture Power Activation is the first to have multiple purposes (listed above). Actions submitted for any Power Activation that has multiple purposes must state the purpose for which the Power has been activated or they cannot be processed as the mechanics and cost for each purpose are different. Each Power Activation can only be for one purpose. (*About Porpoises, 1 Culture, p. 357*)

Cultural Traits Pieces:

- Culture is represented in the Public Space by placement of Cultural Traits. There are two types of Cultural Traits: Aspects and Proficiencies; each takes one monad on the Public Spaces. Culture is like a multi-faceted diamond that appears differently each time you turn it slightly in the light; it is impossible to see all of the aspects of a diamond at any one time. (*Cultural Traits, 2 Culture, p. 363*)

Aspect Pieces:

- Aspects represent part of the songs of a civilization. Aspects are particular glimpses of a culture (eigenstates?) which only appear at particular times, or under the correct circumstances.... While Aspects might arguably be another ‘interpretation’ in the game, they are not officially Interpretations for game purposes: They lack form, they are only pieces. (*Aspects, 2 Culture, p. 364*)
 - The primary quality of Aspects are that they are momentary, transitory; the mood changes, values recede from the forefront, times change. As a result, Aspects are not permanent. (*Between the Candle and the Stars, 2 Culture, p. 366*)
- Aspects available in any game will be limited to those on the Aspects List provided by the Concierge during the setup. The Aspects List is an alphabetical list where each letter represents a particular Aspect whose word appears next to the letter. Thus, the Aspects in the Public Spaces will bear the letters of the alphabet (26 possible Aspects) and the letter on the Aspect represents the Aspect corresponding [to] the letter on the list. (*Aspects A to Z, 2 Culture, p. 364*)
 - The Concierge will provide each position with a *secret* Aspect List for their culture. The list might or might not be the same for all positions; each position could have its own list, or more likely, there will be some significant overlap. Not all letters might be used in a list.
 - Like the Galactic Space in this game, the Aspect List reduces the impossibly infinite to a manageable, playable, finite sample for game purposes – it is thus a concession to playability. Your species will exhibit about 20-25 Aspects during the game.
 - The Aspects List of each position may be changed during the game by Kairotic Moments, see After the Fall, 3 Kairotic Moments, p. 1445, *infra*.

- Whenever the Culture Power is activated for the purpose of Exposing Aspects, the position may attempt to ‘expose’ three Aspects of their choice. This Power Activation **cannot fail** due to inactive Constructural Elements, it is not locational. (*A Bustle in Your Hedgerow*, 2 Culture, p. 365)
 - Exposed Aspects must be immediately placed on any available unoccupied Monad in the Public Space *adjacent to a **Friendly or Naturalized Colony*** (cf. Cultural Proficiency Pieces can be placed adjacent to *any other piece*).
 - Each attempt to expose an Aspect must provide a short (one sentence) reference to a game event, condition, News Event, or circumstance that might provide the opportunity to ‘expose’ the named Aspect and the location where the proposed Aspect is to be placed on the Public Space. The Concierge will interpret very liberally, but the sentence or reference and proposed location must reasonably relate to the Aspect to be Exposed; only the most specious Exposure attempts will be rejected without a die roll.
 - Whether or not the Aspect is in fact Exposed, is not up to the Concierge, rather, the Aspect will be exposed 50% of the time. If the Aspect is part of an existing Writ Interpretation, the Aspect will be exposed 55% of the time, and if a Writ containing that Aspect is activated (not issued) in the same Regular Turn, the Aspect is exposed 60% of the time.
- Aspect pieces have a light side and a ‘dark side’; on the turn they are placed, they are placed light side up (or occasionally, the dark side up, at the judgment of the Concierge). At the end of each Regular Turn, the Aspects that started the turn with the light side up are flipped to the dark side, and Aspects that started the turn with the dark side showing are removed at the end of the Regular Turn.... Thus, Aspects age off the Public Spaces if they are not removed before then due to other causes. (*Between the Candle and the Stars*, 2 Culture, p. 366)

Proficiency Pieces:

- Proficiencies represent the systems, organizations, ways, techniques, traditions by which society handles the day-to-day, person to person problems and needs of civilization. For example, keeping order, distributing food and resources, caring for the young, education, emergency medical assistance, etc. are developed proficiencies. (*Proficiencies*, 3 Culture, p. 383)
- When the Culture Power is activated for the purpose of Perfecting Proficiencies, the position may automatically and immediately place two new Proficiencies of their choice on any unoccupied Monads in the Public Space that is adjacent to any other piece (cf. Cultural Aspect Pieces must be placed adjacent to any Friendly or Naturalized Colony). The resource cost of Proficiencies is based on the total population of the position at the time the Power is activated, including Conquered, Converted and Naturalized **alien colonies**, population on colony ships, and colonies of all political status (see Colony Politics, *et seq.*, 2 Order, p. 538, *infra*). Each new Proficiency costs 1 RP per 100 population factors. A position may indicate to the Concierge that only one new Proficiency is desired, but the cost of the Culture Power activation is the same, regardless of whether one or two Proficiencies are received. (*Perfect Proficiencies*, 3 Culture, p. 381)
 - Activation of the Culture Power to Perfect Proficiencies is not location specific and cannot fail due to inactive Constructural Elements.
 - Note that due to relative activation costs, the placement of new Proficiencies will occur before activation of the Census or Taxation Power in the normal Power Activations processing sequence (see Clockwork Universe, 3 The Streams of Time, p. 90, *supra*). Lower cost activations are processed first. The cost of proficiencies is commensurate with the size of the position; a position with 1000 total population would be a fairly large position in GGDM (perhaps 5 or 6 large industrialized colonies, and a dozen smaller colonies), for whom the cost of 10 RPs per Proficiency should still be nominal, considering their industrial output.
- Proficiencies are similar to Aspects except that they have numbers on them, rather than letters, and the numbers, ranging from 1 to 20, reflect the Proficiencies listed below. Proficiencies never ‘age’ like As-

pects and can remain in the Public Spaces indefinitely; they do not have light or dark sides.... Proficiency Pieces may be removed by the ‘actualization’ of Fuzzy Groups and some may be lost by Census Power activation. (*Proficient Pieces, 3 Culture, p. 382*)

- Each time the *Census Power* is activated there is a 30% chance that each Proficiency will be eliminated from the Public Space due to turnover of generations. (*And the Cradle Will Rock, 3 Culture, p. 382*)
 - Each time a Government Title becomes *disrupted or changes*, there is a 20% chance that each Proficiency on the Public Space will be eliminated.
 - Proficiencies *that are no longer adjacent to another piece* on the Public Space **are also lost** (i.e. ripple effect, thus the placement of Proficiency Pieces is important). Research, Census, activation of Fuzzy Groups, removal of stars and planets from the Public Space, and the order in which Power Activations are processed can lead to Proficiencies losses, destroying Fuzzy Groups and destabilizing governments.

- **The twenty Proficiencies available in GGDM are as follows:**

Communication Proficiency	Nationhood Proficiency
Customs Proficiency	Police Proficiency
Education Proficiency	Powers Proficiency
Engineering Proficiency	Resources Proficiency
Equity Proficiency	Regeneration Proficiency
Expression Proficiency	Rhetoric Proficiency
Finance Proficiency	Security Proficiency
Integrity Proficiency	Spirit Proficiency
Intelligentsia Proficiency	Urbanization Proficiency
Medical Proficiency	Will Proficiency

- *The Proficiency areas are listed here for brevity, see original GGDM rules text for details.*

Fuzzy Groups:

- A Fuzzy Group is a specific formation of cultural traits and active Constructural Elements on the Public Spaces that represents a *potential* of the civilization at that time and place; a collusion of circumstances, people, and forces that *might* result in any number of events or developments. (*Fuzzy Groups, 4 Culture, p. 404*)
 - A Fuzzy Group must consist of:
 - Two identical Proficiencies and one Aspect identical to the one in the center, forming a triangle around, and adjacent to, one Aspect; or
 - Three identical Proficiencies forming a triangle around, and adjacent to, one Aspect. (*Fuzzy Formations, 4 Culture, p. 405*)
 - Thus, it will require at least two Culture Power activations to obtain the cultural traits necessary for a Fuzzy Group – if the Constructural Elements are already activated; planning is also required to make sure adjacent spaces are available on the Public Space.
 - Finally, at least one of the Cultural Traits Pieces of the Fuzzy Group must be adjacent to a Friendly or Naturalized colony that has an active Ideological Constructural Element and either the Symbolic or Epistemological Constructural Elements active. The colony planet adjacent to the Aspects may or may not be included in one side of the triangle. The Fuzzy Group formation may be present, but if the active Constructural Elements are not present, there is no Fuzzy Group. Fuzzy Groups may interlock and overlap, share some of the same Cultural Traits Pieces, Fuzzy Groups may come, Fuzzy Groups may go quietly, but the fuzz never fades. The active Constructural Elements used in the formation must be on the same adjacent colony at the same time, however.
 - Positions should be cognizant when placing Fuzzy Groups, and especially the piece adjacent to the colony, of turnover on the Public Space due to aging of Aspects (see *Between the Candle and*

the Stars, 2 Culture, p. 366, *supra*) or loss of Proficiencies due to Government Title disruption or change or activation of the Census Power (see And the Cradle Will Rock, 3 Culture, p. 382, *supra*). A Disruption Event or **Apostasy** triggered by a Kairotic Moment at the colony that inactivates the required Constructural Elements can also disable, derail, the Fuzzy Group. Thus, like the Cultural Pieces that form them, Fuzzy Groups are a momentary phenomenon.

- The purpose of a Fuzzy Group is Actualization; Actualization is the moment when the *potential* becomes **reality**. Actualization of a Fuzzy Group does not require an activation of the Culture Power; Actualization may occur at any appropriate time, and a position may Actualize as many Fuzzy Groups in one Regular Turn as desired or possible. When a Fuzzy Group is Actualized, the Aspect(s) and Proficiencies (the Cultural Trait pieces) making up the Fuzzy Group are removed from the Public Space in exchange for a Writ effect (hint, this is an important cycling or turnover mechanism on the Public Space). Additionally, there is a 50% chance that the Ideological Constructural Element on the colony used will become inactive. Actualizing a Fuzzy Group *is the only way to activate Writs*, which provide the effect. (*Actualization, 4 Culture, p. 406*)
 - Failure to activate the Writ because of Power Activation failure will cause the Fuzzy Group to fail to actualize and the Cultural Trait Pieces are **not removed** from the Public Space.
 - A Writ is an official Interpretation, see Official Interpretation list in 1 Dreamtime, p. 130, *supra*. Writs are detailed in the next section.
 - The Culture Power must be activated to create the Writ initially, activation of the Culture Power is never required to use the Writ unless that is part of the conditions of the Writ Interpretation.

Cohering Purpose (a ‘getting on the same page meeting’):

- Activation of the Culture Power for the purpose of Cohering attempts to change some inactive Constructural Elements (see, 2 Constructural Elements and 2 Disruption, generally, *supra*) to active status on Friendly, Naturalized and Converted Colonies and ships currently located in a system with a Friendly or Naturalized colony (but not Converted Colony). (*Cohering, 5 Culture, p. 421*)
 - When the Culture Power is activated for the purpose of Cohering, the position must inform the Concierge which one of the three Constructural Elements (Epistemological, Ideological or Symbolic) is to be reactivated throughout the position. Additionally, the position must provide the Concierge with a range of RPs that will be spent on Cohering; 1 RP will automatically be spent per two undisrupted Government Titles held by the position, rounded up (so that five GTs will cost 3 RPs) plus a variable number of RPs will be deducted from the Treasury for successful Cohering up to the limit set by the position. The RPs must be in the Treasury at the beginning of the Regular Turn. (*The ‘Getting on the Same Page’ Meeting, 5 Culture, p. 422*)
 - For example, a position with four undisrupted Government Titles wishes to Cohere the Epistemological Constructural Element. The initial cost is 2 RPs for the Government Titles, and the position dedicates another 6 RPs to Cohering.⁶
 - Each inactive Constructural Element of the type chosen at a Friendly, Naturalized or Converted (but not Conquered) Colony, or on a *ship* (or System Boat) owned by the position located in a system with a *Friendly or Naturalized Colony* that has that Constructural Element currently inactive, will be checked to determine if it becomes active again; this will produce variable results throughout the position. (*Money Can’t Buy You Love, 5 Culture, p. 422*)
 - Prior to each Cohering attempt at a colony or ship, a check will be made to see if the Cohering attempt fails due to inactive Constructural Elements (see Power Off, 2 Constructural Elements, p. 193, *supra*), i.e. the target colony or ship fails to obey the Power Activation.

⁶ There is a strategic choice; a position might cohere the Constructural Element that has the largest inactive status, or the position might be targeting, say, the Epistemological Constructural Element because it is effecting Colleges. Or both could be true.

- The base chance for any inactive Constructural Element of the type chosen to change back to active is 30%;
 - 10% is added if the position has a Unitary Structural Government Title *and* no currently disrupted Government Titles,
 - 5% is subtracted if the target colony is a Naturalized Colony and 10% is subtracted if the target colony is a Converted Colony,
 - 5% is added if the position has a number of endowed Colleges equal to the number of undisrupted Government Titles, *and* there are no currently un-endowed Colleges.
 - Checks will be made in random order at each ship and colony that currently had the chosen Constructural Element *inactive* until stopped by running out of funds or when all target Constructural Elements are checked.
 - Enlightenment can be applied to Cohering attempts and applied to either check (see 2 Colleges generally, *infra*). (*Money Can't Buy You Love, 5 Culture, p. 422*)
- One RP will be subtracted from the Treasury for every three ships or 100 Friendly or Naturalized population factors affected by Constructural Elements that are activated as a result of Cohering this turn. Fractions will be rounded up at the end of the process such that one extra RP might be taken to satisfy the rounding. (*You Can't Always Get What You Want, 5 Culture, p. 423*)
 - Funds dedicated to Cohering cannot be used for any other purpose on the turn of Cohering, even by Power Activations that come later in the Regular Turn Action processing sequence. Funds not used will be returned to the Treasury for the next turn.
 - Continuing the previous example, the position had dedicated 6 RPs to Cohering *after* paying the initial 2 RPs for Government Titles. These funds cannot be used for any other purpose during the Regular Turn. During the Cohering checks, Friendly Colonies containing 57, 60, 80, 120, and 100 population factors have their Epistemological Constructural Element reactivated, and a Carrier and two Cargo Ships have their understanding of things corrected (probably by the local *Chekist*). Thus, 317 populations on five colonies, and three ships were Cohered, costing 5 RPs, a very good result (even at 35% unless there were a lot of inactive ECE to check)! All of the other checks failed or possibly no further checks were needed, the results in any case were random. The remaining RP is returned to the Treasury at the end of the turn processing. The checks would have also stopped if the Cohering had run out of funds.
 - The preceding example does not account for the possibility that a number of colonies or ships may have refused or failed to obey the Cohering Culture Power activation due to inactive Constructural Elements. Failed attempts cost nothing regardless of the cause.

Writs (Culture Power)

- A Writ is an official Interpretation issued by a position using an activation of the Culture Power for the purpose of Issue Writ, which, through the use of the inherent sovereign power of the issuing position, develops and/or exercises a cultural ability that tends to define or becomes part of the overall cultural identity of the ruling native population type of the position (that is, does not include conquered or converted population and may not include naturalized population). (*Who Are We?, 1 Writs, p. 436*)
 - The issuance of a Writ does not require the actualization of a Fuzzy Group. All that is required is the activation of the Culture Power for the purpose of Issuing Writ costing two Acts. Additionally, as described later, a Writ may not be used as an Interpretation to satisfy any of the Power Activation Interpretation requirements *on the Regular Turn it is issued*. (*Nothing Fuzzy About It, 1 Writs, p. 436*)
 - Activation of the Culture Power for the purpose Introduce Writs does not depend on Constructural Elements and thus cannot fail due to inactive Constructural Elements. One activation of the Culture Power for the purpose of Issue Writs allows a position to issue a number of Writs equal

to or less than the current number of undisrupted Government Titles. This is not the same as activation of Writs which are limited by the number of Fuzzy Groups that a position can, and is willing to, actualize in a Regular Turn and activation of the Culture Power for the purpose of Issue Writs is not required to activate established Writs. (*Tabula Rasa*, 1 Writs, p. 436)

- ...a Writ improves the chances of exposing the Aspect with which it is associated, especially on Regular Turns where the Culture Power is activated to Expose Aspects and a Writ associated with that Aspect is also activated. (*Behind the Bookshelf*, 1 Writs, p. 436)
- Writs are created by the players and submitted to the Concierge with the position's Actions. The Writ must contain the following elements when it is sent to the Concierge:
 - Issuer
 - Power
 - Aspect
 - Proficiency
 - History
 - Body
 - Directive
 - Condition Precedent
 - *The parts of the Writ are listed here for brevity, please see the original GGDM text for details and discussions. (Form of the Writ, 2 Writs, p. 438)*
- Writs are secret and will not be published or shared with any other position. As such, it is necessary that the Concierge stand as the final, unquestioned judge and interpreter of Writs. The following are some rules and factors to be considered when a Writ is submitted. (*Holy Writ*, 2 Writs, p. 441)
 - A Writ must be internally consistent and reasonable, and make sense to the Concierge within the current context of the game. Specifically, there must be a reasonable relationship between the Power, Aspect, Proficiency, History, Body, Directive, and Conditions Precedent in the Writ. There must also be a specific relationship between the Body and the Directive. The Writ is a whole package, woven of threads of a civilization. (*Consistency*, 2 Writs, p. 441)
 - A Writ may not satisfy its own condition precedent by activation; the conditions must be present before the Writ can be activated. A Writ may not use the activation of another Writ as a condition precedent. Finally, a Fundamental Reality or any effect from a Fundamental Reality may not serve as a condition precedent to a Writ, thus, Writs are of limited use in counteracting unfavorable Fundamental Realities. (*Circular Conditions*, 2 Writs, p. 442)
- ... the Writ is not published, and ... the Writ cannot be activated on the Regular Turn it is issued... The Concierge reserves the right to ultimately reject the issuance of the Writ if no consensus can be formed. In the rare event that a Writ is rejected, no compensation will be made to the issuing position. (*Negotiable Instrument*, 2 Writs, p. 440)
 - A Writ may not be activated on the Regular Turn it is issued, even if the Power listed in the Writ is the Culture Power or the Power listed on the Writ is otherwise activated. One activation of the Culture Power may not be used to both introduce Writs and activate a Writ whose listed Power is the Culture Power; those are two separate actions. It is not necessary that the Power listed on the Writ be activated in the Regular Turn it is introduced, the only required Power Activation is the Culture Power, to introduce the Writ. (*Writ of Error*, 3 Writs, p. 444)
- At the judgment of the Concierge, a Writ may be suspended at any time. A suspended Writ may not be activated and does not enhance the chances of exposing the Aspect to which it is associated (see *A Bustle In Your Hedgerow*, 2 Culture, pp. 365-366, *supra*). A Writ will be suspended when it is no longer legitimate to the position, when it is being abused, or any other game reason. For example, a Writ that is closely tied to a Government Title (e.g., in the History section, *ut supra*) may be suspended if the Government Title is disrupted, abandoned, or voluntarily removed, however, it is also possible that such a Writ might continue with the current Titles long after the originating Title is lost to history. ... Writs may

also be suspended during or after a Reformation (and rarely) following a Kairotic Moment. A previously suspended Writ may also be restored by the Concierge, it does not ‘disappear’ upon suspension (it is instead, deprecated). (*Suspended Writ, 2 Writs, p. 440*)

- The activation cost of each Writ is the simultaneous **successful** activation of the appropriate Power and the actualization of a Fuzzy Group (not a Zietrice) composed of the Aspects and Proficiencies as indicated on the Writ. See 4 Culture, p. 404, *et seq., supra*. The Concierge recognizes that the actualization of a Fuzzy Group is a considerable cost. Additionally, there must also be a cost in resources (i.e. RPs) for each Writ effect. (*Cost of the Writ, 2 Writs, p. 442*)
 - Failure to activate the Writ either because of Power Activation failure or by not meeting the Conditions Precedent (*ut supra*, p. 439) will cause the Fuzzy Group to fail to actualize and the Cultural Trait Pieces are not removed from the Public Space.
 - The constant against which all Writs are measured is a standard **cost**, in the form of a Power Activation required (a Power Activation shouldn’t be for the sole purpose of using the Writ, which is wasteful), a Fuzzy Group actualization, and some RPs. (*Alternate Writs, 3 Writs, p. 446*)
- A Writ may not be used as an Interpretation to satisfy the Interpretation requirement of any Power Activation on the Regular Turn it is introduced. Thereafter, the proper activation of the Writ (by actualization of the Fuzzy Group) may satisfy the Interpretation requirement for **any one** activation of the Power to which the Writ is tied, on the Regular Turn that they are activated together. If the Writ cannot be activated because the conditions precedent are not met, then the issuing position will have to use a News Event to satisfy the Interpretation requirement for the Power Activation. One should be provided just in case. (*Writ of Extent, 3 Writs, p. 444*)
- A Writ, emulating from the sovereign power of the nation-state (i.e. position), necessarily only applies to the native and naturalized alien population factors of the position issuing the Writ at the time of the activation. Writs will never *beneficially* apply to Conquered or Converted populations (but can be used to their local detriment), however, it is possible that Writs may beneficially apply to Naturalized populations, depending on circumstances. (*Writ of Prohibition, 3 Writs, p. 445*)
- Writs never expire in the sense that once they are created, they are permanently part of the game and part of the history of the issuing position; however, it may be that the conditions precedent for the Writ become impossible, or that the Writ becomes no longer useful for whatever reason. (*A Writness to History, 3 Writs, p. 445*)
 - The exception to this rule is Articles of Incorporation, which is a Special Writ used to create Corporations and MegaCorporations. Those Special Writs do expire like a Royal Charter, see 1 Corporations generally, *infra*.
 - Writs, once accepted, are unchangeable, and also cannot be copied or ‘stolen’ by others (since they are secret, and since they apply to a particular issuing nation-state). Unlike Patents, there are no ‘pregame’ or ‘existential’ Writs allowed.
- Writs may not be used to instantly create new colonies where none existed previously, or to create instant huge warfleets (or ships, defenses, or Technological Devices), and may not be used to create new technologies, which are the sole province of the Patent process. (*A Cultural Writness, 3 Writs, p. 445*)⁷
 - Writs cannot be used to change the natural laws of the universe and may not be made to act like or substitute for another type of Interpretation (which is like using a wish to get more wishes, it would tear a hole in the universe).
 - Writs are not *dues ex machina*, see Keep the Sand in the Sandbox, *et seq.*, 2 Dreamtime, p. 147, *supra*, for guidance.
 - The effects of Writ activation on the previous turn may be used in some circumstances to satisfy a legitimacy requirement of a Government Title (meaning that the government must continue to

⁷ The Writ is your game equipment and these are like rules in sports as to what you are not allowed to do with your equipment; in football, you can’t take your helmet off and beat another player with it, in baseball, you can’t take the bat down to first base and swing at the first baseman to force him off the bag. It’s like that with Writs.

support the Writ to remain legitimate). A well-crafted Writ may be used to increase RPs and/or population over the long term; while Writs that create instant wealth and population will be suspect and *may not* be accepted. (*An Unbearable Writness of Being, 3 Writs, p. 445*)

Zietrice:

- A Zeitrice (“zeit-trice”) is an inside out or reversed Fuzzy Group consisting of *three Aspects and one Proficiency* having the same triangular arrangement as described previously for Fuzzy Groups (see Fuzzy Formations, 4 Culture, p. 405, *supra*), but instead, a Symbolic Constructural Element is required on an adjacent Friendly or Naturalized Colony plus one active Ideological or Epistemological Constructural Element. (*Zeitrice, 4 Writs, p. 447*)
 - There is only one form of the Zeitrice formation; a Zeitrice *cannot be formed* by use of two Aspects and two Proficiencies. Using three legally-placed Aspects, a Zeitrice may be somewhat more difficult to form than a regular Fuzzy Group. A Zeitrice represents potential profundity.
- The ‘actualization’ of a Zeitrice is by the process of Reification. Reification is the process by which something abstract becomes concrete and real. (*In a Trice, 4 Writs, p. 448*)
 - *Reification does not require a Power Activation.* Whenever a Zeitrice is Reified, all of the pieces forming the Zeitrice are removed from the Public Space and a special type of News Event called an Exposé’ (“ex-pos-say” not to be confused with Exposing “ex-pos-ing” Aspects or exhibitionism) is posted. The Exposé’ does not require and is not related to any Power Activation, *may not be used* to satisfy the Interpretation requirement of any Power Activation, as it is not a direct result of a Power Activation, but is still an official Interpretation as a News Event. An Exposé’ is always a non-adverse News Event – it cannot directly affect any position except the issuer. The Exposé’, like a Special Bulletin, *is static*, it cannot be modified by any position after it is issued.
 - Whenever a position desires to Reify a Zeitrice, a proposed Exposé’ News Event must be sent with the position’s Actions. The Exposé’ will not be posted, and will not take effect, until **after** the Concierge has processed the position’s Regular Turn actions (therefore may require some guessing and prediction). Each position may Reify one Zietrice per Regular Turn, but will likely only do it a few times during the game, or possibly not at all. There is no requirement that any position submit an Exposé’ during the game, rather, it should come as a natural result of thinking about the game, in the game. (*Reification, 4 Writs, p. 448*)

Exposé’ News Event (the ‘deep blue think’):

- The Exposé’ News Event is the deep think or deep blue statement by the position during the course of the game. Like a Writ, an Exposé’ must have specific form and parts:
 - *The Place*, the Exposé’ must begin with a list of the Aspects and Proficiencies to be used in Reification (using coordinate locations on the Public Space).
 - *The Facts*, nothing but the Facts (e.g., Dragnet (1951-1959)). The Exposé’ must contain an enumerated list of current facts about the position which are to be exposed. The Exposé’ must reasonably relate to one or more **Fundamental Realities**, in addition to any other game facts, however, the ‘reasonably related’ qualifier is a liberal judgment call by the Concierge. The facts should be written in simple sentences, in the present tense, without qualification (‘no ifs, ands or butts’). These facts must be verifiable by the Concierge looking at the issuing position’s information and Public and Diplomatic Space (see Diplomatic Spaces, 2 Diplomacy, p. 1116, *infra*); the facts can only relate to the internal information of the position. Reference may be made to Galactic Space if absolutely necessary, but the Exposé’ is entirely an internal matter.
 - *The Dirt*, the Exposé’ must include a blurb for publication as the News Event. The blurb should be written in a faux investigative reporting style if possible and must expose the facts in the previous section, which, when published, will become public knowledge. The section can be written in a slightly tabloid style if desired, it can have a headline, it can be written in character if that works, be creative and fun with it, but not deceptive and useless.

- There is some artistic license to dressing up the facts for the Exposé' blurb but not such as to obscure the facts for the audience – the other positions – who do not have access to the internal information of the issuer. The blurb cannot be used by the issuer to dodge or mitigate the exposure of facts required by the process of Reification. (*Diary of a Madman, 4 Writs, p. 449*)
- The Facts presented in the Exposé' must be Absolutely True for game purposes and must also be literally true. (*Spinning Top, 4 Writs, p. 450*)
 - Because the Concierge verified the facts in the Exposé', players can take them as true (at least at the moment of publication) and thus the Exposé' constitutes 'free intelligence' to the other positions in the game. However, the Exposé' should – most importantly – also enhance play of the game overall by providing facts to work with in making the story...
- The final part of the Exposé' is an effect that the position desires from the Reification. This part *will not be published*, it is between the position and the Concierge only. The Reification must contain a single, restricted, one-time effect that is *reasonably related* to the effort and cost of the Reification, the Aspects and Proficiencies used, and especially the Facts that were exposed in the News Event. The effect should apply only to the position that issued the Exposé'; it cannot be used to *directly affect* another position. (*The Little Secret, 4 Writs, p. 450*)
 - Each Exposé' is a singular, one-off, non-repeatable event, unlike a Writ which can be activated any number of times during the game. Thus the effect of the Reification can be a little more or a little different than the scope of the Writ, but should not be abused.
- After the Exposé' is posted, there is a 5% chance that each Fact in the Exposé will add one Monad to the Public or Diplomatic Spaces (see Diplomatic Spaces, 2 Diplomacy, p. 1116, *infra*) of the issuing position and a 3% chance that each Fact will allow one Monad in the issuer's Public or Diplomatic Spaces to be swapped to a new location in the other space (that is, from Public to Diplomatic, *vice versa*). (*Edge of Reality, 4 Writs, p. 451*)
 - A separate die roll is made for each fact for both possibilities. So one die roll is made for each Fact for the possibility of adding a new Monad, and one die roll is made for each Fact for the possibility of moving one Monad.
 - The chances are not added together, each roll to add a new Monad has a separate 5% chance and each roll to be allowed to move a Monad has a separate 3% chance of success. If you had 5 Facts in the Exposé', the chances *would not be* 25% and 15% for each Fact; they would be 5% and 3% for each of the five rolls.
 - Adding or moving Monads allows the issuing position to slightly reshape their reality and/or slightly expand their reality that is represented by the Public Space. It is the choice of the issuing position where the Monads are moved or added and whether on the Public Space or on a Diplomatic Space.
 - New Monads can be placed adjacent to any Monad on any 'edge' of the Public or Diplomatic Space and any Monads to be moved must currently be empty and maybe moved to any 'edge' location on the Public or Diplomatic Space.
 - Positions may use Enlightenment for rerolls in this case (see 2 Colleges generally, *infra*).
- The entire Exposé' will be subject to approval by the Concierge, however, the standards of approval by the Concierge will be liberal because this sandbox, this story is for the players.... Like Special Bulletins pFosted by the Concierge, Exposé' may not be subsequently altered by follow-up News Events posted by other positions, nor may it be subject to Diplomatic Protests. (*The Point of Know Return, 4 Writs, p. 452*).
 - The Exposé' represents the argument that some normally secret game position information must be sometimes made public for the purpose of cohering the game story. The carrot is what the position may gain by doing so, and what the game may gain in enjoyment. An Exposé' can function in a manner similar to an Aspect, except on the scale of the game story. The Concierge

may sometimes – carefully – accomplish a similar end with creative Prose Interventions Special Bulletins.⁸

Colleges (Culture Power)

- A College is the entire recognized, organized body of knowledge and professional organization in a civilization dedicated to advancement of a particular purpose. A College is also the social and government recognition of the body of knowledge and professions, sanction, and a resource commitment. (*College Bound, 1 Colleges, p. 456*)
 - A Writ is not required to found or Host a College.

Foundation:

- Colleges must be Founded by an activation of the Culture Power for that purpose, which costs *three Acts and a Scene*. Each activation of the Culture Power for the purpose of Founding a College may only be used to Found one College. (*Foundation, 1 Colleges, p. 456*)
 - At the time of Foundation, a position must provide the following basic information: College Mission, Initial and Per Turn Endowment, and Host Colony location. This information taken together forms the College Charter; each Charter must be unique. The Scene used in the Foundation must be on the planet where the proposed Host Colony is located. A College Charter is not an ‘official interpretation’ in the game (i.e. it is not a Writ) and thus cannot be used to satisfy the Interpretation requirement of the Culture Power Activation.
 - While it is possible to Found a college by use of an Expose’ (maybe Hari Seldon explaining to Emperor Cleon I that the Galactic Empire is doomed) if the stars align correctly – check with the Sidereal Astrologers College first – the College will still need a simultaneous Initial Endowment. Although GGDM does routinely allow players to create ‘something from nothing,’ Founding a College with Initial Endowment from an Expose’ would require a very big Expose’ and the *careful* judgment of the Concierge. See *The Little Secret, 4 Writs, p. 450, supra*.
 - A College Charter is not a Writ, it does not have Writ form or Writ function game mechanically (see Writs generally, *supra*), nor does it have an expiration like an Article of Incorporation (a Special Writ, see *Someone Stole the Stage, 1 Corporations, p. 1247, infra*). Admittedly there may be some conceptual overlap. While the College Charter does have a form and rules, it is not an ‘official interpretation’ and does not need to be ‘accepted’ by the Concierge as long as it is in correct form (see *Official Interpretation and Flavors of Fact, 1 Dreamtime, pp. 130, 134 respectively, supra*).
- The Mission of the College must be definable in game terminology. Each College may only have one Mission, and the Mission must be one to three words naming a Power, Aspect or Proficiency, Constructural Element, or some other game-specific term, such as “ships,” “defense bases,” “orbital shipyards.” The first three are commonly called Power Colleges, Proficiency or Aspect Colleges, and Constructural Colleges, respectively, while the latter are called Special Colleges. (*Mission, 1 Colleges, p. 458*)
 - Colleges are typically named by their Mission, for example, the “Combat College” (Power College) or the “Police College” (Proficiency College) or the “Ship College” (Special College), whatever the case may be; a position may not have Colleges with duplicate Missions.
- The Endowment is the initial and ongoing resource commitment to the College. A College with no Endowment does not generate anything and will eventually “close” if not Endowed for three consecutive Regular Turns (i.e. “bankrupt”). (*Endowment, 1 Colleges, p. 459*)
 - The Initial Endowment is the commitment of resources (RPs) currently in the Treasury to fund the College. Obviously, the Treasury must have sufficient funds for the Initial Endowment and those RPs are subtracted from the Treasury at the time of Foundation.

⁸ Alternatively, I have later thought an Expose’ could be similar in function to a Shakespearian soliloquy as well; it exists somewhere between those two points game mechanically

- While Colleges do represent the entire body of professional knowledge and commitment on a particular subject or group of subjects throughout a civilization; Colleges do need a “place,” a Host Colony (aka “campus colony”). (*Campus Life, 1 Colleges, p. 459*)
 - The colony designated to Host a College must be a Friendly or Naturalized Colony (see Colony Politics, 2 Order, p. 538, *infra*) with at least ten population factors.
 - An eligible colony may Host any number of Colleges as long as it has ten population factors *for each*.
 - The location of a College on a Host Colony has no effect on the colony as the College is publicly funded by the interstellar government, except that a colony Hosting a College may never voluntarily remove population such that it has less than ten population factors per College hosted (i.e. minimum population is locked).
 - A colony does not become a “specialized colony” (see 4 Expansion, p. 925, *infra*) by Hosting a College, but it is possible to create “specialized” College Host colonies.
 - If the Host Colony of a College is captured, operation of the College is suspended, but no funds are lost from the current Endowment. If the Host Colony is recaptured, operation of the College recommences on the next turn. If a Host Colony cannot be recaptured within three Regular Turns (Turn Cycles), the College will “close” and half of the Endowments will be lost, while the other half are returned to the Treasury.
 - Ownership of Colleges is non-transferable as the College is related to (and a product of) the specific cultural milieu and the interstellar government that created it.⁹
- Inactive Constructural Elements have no effect on activations of the Culture Power for the purposes of Endow Colleges (*ut supra*) or Doctrinal Template (see Combat Formations, 4 Colleges, p. 503, *infra*), as they are non-localized Power Activations. (*Bobbing Lights, 1 Colleges, p. 465*)
 - Activations of the Culture Power for the purpose of *Founding Colleges* or Amending Charter are subject to the *Host World's* Constructural Elements and might fail due to inactive Constructural Elements. If the attempt to Found a College fails, no RPs are taken from the Treasury for the Initial Endowment and the position can try again later.
- The Charter for the College cannot be changed except by Amending the Charter (aka changing the tune). This includes the Host Colony; if the Host Colony is lost for any reason, and cannot be regained, it may be necessary to Amend the Charter to Host the College on a new Host Colony before the College “closes.” Any change in the Faculties or per turn use of the Endowment would also require an Amended Charter. A College Charter may only be Amended if the College currently exists, “closed” Colleges cannot be “re-founded” by activation of the Culture Power for the purpose of Amending the Charter. Activation of the Culture Power to Amend a Charter requires two Acts and one Scene on the Host World to Amend one Charter.¹⁰ (*Amended Charter, 1 Colleges, p. 462*)
 - Amendment of the Charter should not allow a College to change its Mission because a College represents the entire body of knowledge and professionalism on a subject across civilization. It is not impossible however, but the implications would be profound. (*New Mission, 1 Colleges, p. 462*)

Endowments Game (aka ass-kissing rich Alumni):

- At the end of each Regular Turn after Foundation, *whenever actions are processed for the position*, the College will operate automatically (positions cannot choose not to operate an Endowed College, except by skipping their Regular Turn) and the “Per Turn” Endowment (provided on the Charter) will be subtracted from the current Endowment of the College. (*Student Loans, 1 Colleges, p. 460*)

⁹ The key concept for Colleges in GGDM is that they are simultaneously local and general, specific and general.

¹⁰ The Scene used to Amend the Charter could be on the proposed new Host World if the Concierge allows; this is useful if the original Host Colony is unavailable for whatever reason. The game should not get hung up in mechanical quandaries; there is room for interpretation in most cases and the Concierge has the final interpretive authority over grey areas and secret position internal processes.

- Therefore, to continue operating the College, additional resources (RPs) will need to be committed to the Endowment by activation of the Culture Power for the purpose of *replenishing the Initial Endowment up to its original level*.
- A College can never be ‘over-endowed,’ that is the Initial Endowment serves as the limit for future endowment replenishments.
- Activation of the Culture Power for the purpose of Endowing Colleges requires one Act and may be used to Endow *any number* of Colleges in a single Regular Turn.
- A position with multiple Colleges should specify which College Endowments are to be replenished.
- Activation of the Culture Power for the purpose of Endowing Colleges allows a position to add RPs to the Endowment of *any number* of previously-founded Colleges in the same Regular Turn. The RPs are immediately subtracted from the Treasury, which must have sufficient funds and RPs committed to Colleges cannot be retrieved.
- If the Treasury is insufficient to meet endowments in a Regular Turn, all RPs will be taken and distributed approximately equally to the Colleges listed. A position might intentionally do this if it simply wants to dump all remaining RPs into the Colleges (but cannot meet all of their Initial Endowments) to keep them running and wait for Taxation to replenish the Treasury later.
- RPs committed to the Endowment of a College do not need to be located on the Host World of the College to replenish the Endowment (i.e. do not count against turn GDP of the Host World).
- There is a dynamic between the Initial and Per Turn Endowment of Colleges and activations of the Culture Power to Endow Colleges. The smaller the Initial Endowment, the more that later activations will be required to replenish the College, but conversely, less RPs will be required each time. Larger Initial Endowments will require more RPs each time, but less Power Activations later. Per Turn Endowments also regulate the frequency of the need to replenish Colleges. (*Dynamic Sessions, 1 Colleges, p. 461*)

Faculties and Class Generation (and a good ‘ol College Try):

- Faculties are the effects of the College on society, empowering the position to act, or to act more effectively, to achieve superior results. Faculties include the training of the next generation, the dissemination of knowledge and understanding throughout society. (*Faculties, 2 Colleges, p. 473*)
- At the **end** of each Regular Turn, each College will attempt to generate Faculties if the College’s Host World is not captured and if enough Endowments remain to fulfill the current Per Turn Endowment of the College. Faculties are received for each successful College Try. The number of College Tries allowed for each College is the total population of the position (including Converted, but not Captured populations) divided by the total number of colonies, divided by ten. (*My Generation, 2 Colleges, p. 473*)
 - So, a position with 300 eligible population on five colonies, gets six College Tries per College per turn ($300 \div 5 \div 10 = 6$).
 - The chance of success of each College Try is the Per Turn Endowment (RPs) divided by the total number of colonies divided by ten (or put another way, 1 RP per Turn Endowment per colony equals a 10% chance of success).
 - So, a College with a 10 RP per Turn Endowment and five colonies would have a 20% chance of receiving a Faculty for each College Try.
 - Note that the math here rewards urbanization and stability; expanding and establishing new colonies, and conversion of colonies, can dilute the chances significantly.
 - ‘Faculties’ are therefore the ‘game unit’ of Enlightenment in a position’s civilization; just as RPs are the non-monetary economic unit of the game. And like RPs, Faculties are considered to both exist generally throughout the civilization and are simultaneously applicable locally, within limitations, to accomplish the task at hand (quantum mechanics again...).
- Regardless of how many Faculties are received, the *per-turn* Endowment is subtracted from the Endowment of the College each Regular Turn it operates. (*Tuition & Tenure, 2 Colleges, p. 474*)

- All Faculties generated by a College are kept in a “class” for that College and a running tally is kept on each College’s current Charter. Immediately prior to Faculty generation (i.e. College Tries) each Regular Turn (or Turn Cycle if Regular Turn Actions are not submitted or processed) after the operation of Institutes and Enlightenment, half of the Faculties in each College’s ‘class’ will retire (i.e. ‘age-out’ like RPs in the Treasury).
- Faculties in a College’s ‘class’ are not immediately lost if the College’s Host Colony is captured or if the College ceases to function or closes for any reason, but of course, without replenishment, they will eventually dwindle away, losing half each Regular Turn. Or put another way, the half-life of a Faculty is one Regular Turn if not used.

Enlightenment:

- The success or failure of any action or the successful resolution of any situation depends on the quality of the people ‘on the ground,’ that is, the people who are actually involved in performing, leading, or evaluating the task. (*Enlightenment, 2 Colleges, p. 475*)
 - Enlightenment in GGDM should not be confused with the historical era from which the term derives its more general application here. Enlightenment are that package of qualities that lead to what professional sports calls execution (effort) and talent.
- All of the Faculties currently in the “classes” of all of a position’s Colleges are part of an imaginary pool called The Enlightenment (similar to the Treasury as an imaginary pool of RPs available to the central interstellar government). These Faculties are available for use to affect die-rolling situations during the turn and/or to operate Institutes (see Institutionalized, *et seq.*, 3 Colleges, p. 487, *infra*). (*Pool of Radiance, 2 Colleges, p. 477*)
 - Whenever a position intends to use Faculties to affect die rolls, they must be assigned in the Regular Turn Actions submitted, in other words, the decision to use or apply Faculties to die-rolling situations that might occur during the turn must be made *before the turn is processed* (i.e. foresight, because of the way the game processing operates). Faculties designated to affect die rolls are not available for operation of Institutes during the same Regular Turn.
- Faculties designated to support die rolls in the position’s Regular Turn Actions are subtracted one from each College’s class until enough Faculties are gathered to satisfy the Faculty commitment. Faculties will be taken from the oldest College first, and then one by one to the newer Colleges, until all Colleges have given one Faculty, and if more are needed, the process starts again with the oldest College. Whenever a Faculty is used for a reroll, it is expended, removed. Faculties are designated to support a specific Power Activation. (*Nightlight, 2 Colleges, p. 477*)
 - Faculties from classes of *suspended Colleges* remain available until they ‘age-out.’
 - Enlightenment is about doing in the game. Because Enlightenment must be designated for either specific Power Activations or Combat Rounds, they cannot be used to affect non-Power Activation effects of the game, such as Reformations, Kairotic Moments, or News Events or usually acts of other positions, hostile or otherwise.
- Faculties must be applied to specific die-rolling situations. So, for example, Faculties cannot be used to affect Census and Taxation, but can be used to affect the Loading of population on Colony Ships, or to affect Combat. Enlightenment can only be used to affect situations occurring on the Public Space – remember that the Public Space at any moment also includes all places in the Galactic Space where the position currently has ships or sovereign populations located. Besieging a Host Colony has no effect on Faculties from either Colleges located there or any other College. Similarly, Faculties from a College have no special effect on or any extra meaning to the colony Hosting the College. (*Web of Night, 2 Colleges, p. 477*)
 - A die roll in GGDM should be thought of as representing the collective result of hundreds of small activities, tasks, and actions, sometimes over an extended time period (sort of like at bats, pitches and plays collectively in a baseball season). Occasionally, a die roll may represent the result of a momentary act by one or two individuals in a crucial situation (like in a baseball

game). Thus, GGDM's scale is different from what is commonly seen in science-fiction movies and books where individual heroic characters drive the action (see related discussion in *Buzzing Lightyears, et seq.*, 4 *The Streams of Time*, p. 101, *supra*).

- Faculties are assumed to come from and apply to the position's sapient, biological population, especially in reroll situations. Because of so many unknown and currently unknowable, speculative possibilities, GGDM makes no comment on whether or when Faculties apply to tasks performed solely by machines or artificial intelligences (the question of what is 'artificial' about a machine's intelligence is another interesting issue), for example, can Faculties be applied to Hazard Rolls for purely robotic Scout Ships (see *Then Never Comes*, 3 *Expansion*, p. 907, *infra*), or must we assume that Scout Ships have a biological sapient crew? What if Fighters (see *Fighters*, 1 *Carriers & Fighters*, p. 1046, *infra*) are just sophisticated drones? There may be a tendency for technology in the game to develop in the direction of crewless warships and machine interstellar combats; participants will need to decide what this means in the game.
- For each Faculty used, the position gets one reroll of a failed die roll as if it never occurred.... The Enlightenment reroll will be applied to the first failed die roll. A position may only reroll each die rolling situation *once*, at the moment a die roll fails, no matter what kind of die roll it is, or whether or not the die roll is important. Multiple Faculties may be committed to situations where there may be multiple die rolls, but whether used or not, any committed Faculties are not available to operate Institutes. Unused Faculties will be returned to the Classes at the end of the turn, before aging is processed. Faculties committed to Combat, used or not, **will not be returned** at either the end of the Round or at the end of the Combat. (*Vampire Suicide*, 2 *Colleges*, p. 478)¹¹
- "Failed die roll" in GGDM means any die roll result that is less than the optimal, best possible result. Thus for any die roll where the result determines the value of X (rather than hit or miss, success or failure), whenever the result is not within 10% of the best possible X (e.g., funding rolls in Research Attempts), a Faculty will be used to reroll and the result of the reroll, even if worse than the original, will be applied. Positions should thus take care in committing Faculties to rerolls in situations where the die roll is to determine a value and an optimal result is not required or worth the risk or expenditure of Faculties. (*Harsh Mistress*, 2 *Colleges*, p. 479)
 - In situations where the die roll is to determine a success or failure, hit or miss, or whether or not a colony or ship will obey the Power Activation (see *Power Off*, 2 *Constructural Elements*, p. 193, *supra*), with no other possible result in between, the failure is a "failed die roll" which will trigger a reroll using available Enlightenment.
 - In situations where the die roll is to determine the value of X (*ut supra*), Enlightenment can be a harsh mistress (something courted or beloved, but a harsh respondent) as only optimal results prevent rerolls and the rerolled result can be worse than the original.
- Application of Enlightenment in combat is the same as for any other situation. All participants in the combat may commit currently available Faculties with the orders sent for each Combat Round. As explained in *Relativity*, 2 *The Streams of Time*, p. 85, *supra*, combats operate semi-independently of Regular Turns, that is, combats operate on their own schedule and may continue for many Turn Cycles, depending on how quickly the participants wish to resolve the combats. As a result, it may be possible for a fresh set of Faculties to be supplied to a combat after each Regular Turn by each side. (*Army of Light*, 2 *Colleges*, p. 479)
 - Faculties assigned to Combat carry to the end of the combat, see *Combat Resolution*, 3 *combat*, pp. 976-977, *supra*; unused Enlightenment is not lost at the end of each Combat Round. Faculties used in combat *may never be used to affect the other side's die rolls*, that is Faculties cannot

¹¹ The 'one reroll' rule is the singular important game mechanical restraint to use of Enlightenment. Players may tend to forget the rule when committing Enlightenment to Power Activations. In many other games, players can spend a wealth of points, tokens, etc. rerolling and rerolling until the point is reached where a positive result must be obtained due to what has been expended, the position cannot then come away empty-handed and with empty pockets too. Enlightenment doesn't work that way in a simulation game.

be used to make the opposition reroll a successful die roll in combat or Special Operations, thus, Faculties may not be helpful while executing retreats from combat....

- However, in Fighter attacks in Combat, the position may decide each Combat Round that Faculties committed to Combat will not be used for Fighter attack rerolls – *this is simply a game mechanical concession* as Fighter Combats use lots of die rolls and are processed first in the Combat Round, therefore, could easily use all of the Faculties committed to the Combat Round before the other ships execute their attacks. This may be an important decision.
 - Enlightenment should not be applied to Ship Missile attacks, see Fire & Forget, 4 Carriers & Fighters, p. 1080, *infra*.
- Inactive Constructural Elements do not affect actions or die rolls in Combat except that inactive Epistemological Constructural Elements may affect application of Enlightenment to individual units in the Combat.

Institutions (for the ‘institutionalized’...):

- Institutes are non-technological installations created by use of a Special Writ called a Land Grant. Institutes are “social installations” at or on a specific colony such as temples, amusement parks, prisons, schools (but not Colleges), command centers, financial markets, social services, and such, which are not related to any specific technology, i.e. Patent (see Patents generally, *infra*), and the existence of which probably predate interstellar civilization. (*Institutionalized, 3 Colleges, p. 487*)
 - Institutes can be singular; there is no requirement to construct Institutes across several colonies.
- A Special Writ is simply a Writ that is named in the GGDM rules and performs a function specified in the rules. Examples include the Land Grant for Institutes, the Writ of Naturalization (see Naturalization, 3 Order, p. 557, *infra*), and Articles of Incorporation (see 1 Corporations, p. 1246, *infra*). (*Institutionalized, 3 Colleges, p. 487*)
 - Land Grant Writs are created and introduced the same way as normal Writs (see Tabula Rasa, 1 Writs, p. 436, *supra*). The Land Grant Writ must provide all of the special information necessary for the Institute. Specifically, a Land Grant Writ must include a Power Activation (as a normal Writ), the name of the Institute being created, a specific College with which the Institute is associated, which will be used to supply Faculties, the number of Faculties used per turn per Institute location, and the building cost and operational effect of each Institute (i.e. what does it do with those Faculties?). (*Letters Patent, 3 Colleges, p. 488*)
 - Institutes may never be used to affect die rolls.
 - Ownership of Institutes is non-transferable, but they might continue operating for awhile or indefinitely, to a greater or lesser degree, after capture.
- ...the ability to build a particular Institute is created by the use of a Land Grant Writ; however, the building of Institutes on or at colonies requires:
 - The activation of the Writ that created the Institute (by actualization of a designated Fuzzy Group and concurrent activation of the Power listed on the Writ) and,
 - The simultaneous activation of the Construction Power at any *Friendly or Naturalized Colony* where it is desired to build the Institute (cost counts against the GDP),
 - One activation of the Land Grant Writ may be used to build Institutes in as many places as legally possible in the same turn with Construction Power activations.
 - Institutes will have a building cost, as any other installation, and only **one** of each type of Institute may exist on each colony at any time (they can be rebuilt as above if destroyed, as by Raids, Orbital Bombardment, Black-ops, etc.). (*Land Grant, 3 Colleges, p. 488*)
- In order to operate, an Institute must be supplied with Faculties each Regular Turn. An Institute will operate automatically (no Power or Writ activation necessary), and use available Faculties, each Regular Turn that the College to which it is associated has enough Faculties in its “class” *after* pre-committed Faculties are subtracted for use in rerolls (however, see Skool Tyme, 2 Constructural Elements, p. 190, *supra*).

- Institutes generally operate at the end of the Regular Turn, before Colleges operate, unless otherwise specified in the Land Grant Writ.
- Institutes generally have a strictly local effect, although that is negotiable. (*Meets & Bounds, 3 Colleges, p. 489*)
- It is through the use of Institutes that Faculties may be applied to general, and *non-die-roll situations* such as Taxation and Census. Institutes cannot produce Faculties for either the position's use generally, or for its own use or the use of another Institute. Institutes that fail to operate for five consecutive Regular Turns are closed and removed from the colony. (*Meets and Bounds, 3 Colleges, p. 489*)
 - Institutes may not be used to force a reroll in situations where their world fails to obey a Power Activation due to inactive Constructural Elements (see Power Off, 2 Constructural Elements, p. 193, *supra*), but through the use of Faculties, any chance of failure could be affected on the world where the Institute exists, if built for that purpose, which will be defined in the Land Grant Writ. This is an example of the distinction, above.

Native Intelligence:

- While Colleges are the primary means of generating Faculties, each position will naturally receive some Faculties each turn based on the number of Fundamental Realities taken by the position during set up, due to the natural intelligence and cultural heritage each species brings into the game. Faculties received from Fundamental Realities are called Non-Specific Faculties, or NSF. One Faculty is received at the end of each Regular Turn for each Major Fundamental Reality. The number of NSF received each turn is reduced by one for each College founded during the entire game, regardless of the current state of the College or its eventual fate. (*The First is Last, 3 Colleges, p. 493*)¹²
 - NSF have all of the properties of normal Faculties, including aging, and are most likely to be used early in the game. It is possible also to create Institutes by Land Grant that use NSF by listing NSF as the "College" on the Land Grant Writ. Use of NSF are blocked 25% of the time by inactivation of the Epistemological Constructural Element on the target colony or ship (see Skool Tyme, 2 Constructural Elements, p. 190, *supra*). (*Native Intelligence, 3 Colleges, p. 494*)
 - This latter should not be confused with the failure of a colony or ship to obey Power Activation due to inactive Constructural Elements. This applies only to the attempt to use a NSF as a Faculty (an intangible object) on the target colony or ship.

Doctrinal Template:

- A Doctrinal Template (or SOP, "standard operating procedure" if you prefer, though the two are not close to the same in military speak) is a document created by positions, which describe in sufficient game detail some wetware combat-related trait, training, or tactical innovation of their forces that is *not solely* the result of either technology or the capabilities of the hardware used in battle. Most often, Doctrinal Templates will describe combat formations, training, organizational, command, and morale related issues. (*Combat Formations, 4 Colleges, p. 503*)
 - Doctrinal Templates are subject to approval and interpretive rulings by the Concierge.
- Doctrinal Templates may be created by an activation of the Culture Power for that purpose using one Act, on the same Regular Turn as an activation of the Combat Power. Activation of the Culture Power to Develop Doctrinal Templates is not subject to Power Activation failure checks (i.e. it cannot fail). (*Brain Trust, 4 Colleges, p. 504*)
 - Doctrinal Templates may only be created by positions that have a Combat College and may only use Faculties from the Combat College.
 - Doctrinal Templates may be activated in any suitable combat by use of Faculties from the Combat College.
 - These Faculties from the Combat College would be used in addition to any that may have been taken from the Combat College for use as die roll support in that combat.

¹² NSF answers the question of what happened before Colleges to allow the civilization to go into space? NSF bridges the gap.

- Doctrinal Templates are not Interpretations or Institutes (i.e. they are not Writs), and do not require the actualization of a Fuzzy Group, and cannot be used to satisfy the Interpretation requirement of any Power Activation.
- A Doctrinal Template is not required to do anything described in the Combat and Carriers & Fighters rules sections. Fighters and Ship Missiles are Existential Patents (i.e. technologies) and would never be created by a Doctrinal Template. (*Intuition, 4 Colleges, p. 504*)
 - For example, Combat Screening is a formation, the only one specifically described in these rules, but is a natural and necessary extension of the introduction of Carriers (which is how I thought of the Combat Screening concept) and Log Ships into Combat, and thus does not require the use of a Doctrinal Template.
 - However, Doctrinal Templates may be developed that are based on, improve, extend or add to either of the foregoing. Much depends on assumptions of what already exists.

Order (Vital Power)

- The Order Power must be activated for any of the following purposes:
 1. Declare/Move Capital Colony,
 2. Conversion/Naturalization (of a conquered **alien colony**),
 3. Maintenance,
 4. Government Formation (see Government Titles, *infra*).
 - Activation of the Order Power for the purpose of Declaring or Moving a Capital Colony requires one Act and one Scene on the target colony. Activation for the purpose of attempting to Convert or Naturalize an **alien colony** requires one Act and one Scene on the target colony. Activation for the purpose of maintenance will require one to three Acts. Declaring or Moving a Capital Colony and Maintenance also cost RPs from the Treasury. Finally, the actions regarding Government Titles are fully detailed in the section following the Order Section. (*To Insure the Domestic Tranquility, 1 Order, p. 517*)
 - Activation of the Order Power for the purpose of Declare/Move Capital Colony, Maintenance, and Government Formation can never fail due to inactive Constructural Elements. Conversion attempts are also never effected by inactive Constructural Elements on the target colony. Naturalization attempts, however, may fail due to inactive Constructural Elements at the target colony. (*Gaveling, 1 Order, p. 518*)

Capital Colony:

- Each position which owns any colonized planet must have a capital. The Homeworld or a starting colony, or the first planet colonized by the position in the game automatically becomes the position's Capital Colony; no Power activation is required. The capital is the source of remote authority, it is the central seat of the government, the administrative center, it is part of the identity of the population, and the emotional heart of the civilization. (*Capital Colony, 2 Order, p. 532*)
 - A Capital Colony is not a 'specialized colony' (see 4 Expansion, p. 925, *infra*) and a colony hosting the Capital receives no particular benefit; it does not require a Writ.
 - A Homeworld has no distinction in game terms, it is considered a colonized planet. Thus positions that begin with a Homeworld must have it as their Capital Colony.
 - The first colony founded by Invader Primal State positions **must be** accompanied by a News Event declaring the location and Capital Colony status of the first colony. The Capital Colony of Homeworld and Lost Colony Primal States is already known at the beginning of the game, Outposters must announce their Capital Colony before the game begins.
- There is no extra benefit to having a Capital Colony, but that it allows positions to efficiently activate powers and direct the activities which are the result of the position's Power Activations each turn (and

do the things positions do in the game). On that basis then, it is the loss of the Capital Colony to conquest or destruction that has a special effect on the position: The loss of the Capital Colony results *in the disruption of the position's Structural Government Title* (see World Powers Fall, 3 Government Titles, p. 616 and A House Divided, 5 Government Titles, p. 637, *infra*) and the position will also lose Acts or Scenes on the next turns as a result of government disruptions. Finally, an Intervention Potential Plus will be generated due to the disruption in the administration and centralized control from the conquest or destruction of the Capital Colony. (*Capital Punishment, 2 Order, p. 532*)

- An IP+ (Intervention Potential Plus) is not generated for disruption of a Structural Government Title, which has no Conflict Checks, it is not considered a Disruption Event at a colony and cannot affect Constructural Elements, see Rousing the Rabble, 2 Disruption, p. 271, *supra*. So the loss of the Capital Colony will only generate one IP+ unless it also causes an Estate or Social Government Title to become disrupted at the end of the Regular Turn.
- ...the *Capital Status* of the Capital Colony is disrupted if the Symbolic Constructural Element on the colony is inactivated for any reason. This *does not mean* that the colony ceases to be a Capital Colony or that the position does not have a Capital Colony. Rather, the symbolic image of the Capital Colony is tarnished, loses prestige, or [is] disputed such that, in addition to the inhibitions that accompany an inactive symbolic Constructural Element (for example, if Diplomatic Spaces were attached to the Capital Colony), one Intervention Potential Plus is generated each turn the Symbolic Constructural Element is inactive at the Capital Colony. A Special Bulletin may also be published, at the discretion of the Concierge, relating to the image problems. (*Fist Fights in Parliament, 2 Order, p. 532*)
 - This rule only applies to Capital Colonies; no other colony's political status is affected by whether or not the Symbolic Constructural Element is inactive.
 - Disruption of the *Capital Status* of the Capital Colony does not cause the Structural Government Title to be disrupted, because it is still a Capital Colony.
- Each position may only have one Capital Colony at any time. A position would only need to declare a Capital Colony if the previous one is lost to conquest or destruction. A new Capital Colony must be declared on the Regular Turn following the loss of the old Capital Colony. There are two ways that a new Capital Colony can be declared:
 - The first, preferable way, would be by an activation of the Order Power for that purpose, which must be accompanied by a News Event announcing the location of the new Capital Colony. By activating the Order Power, the position may choose the location of the new Capital Colony and avoid additional entropy.
 - If the position does not have enough Acts and Scenes to activate the Order Power, or chooses not to do so (the position is not required to do this *even if it can*), then the Concierge will choose and declare a new Capital Colony for the position, generate the News Event (as a Special Bulletin), and act pursuant to Gone with the Wind, 1 Government Titles, p. 582, *infra*, to restore the position's disrupted Structural Government Title. The Concierge will not provide an advance consultation on where he might place the Capital Colony if the position chooses not to do it, or what might happen as a result. (*Capitol Declaration, 2 Order, p. 533*)
- A position may choose to voluntarily move their Capital Colony during any Regular Turn by activating the Order Power for that purpose, and issuing a News Event declaring the move and the name *and political status* of the new Capital Colony. While the loss of the Capital Colony has dire consequences, moving the Capital Colony does not always have to be in response to military threat; clever players may find a way to make the movement of the Capital Colony a beneficial event. (*Inside the Hyperspace Bypass, 2 Order, p. 533*)
 - In addition to the activation cost of the Order Power to move the Capital Colony, the movement also costs 10 RPs from the Treasury.
 - Finally, the Capital Colony is not moved on the Regular Turn the movement is declared, but instead, the colony designated as the new Capital Colony gains that status on the following Regular

Turn Cycle (even if the position submits no Actions, no Order Power activation is required to complete the process).

- Voluntary movement of the Capital Colony does not require movement of populations between the old and new Capital Colonies (though the Concierge may reject the target colony due to ineligibility, below, and either cancel the move or choose a new Capital Colony).
- In any instance where the Capital Colony is either voluntarily or involuntarily moved, the new Capital Colony must be placed on a Friendly Colony within two turns' ship movement of the old/current Capital Colony and the new Capital Colony must be connected so that it meets the requirements of the position's Structural Government Title. (*Capital Eligibility, 2 Order, p. 534*)
 - If there are no Friendly colonies available, then it may be placed on a Naturalized Colony, and if none are available, then it may be placed on a Converted Colony. As an absolute last resort, a Conquered Colony may serve as a Capital Colony.
 - If the Capital Colony is not located on a Friendly or Naturalized Colony, then it must be moved to one as soon as one becomes available within two turns' movement range of the current colony.
 - Placing the Capital Colony on a Conquered or Converted colony does not change the political status of the colony (*ut infra*).
 - A Capital Colony is lost if located on a Conquered or Converted Colony that reverts.
 - There are no minimum population requirements for a colony to become a Capital Colony.
- GGDM makes no provisions for use of any sort of ship as the Capital of the position. It is not expressly disallowed, however, and may properly occur in the game possibly with the use of a Writ, one of the main issues being the required Pathways connecting the Capital to the Government Titles on the Public Space. (*Capitol Ships, 2 Order, p. 535*)
- If the original Capital Colony is conquered or destroyed before the transfer at the end of the Regular Turn, the position will not have a Capital Colony at the end of the Regular Turn, and the Structural Title will automatically be Disrupted, and then restored at the end of the next turn if the new Capital Colony survives. (*General Howe in Philadelphia, 2 Order, p. 535*)
 - If the movement of the Capital Colony is in progress, and the colony designated as the new Capital Colony is captured or destroyed before it becomes the Capital Colony, the movement of the Capital Colony is cancelled, and the old Capital Colony remains the Capital Colony. The 10 RPs are always subtracted from the Treasury in any case. A News Event will be required to announce the cancellation.
 - If the movement of the Capital Colony is in progress and both the old Capital Colony and the colony designated as the new Capital Colony are captured or destroyed at the same time – well, do you still deny the universe is conspiring against you? – the position will obviously suffer the effects of being without a Capital Colony.

Colony Politics:

- Colonies have four possible *political status* which govern their relationships. Colonies can be Friendly, Conquered, Converted, or Naturalized. (*Colony Politics, 2 Order, p. 538*)
 - Friendly colonies are colonies composed of their owner's Native Population Type, descended from the Original Populations. Friendly colonies are assumed to be completely loyal *for game purposes*, support the operation of fleets, and produce and grow at full potential, and may also be the site of Colleges and Institutes. (*Friendly Colony, 2 Order, p. 539*)
- When a Colony and/or Ground Combat ends with the surrender of the colony, the colony has no choice but to hope for the best. At that point, the colony becomes a Conquered Colony controlled by the attacker and passes to their possession; the former owner exerts no control over the colony and *may not exercise Taxation or Census Powers*. (*Conquered Colony, 2 Order, p. 539*)

- The newly Conquered Colony is removed from its previous owner's Public Space and placed on the new ruler's Public Space and connected subject to the Structural Government Title requirements.
- The Monad occupied by the colony is not transferred with the colony (see Monad Imperialism, 3 Order, p. 561, *infra*), it remains available (but now unoccupied) in the original owner's Public Space. Thus, conquest of colonies is *not* a means to expand the conqueror's Public Space, but rather, will serve to fill the conqueror's Public Space with **alien colonies** while expanding their sphere or footprint in Galactic Space. However, see Alienation and Alien Nation, 3 Order, pp. 560-561, and In Spite of Ourselves, 4 Order, p. 574, *infra*.
- A Conquered Colony is not a Friendly Colony for the new owner and may not be used to support fleets (see Supporting Colony, 1 Movement, p. 840, *infra*) and may not be taxed (see The Taxman Cometh, 2 Taxation & Census, p. 306, *supra*) but may be Looted (see 3 Commerce, p. 1210, *infra*).
- Further, the Conquered Colony will instantly *revert* to the control of the *owner of the Native Population Type* of the colony at any time the conqueror has no warships remaining in the system, or ground troops on the colony, regardless of whether or not the previous owner was the position representing the Native Population Type of the colony. However, if the colony was Naturalized by its previous owner, *it may first revert automatically to the previous owner and not to the owner of the colony's Native Population Type* (this is a political situation on the ground subject to possible Concierge Interventions). The Concierge will make an of-the-moment judgment.
- In order to make a Conquered Colony productive, it must be pacified, order must be restored, and the colony must be brought into the conqueror's economic system. This is the process called Conversion ('annexation without representation'), and there are two ways to convert a conquered colony, the long way and the short way:
 - The short way is by either Orbital Bombardment or Pacification Combat (see Making War for Peace, 6 Combat, p. 1020, *infra*), both lasting one Combat Round, following the conquest of the colony, and will result in damage to the colony and the planet.
 - The long way requires activation of the Order Power to attempt Conversion. (*Converted Colony, 2 Order, p. 540*)
- A Converted Colony will produce resources during Taxation by the new owner, will support the Operational Flight or Supply of fleets, and may build and do everything a Friendly Colony can, but the populations on Converted Colonies *do not grow* when the new owner's Census Power is activated and it will revert in the same manner as a Conquered Colony any time that the owner does not have a warship in the system and/or ground troops on the colony. (*Converted Colony, 2 Order, p. 540*)
- ...the Naturalized Colony is a Converted Colony that has been in the possession of its current owner so long that it becomes completely friendly (or *mostly harmless*) and culturally corrupted (well, that's one side anyway) so that the colony becomes in all ways equal to a Friendly Colony, meaning that the population will grow during Census, it will produce Taxation and support the Operational Flight or Supply Limits of starships, and it does not require a warship or Ground Units present to insure loyalty. The only difference remaining between the Naturalized Colony and the Friendly Colony is the Native Population Type of the colony. (*Naturalized Colony, 2 Order, p. 540*)
 - A Naturalized Colony that is subsequently captured by any other player, including the owner of its Native Population Type, becomes a Conquered Colony again, but if the owner for whom it was *last* Naturalized recaptures the colony, it immediately reverts to being a Naturalized Colony for that position.
- For the purposes of the political status of Balkanized Colonies, each population type present on the planet is treated as a separate colony (even if the assumption is that the populations are intermingled).

Thus, one part of the population might be a Friendly Colony while the remaining population constitutes a Conquered Colony. (*Balkanized Colony Planets, 2 Order, p. 541*)

- A Homeworld has no special game qualities or distinctions merely from being a Homeworld (other than sentimentality). A captured/conquered Homeworld becomes a Conquered Colony for the conqueror and is treated as a colony for all subsequent purposes. (*Pilgrimage to Earth, 2 Order, p. 541*)

Conversion & Naturalization:

- Conversion and Naturalization are the processes of bringing Conquered Colonies into the sovereignty, political and economic networks of the conqueror's society (and to the conqueror's benefit), as much as can be done considering the situation. (*Conversion & Naturalization, 3 Order, p. 553*)
 - Conversion attempts are never required, a colony can remain perpetually a Conquered Colony.
 - Conversion and Naturalization ... are not automatically successful, however, as time-consuming as Conversion and Naturalization can be, the colony does not suffer damage.
- Only Conquered Colonies may be Converted; colonies that are subjected to Orbital Bombardment Combat by the conqueror are instantly Converted (however, the colony and planet are damaged and there is a risk of *apostasy*). ... Conversion is a matter of time and force, and is thus suitable for resolution by die roll. (*Conversion, 3 Order, p. 554*)
 - Conversion Attempts *are not* subject to failure of the Power Activation due to inactive Constructural Elements on the target colony (their resistance is a given). Game mechanically, Cohering attempts cannot be applied to Conquered Colonies (see Money Can't Buy You Love, 5 Culture, p. 422, *supra*) and Conquered Colonies are likely to have inactive Constructural Elements. However, upon successful Conversion, the conqueror inherits the mess, newly converted colonies may be difficult.
 - Each Conversion Attempt (by activation of the Order Power) requires a die roll on one ten sided die, and is successful if the modified die roll is greater than the population of the Conquered Colony divided by ten.
 - One is subtracted if a Pacification Combat (see 6 Combat, *infra*) has been initiated against the colony (this implies failure to automatically Convert the colony).
 - Two is subtracted from the die roll if the colony was Looted (see Looting, 3 Commerce, p. 1210, *infra*) by the *current sovereign* before the Conversion Attempt.
 - One is subtracted from all Conversion die rolls if the conqueror has no Diplomatic Spaces (see 2 Diplomacy, *infra*) beyond First Spaces with the owner of the Native Population Type of a Conquered Colony. Colony Combat can be a First Contact.
 - One is subtracted if any population is Loaded, Unloaded, or Landed on the Conquered Colony's planet (even their own) by anyone prior to the Conversion Attempt.
 - One is added to the die roll if the target colony is part of a Balkanized planet that contains a sovereign colony of the conqueror's Native Population Type (i.e. familiarity).
 - One may be added, at the discretion of the Concierge, if the Construction Power was activated at the Conquered Colony after conquest (depending on what was built). It is possible to activate the Construction Power without Unloading RPs, just for show.
 - Two is added to the die roll if RPs greater than the taxation value of the colony were Unloaded from Cargo Ships (see Combat Engineers, 1 Construction, p. 664, *supra* and Downloading, 2 Commerce, p. 1202, *infra*) at any time *prior* to the Conversion Attempt (i.e. bribery, reparations), *but not if the colony was subjected to Orbital Bombardment Combat by the conquerors*. RPs downloaded to Conquered Colonies are at normal value, not enhanced value (opposite of Looting, 3 Commerce, p. 1210, *infra*).
 - Due to processing sequence it is not possible to Unload before Conversion in the same Regular Turn (Order is before Commerce) unless paired with a Construction Power Activation (Material Handling, 1 Construction, p. 664).

- If a Pacification Combat has occurred at the Conquered Colony (risking *apostasy*, see Alieney Apostasy, 3 Disruption, p. 283, *supra*) and the result was a suppression (see Fabrication of Order, 6 Combat, pp. 1022-1023, *infra*), two Conversion attempt rolls (at -1 modifier each, *ut supra*) at that colony may be made in a Regular Turn for each activation of the Order Power for the purpose of Conversion targeting the colony *and the total of the two Conversion rolls are added together and treated as one*. However, for each failed Conversion Attempt, one population factor is lost from the Conquered Colony. (*Taught Their English To Our Young*, 3 Order, p. 555)
 - Pacification Combat may thus be required to convert large colonies, i.e., the ability to add die rolls from two attempts may be the only way to get a sufficiently high number for conversion.
- Only Converted Colonies may be Naturalized, and a colony *may not be both* Converted and Naturalized on the same Regular Turn. (*Naturalization*, 3 Order, p. 557)
 - Naturalization is the only activation of the Order Power that can fail due to inactive Constructural Elements. When a Naturalization attempt is made, the target colony is checked to see if it obeys the Power Activation (see Power Off, 2 Constructural Elements, p. 193, *supra*). Enlightenment (true enlightenment!) can be used to increase the chances, but if the colony does not obey the Power Activation, the Naturalization attempt fails on that turn regardless of what the participants and Concierge may desire; ‘they’ (‘dem stupid aliens) are not quite getting it yet!
 - Naturalization is accomplished by activation of a Special Writ of Naturalization on the same Regular Turn as the Power Activation that is only applicable to the target colony (and requiring a Fuzzy Group). The Writ must be in proper form, see Form of the Writ, 2 Writs p. 438, *supra*. Acceptance of the Writ is entirely at the discretion of the Concierge, based on judgment of the colony’s true status and the process, and history with the current conquerors (and possibly, also the story arc of the game); but once the Writ is accepted, it only needs to be activated once to Naturalize the colony.
- GGDM does not anticipate that a Naturalized Colony will ever be reduced in status to a Converted Colony without change of ownership. It is not impossible. However, Naturalization is considered permanent, and the Writ of Naturalization cannot be voluntarily undone or revoked by the position, it’s not just a political convenience. (*Cuba Libre!*, 3 Order, p. 558)
 - A Conquered Colony that contains the conqueror’s Native Population Type is automatically a Friendly Colony (at the discretion of the Concierge), unless it has been Naturalized by another position. If the colony was ever Naturalized, it cannot (likely) never be a Friendly Colony (they have been culturally contaminated by aliens!) to the owner of its Native Population Type, but a +2 modifier is added to all Conversion Rolls by the new owner and it can (probably) be Naturalized again. This is all at the discretion of the Concierge, of course; it could be decided that the colony can be reintegrated, but there are lots of factors, acceptance, work.
- At the end of any Regular Turn in which a position Converted a Conquered Colony, there is a 1% chance, plus 2% per Converted Colony and 3% per Naturalized Colony owned by the position that a Monad will be added to the position’s Public Space adjacent to the location of the colony. A Monad may also be gained each time a colony is Naturalized as above, but the base chance increases to 3% plus modifiers. Additionally, 1% is added to either for every three units currently in *apostasy*. This is an intentional ‘snowballing’ mechanic. (*In Spite of Ourselves*, 4 Order, p. 574)

Alien Nation:

- The conqueror, whatever the political status of the *alien colony*, inherits the Fundamental Realities of the alien nation to which the population belongs, and those Fundamental Realities, along with all other characteristics of the alien Native Population type (such as planet habitability), will continue to apply to the alien populations no matter where in the universe they live or who controls them. (*Alienation*, 3 Order, p. 560)

- The conqueror will not be allowed to see the Fundamental Realities that apply to the conquered populations, but will be informed at appropriate times when they can or cannot do something in relation to the conquered population because of the alien Fundamental Realities, and thus the conqueror will eventually become familiar with their alien subjects. Interventions will apply.
- ...*culture and research that were adjacent to or connected to the conquered colony are not transferred* to the new owner with the colony (but *may be lost or disrupted*). Additionally, Writs, Patents, Colleges, Institutions, and Government Titles of the conquered population are not transferred to or available to the new owner. However, due to the nature of technology, it may eventually be possible to reverse engineer alien technologies found on conquered planets (assuming they survive the battle) with some effort; see 3 Technologies, pp. 712-720, *infra*, for Reverse Engineering procedures. (*Alien Nation, 3 Order, p. 560*)
- ***Transfer of a newly-conquered colony from one owner's Public Space to the new owner does not include transfer of the Monad which the colony occupied on the original owner's Public Space. (Monad Imperialism, 3 Order, p. 561)***

Maintenance:

- When activating the Order Power for the purpose of maintenance, the position may choose to use one, two or three Acts for the activation. Additionally, the position must pledge an amount of RPs, which are immediately removed from the Treasury. A position may not pledge more RPs than are available in the Treasury. (*The Roads Must Roll, 4 Order, p. 567*)
 - Maintenance Shield Activations costing three Acts will process after Taxation Power Activations costing three Acts. This is advantageous.
 - Maintenance is automatically successful in that the number of Acts committed are multiplied by the number of RPs pledged, and the resulting number is divided by a random number determined by the Concierge. The resulting number are Maintenance Shields generated.
 - The Concierge should not inform the players of the die being used or even the results of a specific die roll.
 - The RPs pledged will be removed from the Treasury immediately when the Maintenance purpose is processed, which could cause other Power Activations to lack funding, so care should be taken to insure there are enough RPs in the Treasury to cover everything. RPs spent on maintenance, unlike Cohering, will never be returned.
- Maintenance Shields carryover from turn to turn, and are used to intercept adverse News Events directed at the position and may affect (but not block) Interventions by the Concierge directed at the position. (*The Old Handyman, 4 Order, p. 567*)
 - Maintenance Shields do not last indefinitely, there is a 15% chance that each unused Maintenance Shield will 'age-out' (expire) at the end of every Regular Turn. For each Shield that is eliminated due to aging, there is a 15% chance that in doing so, it will eliminate an Intervention Potential (generally) or reduce an Intervention Potential Plus currently against the position, to a normal Intervention Potential. There is no limit to the number of Maintenance Shields a position may have at any time.
- A position that has at least one Shield has a 50% chance of automatically blocking each adverse News Event – but not a Special Bulletin – and a position may not choose whether or not to block any particular News Event. It is irrelevant whether the adverse News Event would have had no effect (see Red Purge, 3 Dreamtime, p. 161, *supra*), and other positions are never informed if any News Event effect has been blocked by Maintenance Shields. Blocked News Events have no effect on the position, however, one Maintenance Shield is lost for each block. Unblocked News Events do not affect Maintenance Shield. (*Hammer Thumb, 4 Order, p. 567*)

- Modifications to News Events are News Events in their own right, see *The Modified Truth*, *et seq.*, 3 *Dreamtime*, p. 160, *supra*. Modifications of News Events can be blocked even if the original adverse News Event was not blocked. Similarly, blocking the original adverse News Event does not automatically block the modification News Event.
- It is possible that adverse News Events about poor maintenance, civil government failures, counterculture movements might target removal of Maintenance Shields if not blocked by a Maintenance Shield. This creates a situation where the target position loses a Maintenance Shield either way. However, as all positions are equally empowered in News Events, what comes around goes around, and either this warfare will fizzle, or it will turn into a multi-positional fracas of adverse News Events and Maintenance Shields. (*Blowups Happen*, 4 *Order*, p. 568)
 - Even though a certain percentage of adverse News Events will be blocked during the game (perhaps 30% overall) by Maintenance Shields, the “keep the sand in the sandbox” cautions in 2 *Dreamtime*, p. 147, *supra*, remain applicable. Players can still wreck the game by excessive, *dues ex machina* News Events, the equivalent of a global thermonuclear war with News Events in GGDM – nobody wins. Additionally, like adverse News Events that constantly target Constructural Elements, the game may grind to a halt because positions are spending activations and RPs every Regular Turn keeping up a Maintenance Shield and still taking hits from 50% of the *dues ex machina* adverse News Events.
- At the end of any Regular Turn, after the fourth Turn Cycle of the game that a position ends with no Maintenance Shields, the Intervention Potential generated by that position’s Regular Turn becomes an Intervention Potential Plus (IP+) against that position. (*Cheryl’s She-shed Caught Fire*, 4 *Order*, p. 568).

Government Titles (Order Power)

- During the setup process, positions obtain their initial Government Titles, which must include one, and only one, Structural Title, and two to four other Social and Estate Titles. See *The Power to Choose*, 5 *Beginnings*, p. 50, *supra*. Thereafter, any *voluntary act* relating to restoring, abandoning, adding, or changing Government Titles, must be done by activation of the Order Power for the purpose of Government Formation. (*Forming a Government*, 1 *Government Titles*, p. 582)
 - ...activation of the Order Power for purposes of Government Formation requires two Acts and a Scene on the Capital Colony or three Acts *when and only if* the position currently does not have a Capital Colony.
- A position’s Government Titles (and the Foresight) are secret. (*Alien Governments*, 1 *Government Titles*, p. 583)
- At the bottom of each Social or Estate Government Title are a list of one to three Vital Powers associated with that title. Any Vital Power – except Census – that is not associated with a currently *undisrupted* Social or Estate Title *will cost one more Act* to activate. This direct association of Social and Estate Titles with Vital Powers serves as a defining focus for the Titles and positions overall. It should not be difficult for balanced positions to have Social and Estate Titles covering all or most of the Vital Powers. (*Associates & Acquaintances*, 1 *Government Titles*, p. 580)
 - The additional cost of one Act significantly changes the sequence in which Power Activations are processed during the Regular Turn. See *Clockwork Universe*, 3 *The Streams of Time*, p. 90, *supra*. This is a tricky issue requiring consideration; a position’s processing sequence can be changed by Government Title disruption.
 - If one Act is added to Commerce Power activations, the special rule allowing Cargo Ships to Unload RPs before Construction Power Activations sharing a Scene is abrogated, see *Material Handling*, 1 *Construction*, p. 664, *supra*.
 - The association rule may be considered an *optional rule* if participants desire, but it should be decided *before* choosing Government Titles during set up. Instead, undisrupted Social and Estate Titles with duplicate Vital Power associations should be considered insurance in case of loss of legitimacy of one of the Titles.

Structural Titles:

- There are three types of Government Titles in GGDM. Structural Government Titles (hereafter, “Structural Titles”) reflect *the direction in which the power flows* in a governing system. (*Structural Government Titles, 2 Government Titles, p. 595*)
 - **Structural Titles:** Unitary, Confederation, and Dualistic.
 - All positions must have at all times one Structural Title; no position may have at any time more than one *undisrupted* Structural Title.
- Unlike Estate and Social Titles, Structural Titles do not occupy a separate, ‘exclusive’ area of the Public Space, but rather, dictate the arrangement of other Titles, Pathways connecting the Government to the Colonies, and the placement of the Capital Colony within the Public Space. Whenever the conditions required for the Structural Government Title cannot be met, *it is automatically disrupted* (a very rare occurrence). (*All Roads Lead To..., 2 Government Titles, p. 595*)
- A Unitary Structural Title requires that all undisrupted Social and Estate Titles be placed together in a bloc, all adjacent to each other, in the approximate center of the Public Space. Each Friendly, Naturalized, or Converted Colony owned by the position must be connected to at least one Social or Estate Title in the bloc by a Pathway of Monads *equal to or less than the total number* of Social & Estate Titles **plus one** at the time the Pathway is formed. One additional Monad may be added to the length of the Pathway if the Pathway joins another Pathway going to the bloc, but the total length of each Colony’s Pathway must individually comply. The Capital Colony must be connected by Pathways to three Social and/or Estate Titles, using the same rules as other colonies. If a new Capital Colony is declared, new Pathways must be created. The Public Space occupied by the Unitary Structural Title is congruent with the space required by the Estate and Social Titles and Pathways. (*Unitary Structural Title, 2 Government Titles, p. 595*)
- A Confederation Structural Title requires that no two undisrupted Social and/or Estate Titles can be placed adjacent to each other in the Public Space. Each Friendly, Naturalized, or Converted Colony owned by the position must be connected by Pathway to both: 1) one of the Social or Estate Titles and 2) one other Friendly, Converted or Naturalized Colony controlled by the position. The combined length of the Pathways connecting any colony to both a Social or Estate Title and one other colony *must be equal to or less than* (in Monads) the number of undisrupted Social and Estate Titles plus the number of colonies at the moment the Pathway is formed. The Capital Colony must be connected by Pathways to all of the Social and Estate Titles using the same rules as regular Colonies, plus it must be connected to one other Friendly, Converted or Naturalized Colony controlled by the position. As such, the Confederation Structure may feature long and tenuous pathways that resemble a crazy spider web or perhaps the runaround of our daily travels and relationships. (*Confederation Structural Title, 2 Government Titles, p. 596*)
- A Dualistic Structural Title requires the position’s Titles to be arranged in two approximately equal blocs (in the manner of the Unitary Structural Title) that are not adjacent. Each Friendly, Naturalized, or Converted Colony owned by the position must be connected to both blocs, each by a Pathway *equal to or less than* the number of Social and Estate Titles **plus two**, at the time the Pathways are formed. Thus the Dualistic Structural Title position will resemble the hemispheres and corpus callosum of the human brain. The Capital Colony must be nearer to one bloc than the other, but connected to both blocs following the same rules as other colonies. If the Capital Colony is relocated for any reason, the relocation must represent, in the Public Space, a power shift from one bloc to another. Thus, if the Capital Colony was previously nearer to one bloc of Titles, it must then be placed nearer to the other when moved. The space taken up by the Dualistic Structural Title is congruent with the space taken by the blocs and all of the Pathways. (*Dualistic Structural Title, 2 Government Titles, p. 596*)
- The Pathways connecting colonies to Government Titles are inviolate, unmovable, and unavoidable; each colony (other than Conquered Colonies) on the Public Space *must be* connected to Government

Titles pursuant to the type of Structural Title the position has chosen. Monads occupied by non-Structural Government Titles (*ut infra*) are inviolate, that is, they cannot be occupied by anything else or used for any other purpose, including connection of Research Groups or Fuzzy Groups. Inviolate means that Monads occupied by the Pathways cannot be used for anything else while the Pathway exists; however, other Pathways can cross a Pathway and Fuzzy Groups can be formed over and are unaffected by Pathways. (*The Claaaw is Our Master, 2 Government Titles, p. 597*)

- The Pathway should be as short and direct as possible and cannot be altered once established, notwithstanding any other items on the Public Space that may be in the Pathway when first laid – they must either be moved or removed at the discretion of the Concierge so that the Pathway can be created.
- The Pathway from each colony to a Government Title will use at least one of the adjacent Monads, leaving less adjacent spaces for Aspects and Research Pieces and anything else that must be placed adjacent to the colony on the Public Space. A combined Pathway running through a colony will use two adjacent spaces to enter and exit the Monad where the colony is placed, and thus might be disadvantageous.
- Pathways run between colonies and Government Titles generally, Pathways cannot and should not be connected to stars on the Public Space, connecting a Pathway to a star on the Public Space does not automatically connect all colonies located at that starsystem. For the purpose of Pathways, stars just occupy a Monad on the Public Space and can be moved as long as there is another legal place adjacent to the starsystem’s planets on the Public Space. (*Broken Escalator, 2 Government Titles, p. 598*)
- Two or more colonies can join in a common Pathway as long as the Pathway does not run through a Monad occupied by a Colony. Careful placement of Fuzzy Groups, Government Titles and Pathways on the Public Space is an important aspect of play. Typically, colonies will group around the Government Titles, and the larger a position grows (in number of colonies) the more space will be taken by the Pathways. The economy of Pathways also favors larger colonies, because the same Pathway is required regardless of the size of the colony. (*Commons Footbridge, 2 Government Titles, p. 598*)
- Positions may always choose to connect colonies to Government Titles by more Pathways than are required. This may be insurance against removal or abandonment of the Government Title, but it also consumes more Monads on the Public Space. Extra connectivity *could be interpreted* as extreme loyalty of the colony population. (*Roads Must Roll, 2 Government Titles, p. 598*)
- At any time that the Capital Colony is moved and/or a new Capital Colony is declared, the target colony may need to be moved on the Public Space to a suitable, legal location and/or new Pathways be created to satisfy the requirements of the Structural Title. The Pathways take precedence; some things may be lost. (*Capitol Chaos, 2 Government Titles, p. 598*)

World Powers Fall (Structural Title Disruption):

- There are three conditions under which a **Structural Government Title** can become disrupted (**but does not** generate an IP+): A Structural Title is disrupted:
 1. If the position does not currently have a Capital Colony (**after** a position’s Capital Colony has been established, see Capital Colony, 2 Order, p. 532, *supra*),
 2. If the position has no remaining undisrupted Social or Estate Titles, or
 3. If the position is unable to comply with the requirements of the Structural Title for any reason, including but not limited to, having no undisrupted Social or Estate Titles to connect the colonies by Pathways or being unable to place Titles in required ways. (*World Powers Fall, 3 Government Titles, p. 617*)
- As *Structural Titles* do not occupy any Monads on the Public Space (except Pathways), there is nothing to remove when a Structural Title becomes disrupted. Rather, the disrupted Structural Title continues to exist in Pathways on the Public Space, but does not collect Acts or Scenes and is not able to provide a

Power Activation while disrupted. While disrupted, the placement requirements of the Structural Title continue to apply on the Public Space, until and unless it is replaced by a new Structural Title. (*World Powers Fall, 3 Government Titles, p. 617*)

- A Structural Title becomes undisrupted or restored at the end of any turn when there are no remaining conditions which would cause it to be disrupted. (*World Powers Fall, 3 Government Titles, p. 617*)
 - This **automatic restoration** applies only to Structural Titles; restoration of Social and Estate Titles requires an activation of the Order Power and is discussed later.
 - Note that as Structural Titles have no Conflict Checks they are generally less susceptible to the vagaries of game events and decisions. Structural Titles are sort of the bedrock or spine of the position's government, and usually always insure a minimum of one Power Activation available each Regular Turn.

Changing Structural Titles:

- A disrupted Government Title may not be abandoned unless its holder is maintaining at least three undisrupted Government Titles. (*Three Kingdoms, 5 Government Titles, p. 638*)
 - Adding any new Government Title, of course, will prevent the restoration of any of the currently disrupted Government Titles and they are then considered abandoned, unless there are not currently three undisrupted Titles (*ut supra*).
 - A new Structural Title may be added only if the current Structural Title is disrupted. However, a position may never have two *undisrupted* Structural Titles at the same time.
- Changing a Structural Title is an extreme measure. Because a position may only have one Structural Title at a time, and cannot be without a Structural Title (whether or not disrupted), a position cannot remove or add a Structural Title as it would other Titles (see, A New Order and Corridors of Power, 5 Government Titles, both p. 642, *supra*); rather it can only change Structural Titles by doing both at the same time with one activation of the Order Power for the purpose of Government Formation. (*Extreme Makeover, 6 Government Titles, p. 650*)
 - A moderate change, which would be any change from a Unitary or Confederation Title to a Dualistic Title and vice versa, has a 20% chance of success.
 - A radical move from a Unitary to a Confederation Title, and vice versa, has a 10% chance of success.
 - The chance of success is increased by 20% if the Structural Title is currently disrupted.
- A change in Structural Title requires a rearrangement of the existing undisrupted Titles. Upon a successful change in Structural Title, the Concierge will rearrange the position's Titles so that they are legally placed according to the new Structural Title, old Pathways may be dissolved and/or new ones formed. (*Home-Wreckers, 6 Government Titles, p. 651*)
 - This may/will require considerable rearrangement with possible losses of Cultural Traits, Fuzzy Groups, and other game items on the Public Space. Colonies will not be lost, but they can be moved out of the way to another place in the Public Space, but anything not representing population (such as Culture and Research) may simply be removed if necessary.

Social and Estate Titles:

- A Social or Estate Government Title within the game consists of two parts. Part of the Government Title is placed in the Public Space (i.e. occupies Monads), and will occupy a significant amount of the Public Space. The second part of the Government Title is called the Magna Carta, which describes legitimacy requirements and Conflict Checks. (*The Duality, 1 Government Titles, p. 584*)
 - Monads occupied by non-Structural Government Titles (*ut infra*) are inviolate, that is, they cannot be occupied by anything else or used for any other purpose, including connection of Research Groups or Fuzzy Groups. Inviolate means that Monads occupied ... cannot be used for anything else. (*The Claaaw is Our Master, 2 Government Titles, p. 597*)

- After the Structural Title requirement is met, each position may have as many Social and/or Estate Government Titles (chosen from the Foresight, see The Power to Choose, 5 Beginnings, p. 50, *supra*) in any combination, as desired up to the limit of five Government Titles, *including* the Structural Title. (*Social and Estate Government Titles, 2 Government Titles, p. 599*)

Conflict Checks (Social & Estate Titles):

- Each Magna Carta (see The Duality, 1 Government Titles, p. 584, *supra*) contains a list of between one and four Conflict Checks. Each Conflict Check describes a condition that must be true or false in order for the government to maintain legitimacy. (*Starch & Parchment, 3 Government Titles, p. 613*)
 - The conditions described by each Conflict Check will be based on ***objectively verifiable*** conditions within the game, such that there should be little dispute about whether or when the conditions have not been met (i.e. when the Conflict Check fails). It is thus that governments seek to establish and maintain the *status quo*.
 - A position is not prohibited from an act or failure to act which will cause a Government Title to fail a conflict check or even to become disrupted.
 - A position may be required to or prohibited from acting in a certain way due ***to Fundamental Realities***, which always hover in the background behind Conflict Checks.
- Conflict Checks for each Government Title are never-ending; theoretically, at all times, at any moment, the legitimacy of the Government Title is being tested. Theoretically, a Government Title loses *some* legitimacy at the moment that it is discovered that the Government Title has failed one or more of the listed Conflict Checks. This may be important in some matters and not in others, the Concierge will judge on a case-by-case basis how to deal with the instant effects of failure of specific individual Conflict Checks by a Government Title, probably including a chance to generate an Intervention Potential. (*Carte Blanche, 3 Government Titles, p. 615*)
 - As a practical matter, the Concierge will perform the Conflict Checks for each of the position's Government Titles at the end of processing each position's Regular Turn.
 - As mentioned in The Power to Choose, 5 Beginnings, p. 50, *supra*, Conflict Checks will not be performed until the fourth turn of the game (a playability concession).
 - The conflict checks for Estate Titles can be somewhat difficult to grasp properly because they are required to be false.
- Any Social or Estate Government Title that is ***currently failing all*** Conflict Checks listed on its Magna Carta, is disrupted and is *removed* from the Public Space (past failures are irrelevant, only current status is checked). All Pathways leading to that Government Title are also removed and new Pathways must immediately be formed (even if objects on the Public Space need to be moved around, and some losses may occur) to connect all colonies to an undisrupted Social or Estate Title pursuant to the rules of that position's Structural Title. (*Foreclosure of a Dream, 3 Government Titles, p. 616*)
 - As noted in Interesting Times, 2 Disruption, p. 272, *supra*, the chance that a Constructural Element will become inactive due to a Disruption Event at a colony is 5% greater if the position has any disrupted Government Titles. Disrupted Government Titles can 'snowball' into an avalanche, collapsing the position. [***position collapse involves many slippery slopes in GGDM***]
 - When a disrupted Social or Estate Government Title is removed from the Public Space that Government Title has completely lost legitimacy and *ceases to function*. It does not provide Power Activations or Acts/Scenes (see Exercise in Vital Powers, 2 The Sidereal Stage, p. 114, and On the Soapbox, 3 The Sidereal Stage, p. 122, *supra*). It is now just a theory or history ripple and has no effect, except that an Intervention Potential Plus is automatically generated per Regular Turn for each instance of disruption of a Government Title (of any kind), see Changing of the Gardener, 2 Disruption, p. 271, *supra*.

Restoration of Disrupted Social & Estate Titles:

- A disrupted Government Title cannot be used to *activate* a Power and will not receive *an Act or Scene*. When a Government Title is disrupted, it may be either restored or abandoned. A disrupted Social or Estate Government Title may automatically be restored by activation of the Order Power for the purpose of Government Formation when:
 1. The Government Title would not automatically become *disrupted* as of the beginning of the turn it is restored. This amounts to an ‘instant’ extra Conflict Check.
 2. There is sufficient open space to legally place the Government Title in the Public Space (positions should avoid placing new pieces in the empty space).
 3. The position currently has less than five undisrupted Government Titles.
 4. And no new Government Titles have been added since the Title to be restored was disrupted (restoration of other Titles do not count as ‘adding new Titles’). (*A House Divided, 5 Government Titles, p. 637*)
- If the Order Power is activated to restore a disrupted Social or Estate Government Title and it cannot be restored for whatever reason, the Power activation is wasted (thus positions may attempt many times to restore a disrupted Title). When a restored Government Title is placed in the Public Space, the position may, but is not required to (unless by a violation of the Structural Government Title), shift any number of Pathways to the restored Government Title, with possible adverse consequences if items occupying Monads need to be moved or lost. (*A House Divided, 5 Government Titles, p. 637*)
 - Automatic restoration by activation of the Order Power for the Purpose of Government Formation *does not apply* to disrupted Structural Titles which has a different criteria, see World Powers Fall, 3 Government Titles, p. 617, *supra*.

Into the Wastebasket of History (Abandonment of Disrupted Titles):

- A disrupted Government Title may not be abandoned unless its holder is maintaining at least three undisrupted Government Titles.... New Social or Estate Government Titles may be added while another Title of any kind is disrupted. (*Three Kingdoms, 5 Government Titles, p. 638*)
 - Adding any new Government Title, of course, will prevent the restoration of any of the currently disrupted Government Titles and they are then considered abandoned, unless there are not currently three undisrupted Titles (*ut supra*).
 - A new Structural Title may be added only if the current Structural Title is disrupted. However, a position may never have two *undisrupted* Structural Titles at the same time.
- A disrupted Government Title that has been abandoned previously may only be subsequently re-added as a ‘new’ Government Title *at the discretion of the Concierge*. Positions will not generally be allowed to abandon disrupted Government Titles and then add them again later as a new Government Title. It is not impossible that this could happen, but improbable. (*The Ends of the Circle, 5 Government Titles, p. 639*)

Winds of Change (voluntary addition of new or abandonment of undisrupted Estate and/or Social Titles):

- A position may attempt to *voluntarily* change any number of its Social and/or Estate Government Titles by activation of the Order Power for that purpose once for each proposed change. The ‘cabinet’ of Government Titles may be voluntarily changed by either adding a new Government Title and/or removing an undisrupted Government Title (like shuffling ministers and portfolios). At the end of any Regular Turn where there is a change in Social and/or Estate Titles, the position may not have more than four undisrupted Social and/or Estate Titles combined, and must have at least two undisrupted Social and/or Estate Titles in any combination (the min-max). (*Winds of Change, 5 Government Titles, p. 642*)
 - Change or disruption of a Government Title may cause loss of Proficiencies on the Public Space. See, And the Cradle Will Rock, 3 Culture, p. 382, *supra*.

- A new Social or Estate Title may be added by activating the Order Power for that purpose when less than four undisrupted Social and/or Estate Titles are currently held. Prior to adding a new Social or Estate Title, the conditions for Legitimacy of the new Government Title must be met and there must be a sufficient space to legally place the new Title in the Public Space, in accordance with the rules governing the current Structural Title, *even if it is disrupted*. (*The New Order, 5 Government Titles, p. 642*)
 - Note that, per the preceding section ... adding a new Social or Estate Title will cause *any currently disrupted* Social or Estate titles to be abandoned.
- Upon successfully adding a new Social or Estate Title, the Title must be immediately placed in the Public Space consistent with the Structural Title requirements, and must be done in such a way as to not cause the immediate disruption of any other Title. Thus, there must be sufficient Public Space to place the new Title, and this requires some foresight. The placement of the new Title cannot be delayed. When the Title is placed, new Pathways from the colonies may be formed if necessary, moving aside or losing items from the Public Space. New Titles are automatically legitimate on the turn they are placed ('the honeymoon'). The Concierge and players will cooperate in placement of new Titles. (*A New Place, Old Face, 5 Government Titles, p. 643*)
- Abandonment of an undisrupted Social or Estate Title (not to be confused with abandonment of a disrupted Title, *ut supra*) is not an automatic event, there are always those who have a vested interest in the *status quo* and when the majority of the civilization has this vested interest, and the rest are mostly silent, there is no force for change. (*The Corridors of Power, 5 Government Titles, p. 643*)
 - The chance of successfully removing a currently undisrupted Social or Estate Title is 10% plus 20% for each currently failed Conflict Check for that Title. Thus, it is easy to remove a Title that is near disruption, and difficult to remove a Title that is solidly legitimate. It is possible for players to engineer the demise of a Social or Estate Title toward removal or disruption by making moves that intentionally cause the Title to fail Conflict Checks; however, this could also harm the position and has its own cost, so it should not be assumed that positions would or should intentionally disrupt their own Titles.
 - When an attempt to remove a Social or Estate Title is successful, the Government Title is removed from the Public Space and abandoned (i.e. it is not disrupted and cannot be restored) at the end of the turn. As previously, this may cause loss of Pathways and the necessity of immediately forming new Pathways from colonies to the government, including movement or loss of items on the Public Space as necessary to form the Pathway. (*Stain Removal, 5 Government Titles, p. 644*)
- In addition to the cost of Order Power activations and forming new Pathways, adding a new or voluntarily abandoning an *undisrupted* Social or Estate Title will also assess one Intervention Potential Plus (IP+) against the position (there's always someone who has a problem with the change). (*Perestroika Will Destroy Ya!, 5 Government Titles, p. 644*)

Emergent Titles (Social & Estate Title Generation):

- **4 Government Titles describes a procedural generation system for Social and Estate Titles that produces a mind-boggling abundance of possible titles, which is why procedural generation has become so popular.**
- Construction of an emergent Government Title is accomplished in the following steps (a decision tree which easily can be automated):
 1. It must first be decided whether the proposed title is a Social Title or Estate Title. This can be done by a 50-50 die roll, or it can be a conscious decision.
 2. Next must be determined the 'scope of the concept' in GGDM terms, a die is rolled to determine if the Government Title has 1, 2, 3, or 4 Conflict Checks.
 3. The third step is to determine whether one of the Conflict Checks will come from the Interstellar Civilization Themes instead of either the Social or Estate Title Themes. This can be done on a

50-50 die roll as well. If the result is positive, one of the Social or Estate Title Theme Conflict Checks is replaced by using a randomly-determined Theme from the Interstellar Civilization Group to generate that Conflict Check. This is done even if the proposed Title has only one Conflict Check; that is, a single Conflict Check Social or Estate Title can arise from Interstellar Civilization Themes, and still act as either a Social or Estate Title in the game.

4. The fourth step then is to make two rolls for each Conflict Check, one to determine which Emergent Government Titles Theme is to be used (#1-20), and the second roll is to determine which Conflict Check is selected from the Theme (#1-10). Do not reroll duplicates of the first die roll (i.e. two Conflict Checks can come from the same Theme), but do reroll duplicates on the second roll (i.e. a Government Title should not have exact duplicate Conflict Checks). Conflict Checks can be contradictory.
 5. After determining the Conflict Checks, the final step to creating an Emergent Government Title is to first roll a die to determine how many Vital Powers are associated with the Government Title and then to roll to determine which Vital Powers are associated with the Title, rerolling all duplicates. (*Shaking the Bingo Balls, 4 Government Titles, p. 627*)
- For example, a new **Estate Title** is being generated, the die roll result indicates that it will have four Conflict Checks (Steps 1 and 2).
 - A die is rolled and on an even result it is determined that one of the four Conflict Checks will be rolled from the Interstellar Civilization Themes (Step 3). So let's get to it! One d20 is rolled and the result is a 15 which is the Security and Survival Theme (i.e. ICT15). A d10 is rolled in that theme group and the result is a 1: "(T) No other **alien colonies** exist in systems where a Friendly Colony is located or all **alien colonies** in a starsystem with a Friendly Colony are owned by the position." This is the first Conflict Check for the new Estate Title. Hmm...
 - A d20 is then rolled three times for the Conflict Checks from the Estate Themes (Step 4), with results of 1, 1, and 9, meaning that two Conflict Checks will come from EGT1 – First Estate – Legitimizers and one from EGT9 - Military-Industrial Complex of the Estate Title Themes.
 - On EGT1, two d10 are rolled resulting in Conflict Checks: #5 "(F) Friendly population factors (including related Lost Colonist population) are under the control of alien sovereigns (i.e. other Major Positions)." and #9 "(F) The position has lost a colony to alien conquest within the last three turns."
 - On EGT9, one d10 is rolled, resulting in Conflict Check: #4 "(F) Position has not lost any Warships, Logistical Ships, Bases, or Fighters or fired any Ship Missiles in Combat in the last two turns (in order to lose something in combat, you have to be involved in a combat...)."
 - Note that Conflict Checks which begin with (T) pass if they are objectively true, and Conflict Checks which begin with (F) pass if they are objectively false.
 - Taken together, the final Estate Title looks like this:
 - (T) No other **alien colonies** exist in systems where a Friendly Colony is located or all **alien colonies** in a starsystem with a Friendly Colony are owned by the position. [Must be TRUE to pass]
 - (F) Friendly population factors (including related Lost Colonist population) are under the control of alien sovereigns (i.e. other Major Positions). [Must be FALSE to pass]
 - (F) The position has lost a colony to alien conquest within the last three turns. [Must be FALSE to pass]
 - (F) Position has not lost any Warships, Logistical Ships, Bases, or Fighters or fired any Ship Missiles in Combat in the last two turns (in order to lose something in combat, you have to be involved in a combat...). [Must be FALSE to pass]

- Finally, the last step, a die roll indicates that two Vital Powers are associated with this Estate Title, and two more rolls result in the Taxation Power and Combat Power being associated. I smell ‘evil’ empire! And it’s not a new type of cologne.
- Players are free to name Social and Estate Titles whatever they wish, I might call this one an ugly bit of xenophobia. To satisfy all of the Conflict Checks the position would 1) need to have exclusive control of all stars where they have Friendly Colonies, 2) control all population factors of their Native Population Type in the game, 3) not lose any colonies to alien attackers and 4) lose ships, bases, fighters or fire Ship Missiles in combat every two turns. This Title may be one of up to ten choices available to the position and the position may choose to install it when conditions warrant. (*Shaking the Bingo Balls, 4 Government Titles, p. 627*)
- The pool of emergent Government Titles (the Foresight, see The Power to Choose, 5 Beginnings, p. 50, *supra*) generated at the beginning of the game will remain available to the position during the game for use whenever a change of Social or Estate Titles occurs. At the discretion of the Concierge, new emergent Government Titles may be generated from time to time during the game whenever necessary – for example, if all Social or Estate Titles have been used, or possibly some titles may ‘age-out’ of the pool every ten turns to be replaced by new potential Government Titles. (*Pool of the Abyss, 4 Government Titles, p. 630*)
 - However, caution should be exercised in replenishing the pool before it is fully drained – as Government Title changes are made during the game, the players will first take those they like the most, are most comfortable with, leaving less immediately desirable titles in the pool. Later in the game, this may cause positions to ‘evolve’ in another direction, for example, from peace to xenophobia and war, or vice-versa, as their civilization changes with a succession of Titles. Replenishing Titles in the pool prematurely may alter the course of the game.
- Conflict Checks that require a Power activation or event to have occurred within X turns, or that a certain condition currently exist, guide the position’s conduct by requiring the position to do or not do certain things in the game *as long as the position is interested in not failing that Conflict Check*, that is, the position players must be diligent and cognizant. A position may, at its own risk, allow or cause a particular Conflict Check to fail by action or inaction. (*Sides of the Coin, 4 Government Titles, p. 630*)

Construction (Vital Power)

- The Construction Power must be activated for any kind of unit building or enhancement tasks in the game. Positions may only build at colonies that they own, and specifically, construction may only occur at colonies. Construction is a location-specific act; each activation of the Construction Power for any purpose requires one Act and one Scene, and the Scene must be on the *colonized Planet* where the Construction occurs, Scene snitching can occur. Construction at two colonized planets in the same starsystem on the same Regular Turn, requires two separate activations of the Construction Power for that purpose and a Scene on each planet. (*Construction Zone, 1 Construction, p. 661*)
 - **The Construction Power may be activated for the following six purposes:**
 1. Colony Enhancement,
 2. Colony Defense Era Upgrade,
 3. Laying Keel,
 4. Shipbuilding,
 5. Ship Supply,
 6. Scrapping.
 - Each activation of the Construction Power allows construction tasks to occur only for the specific purpose for which the Construction Power was activated. **With the exception of Scrapping**, the Construction Power may only be activated for *one purpose* per Regular Turn at each colony.

- However, activation of the Construction Power for the purpose of *Scrapping* may be combined with any other activation of the Construction Power for any purpose and/or *activation of the Commerce Power for the purposes of Loading or Unloading Cargo Ships* in the same turn at the same colony, *using a single Scene to satisfy all of those Power activations at that colony.*
- *All activations* of the Construction Power, for any purpose, must specify a target colony (and ship in the case of Ship Supply) and thus can fail due to inactive Constructural Elements at the target colony. Activations of the Construction Power are vitally important and thus, are an area where inactive Constructural Elements can have the greatest adverse effect. (*An Industrial Action, 1 Construction, p. 661*)

Units:

- The two basic ‘units’ of the game ... are ships and colonies. Colonies contain the position’s population base... and ships protect, expand, explore, enforce, and keep it all connected. ... In some instances, Technological Devices might also be considered ‘units.’ (*View from a Height, 1 Construction, p. 660*)¹³
 - ‘Units’ are the top hierarchy game items, the main items in the game setting on which everything else is based. Units exist and operate independently within the game and the game rules; they are the driving force of the game. Physical Item Technology Patents (PITs) allow players to build units. Since you cannot build a colony (and there are no units other than colonies and ships to start the game), Physical Item Technologies essentially mean the technology to build starships.
 - Continuous Operational Technology Patents (COTs) allow for small improvements in the performance of existing units and installations, while Enhancement Technology Patents (ETs) are the only means to add new abilities to existing physical items, colonies, and installations.
 - Installations are ‘enhancements’ to colonies (as they cannot exist independent of the colony) and anything built on (‘added to’) a colony must either be an Installation or an Enhancement. Populations cannot be ‘built,’ colonies and installations (and in most cases, even ships) cannot exist independent of population, so population is not considered an ‘installation.’
 - Technological Devices (TDs) are most likely to stand alone (as units, physical items), and could in many cases, be considered a ‘basic unit’ of the game, but in other cases, TDs may act as Installations or Enhancements to colonies or ships or other Installations.
 - System Boats – ships without stardrives – are equivalent to ships, and thus are ‘game units’ and their Tender ships are obviously game units because they are ships. See System Boats, 3 Construction, p. 677, *infra.* (*The Fine Print, 1 Construction, p. 660*)
 - Ground Units, introduced in GROPOS, 4 Combat, p. 985, *infra*, are a special case. They are colony enhancements when at a sovereign colony, but they are game units when not on a sovereign colony or being transported on sovereign ships, and are game units in any location *for the purposes of Special Operations Lodging* rules (see French Vanilla, 2 Special Operations, p. 1292, *infra*).
 - Special Operations Missions are not units nor are they enhancements in game terms.¹⁴ Conversely, a Fighter Complement (see How Big is Your Flight Stick, 1 Carriers & Fighters, p. 1050, *infra*) is never a game unit as it cannot exist independently of either a Carrier or Colony, even though in other effects and senses, it is similar to a Ground Unit.

Gross Domestic Product:

- The cost of construction, *except for RPs unloaded from Cargo Ships*, is deducted from the current Treasury. However, a colony may not spend more in all *location-specific activities* in a Regular Turn than that colony would have produced if taxed at the beginning of that turn, plus the RP value of whatever

¹³ ‘Game Units’ – colonies and ships – are the position’s entire presence in Galactic Space. They are also the reason that items from Galactic Space are placed in the Public Space; they are the ‘consciousness’ and ‘looking’ of their civilization and must therefore, be the top of the hierarchy in game items.

¹⁴ Special Operations Missions (SOMs) because their secrecy and the nature of what they might represent, could be at Galactic Space locations that are not currently on the position’s Public Space; SOMs are not sufficient to place their location in the consciousness of civilization absent some other newsworthy events.

was Unloaded from Cargo Ships to the colony on that turn (see Downloading, 2 Commerce, p. 1202, *infra*). This GDP limits the ability of a colony to both build things and Load resources to Cargo Ships in the same Regular Turn. (*Gross Domestic Product (GDP), 1 Construction, p. 662*)

- Besides building at the colony and Loading RPs, variable costs of Loading and Unloading Population at the colony in the same Regular Turn also counts against the GDP, planning is key. See Sardine Tins and ...Vienna Sausages, 3 Expansion, pp. 911, 915, respectively, *infra*.
- The primary purpose of Cargo Ships is to deliver RPs from other locations, importing manufactured goods, machinery, skilled labor, alloys and refined metals, and raw materials that are not available at the destination; therefore, the RPs Unloaded from Cargo Ships in the same turn are added to the destination colony's resource limit (GDP) for Construction on the turn they are Unloaded only. Any RPs Unloaded and not used that Regular Turn *are lost*, not returned to the Treasury.
- For clarification, RPs Loaded to Cargo Ships are taken from the position's Treasury but also count locally against the Colony's GDP for the Regular Turn. Thus, RPs Loaded to Cargo Ships are theoretically the RPs received from the last Taxation of the colony. See Uploading, 2 Commerce, p. 1199, *infra*.
- When the Construction Power is activated for any purpose, other than Scrapping, on the same turn that the Commerce Power is activated at the same colony for the purpose of *Unloading* Cargo Ships, one Scene may be used to satisfy *both* Power Activations at that colony. Further, when this occurs, the Unload RPs is processed *before* the Construction Power, an exception to Clockwork Universe, 3 The Streams of Time, p. 90, *supra*. (*Material Handling, 1 Construction, p. 664*)
- When spending RPs for colony activities, such as ship building, *RPs received from Unloading Cargo Ships will be spent first, and then any remaining cost will be taken from the Treasury*. Timing the movement of RPs by Cargo Ships and Construction activities at various colonies is one of the crucial elements of the game and one of the primary benefits received by colonies for participation in a centralized interstellar government and economic system (*Gross Domestic Product (GDP), 1 Construction, p. 662*)
- All construction projects must be completed by the same colony that began them, regardless of how long it ultimately takes to complete. Colonies may not directly share in any construction even if they are in the same system; however, colonies in the same or different systems may indirectly share in construction costs by moving resources to the construction colony/site by use of Cargo Ships (or Cargo System Boats) or Trucking Transactions (see 4 Commerce, p. 1225, *supra*). (*Orange Cones, 1 Construction, p. 663*)
 - Trucking activations of the Commerce Power may assist co-located allied **alien colonies** in shipbuilding. See Trucking, 4 Commerce, p. 1225, *infra*.
 - Starships exist in system space (are placed on the star on the Public Space) and are not placed at any specific planet in the system (whether or not colonized), but while they are being constructed, they are located at and belong to the colony constructing them. See Shipbuilding, 3 Construction, p. 675, *infra*. Thus two colonies in the same system cannot jointly, in a direct sense, construct a ship as unfinished ships are not located in system space.
- Conquered Colonies do not produce resources during Taxation (see, Resources from Population, 2 Taxation, p. 306), thus, do not have a GDP for Construction. The Construction Power may be activated at a Conquered Colony, however, Construction is limited to RPs which are Unloaded from Cargo Ships to the Conquered Colony (the opposite of Looting, 3 Commerce, p. 1210, *infra*) *on the same Regular Turn as the Construction Power is activated at the Conquered Colony*. (*Combat Engineers, 1 Construction, p. 664*)

Colony Enhancement:

- With the exception of Institutes (see Institutionalized, 3 Colleges, p. 487, *supra*, which requires a Special Writ instead), everything built at a colony requires that the colony owner first hold a Patent allowing

the building of that specific enhancement, installation, or ship. Hosting a College or Corporation at a colony does not require building, nor does Capital Status or any political status of a colony require building at that colony, or a Patent. (*Things to Build, 2 Construction, p. 665*)

- Activation of the Construction Power for the purpose of Colony Enhancement allows the colony's owner to build or add new Installations and Enhancements to the colony (including Orbital Cities) where the Construction Power was activated, up to the limits previously described. The primary and most frequent reason for activating the Construction Power for the purpose of Colony Enhancement is to build new Industry. (*Industry, 2 Construction, p. 665*)
- ...it is best and most economical to build things in one turn, that is, begin and complete building of installations and enhancements at colonies with one activation of the Construction Power. However, unless specified in the Patent, a position may take as long to build anything as desired; this may be necessary to build up small colonies due to GDP limitations. Each time a position wishes to add resources to an item that is 'under construction,' the Construction Power must be activated for the proper purpose at that colony, increasing the 'cost' of building the item or ship in terms of Acts and Scenes, Power Activations required. (*Get to Work!, 2 Construction, p. 666*) [***Orbital Cities & Defense bases have different building specification on their Patents, see below***]
 - Ships, items, enhancements or anything that is not completed has no positive effect on the game, but do exist at the planet, and may count against capacity limitations of the colony and may be destroyed during adverse News Events, by Special Operations Black-ops, or in combat, or by whatever other entropic events occur.
- There are three Existential Patents which reflect the pre-interstellar or early 1st Era development of Orbital Platforms: Orbital Shipyard, Orbital City, and Orbital Defense Base. These Patents may be obtained during the setup process or through the Patent Prosecution described in the Patent rules sections...anything *permanently orbital* at a colony is considered to be an installation and not a ship, therefore, construction of any Orbital Platform requires the activation of the Construction Power for the purposes of Colony Enhancement. Any Orbital Platform not destroyed in Combat (or by Special Operations Black-ops or an adverse News Event), can be captured. (*Orbital Platforms, 2 Construction, p. 666*)
- An Orbital Shipyard is required to construct all starships – except Scout Ships – and System Boats during the game (Scout Ships cost more to build 'on the ground'), Orbital Cities, and Orbital and System Defense Bases. Starships are the sinews of interstellar civilization, connecting islands of civilization separated by vast, cold interstellar void. All positions should consider obtaining the Orbital Shipyard Patent first, preferably during the setup process of the game. (*Orbital Shipyard, 2 Construction, p. 667*)
 - A colony must have at least 10 population to construct an Orbital Shipyard, which costs, 15 RPs. Only *one* Orbital Shipyard can be at each colony, however, each colony on a Balkanized colony planet may have their own Orbital Shipyard.
 - As specified in Shipyard Blues, 7 Beginnings, p. 72, *supra*, a position that does not begin with an Orbital Shipyard may not begin the game with any starships, except Scout Ships. There is no provision for a position to begin the game with System Boats (even though it might make logical sense from a pre-interstellar culture).
- Orbital Cities, which must be built over two Regular Turns like a ship while other orbital items can be built in one turn (see Orbital City Existential Patent), by an Orbital Shipyard cost 20 RPs each (10 RPs 1st turn down payment required) and allow a colony to expand beyond the surface Maximum Habitability of the colony planet below by 15 population factors each by putting populations and industry into orbit (see Dayworld, 3 Taxation & Census, p. 315, *supra*). Orbital City technology is a direct predecessor to Colony Ships that will eventually transport populations to new planets orbiting distant stars. (*Orbital City, 2 Construction, p. 667*)
 - For the process of moving population to or from Orbital Cities, see Sardine Tins and Opening the Can Of..., 3 Expansion, pp. 911, 914, *infra*.

- While positions may obtain the ability to build Ground Defense Bases through the Ground Defense Base Existential Patent, the *first line of colony defense* are Orbital and System Defense Bases (each requiring a separate Existential Patent). Ground Bases are best against Raids and protecting the colony in Ground Combat. Hopefully, you will not need them anytime soon, but you will need them someday. Activation of the Construction Power for the purpose of Colony Defense Era Upgrade is detailed in 2 Combat, p. 954, *infra*.
 - Colony Defense Era Upgrade is not the same as building new Defense Bases or Enhancements to existing Defense Bases both of which require activation of the Construction Power for the purpose of Colony Enhancement. An Orbital Shipyard is not required for a Colony Defense Era Upgrade.
- Ground Defense Bases cost 15 RPs to construct, are constructed in a single Regular Turn (i.e. paid in full), do not require an Orbital Shipyard, and are limited to 1 Ground Base per 3 population factors on the colony. Ground Bases damaged in Ground Combat must also be repaired by activation of the Construction Power for the purpose of Colony Enhancement (see Verdun, 4 Combat, p. 997, *infra*). (*Orbital Defense Base, 2 Construction, p. 668*)
- An Orbital Shipyard is required to build Orbital and System Defense Bases, however, they must always be constructed (i.e. paid in full) in one Regular Turn, not two. (*Orbital Defense Base, 2 Construction, p. 668*)
 - Orbital Defense Bases cost 20 RPs and are limited to 1 Orbital Defense Base per 10 population at the colony.
 - System Defense Bases cost 45 RPs and are limited to 1 System Defense Base per 30 population factors at the colony, limiting them to medium and large colonies.
 - Both Orbital and System Defense Bases can be armed with Ship Missiles and other enhancements, but not Fighter Complements. [*this can be changed by later Patents*]

Ship Building:

- Building new starships is a two-part process and requires at least two activations of the Construction Power. (*Laying Keel, 3 Construction, p. 675*)
 - To begin starship construction, the Construction Power must be activated at the colony building the ship, and which has an Orbital Shipyard, only one is required, for the purpose of Laying Keel.
 - At the time that the Construction Power is activated for the purpose of Laying Keel, the colony must pay half of the total cost of the ship's construction (construction cost of ships is found on the Patent).
 - "Total Cost" of a starship *would include* any enhancement technologies or additions that are required to be built with the ship; total cost *does not include* anything that can optionally be added later (e.g., Fighters, Ship Missiles, System Boats).
 - The colony may lay as many keels as the colony can afford in one activation of the Construction Power at the colony for that purpose and there is no limit to the number of keels that can be in orbit at a colony.
- Incomplete ships and unfinished Orbital Cities are part of the colony that is building them. They have no effect on the colony or the game, they cannot do anything or be used for anything, they are *just there* until they are completed, at which time new ships move into system space and are placed on the system's star on the Public Space. (*Shipbuilding, 3 Construction, p. 675*)
 - To complete or add to the building of any keel, the Construction Power must be activated at the colony for the purpose of Shipbuilding. Any number of keels or unfinished Orbital Cities can be advanced per activation.
 - When resources have been paid equaling the total cost of the project (not counting enhancement technologies), it is completed. Any number of Construction Power activations may be required to complete the ship or Orbital City.

- Any vessel larger than a Fighter (and not an Orbital Platform) but without a Stardrive and capable of independent operation in a starsystem, is called a System Boat. Like Starships, System Boats occupy system space and necessarily have the ability to instantly move to any place in the system as Interplanetary Movement. System Boats have no Operational Flight (OFL) or Operational Supply Limitations (OSL); that is, they cannot exist without a supporting colony or Log Ship (see Ship Systems, 3 Movement, p. 854 *et seq.*, *infra*). While there are no Existential Patents for System Boats, there are various specialized niches that could be filled by System Boats which might be more economical (lacking Stardrives) than Starships. (*System Boats*, 3 Construction, p. 677)
 - Newly constructed ships *and system boats* automatically receive a crew... and are ready to accept orders on the next Regular Turn. Newly constructed ships and system boats begin with the active Constructural Elements of their origin world, which may change over time (see New Ships and Lost Worlds, 3 Constructural Elements, p. 204, *supra*). Origin and Native Population Types of crews are not tracked in-game. (*Maiden Voyage*, 3 Construction, p. 677)
- Newly constructed ships (including Temporal Ships, see 2 Temporal Technology, p. 817, *infra*) are automatically supplied with crew, food, fuel, spare parts, medicine, whatever is required to allow the ship to employ its maximum Operational Flight Limitations (OFL) and Operational Supply Limitations (OSL) (see, 3 Movement, pp. 855-856, *supra*). Newly constructed ships also automatically benefit from all applicable Continuous Operational Technologies at the time of completion. But, new ships are not automatically supplied with Enhancement Technologies, such as Ship Missiles, Fighters, whether expendable or not. (*Transfer and Resupply*, 3 Construction, p. 678)
 - Newly constructed Logistical Ships (hereafter “Log Ships”) are not automatically loaded with extra Supplies (see Logistical Support Ships, 3 Movement, p. 860, *infra*).
 - Newly constructed Cargo Ships *are not automatically loaded* with RPs. That requires an Activation of the Commerce Power at a sovereign colony on any Regular Turn after the Cargo Ship is constructed (see Uploading, 2 Commerce, p. 1199, *infra*) if the ship began the Regular Turn in the system with the colony.
 - Populations *are not automatically loaded onto or appear on* newly constructed Colony Ships. That requires a separate activation of the Expansion Power on any Regular Turn after completion of the Colony Ship to Load Population to Colony Ships when it begins at a sovereign colony (see Sardine Tins, 3 Expansion, p. 911, *infra*).

Supply & Enhancements:

- Any ship arriving at any Supporting Colony (see Supporting Colony, 1 Movement, p. 840, and Operational Flight Limitation, 3 Movement, p. 855, *infra*) automatically has its Operational Flight Limitation (OFL) and Operational Supply Limitation (OSL) reset by receiving supplies from the colony. No Power Activation is required and there is no RP cost for this basic type of resupply; it just occurs automatically in the course of operations. (*Free Resupply*, 3 Construction, p. 678)
 - Additionally, ships arriving at a Supporting Colony automatically receive the benefits of all new, applicable Continuous Operational Technologies (COT) developed in their absence (see Continuous Operational Technologies, 2 Patents, p. 740, *infra*). The cost of these upgrades is assumed in the development cost of the new technologies, which was paid from the Treasury. Because no Power Activation is required, *free resupply and upgrades are never effected by inactive Constructural Elements* on either the ship or colony; however a colony currently involved in a Colony Combat cannot act as a Supporting Colony.
 - The exception to this rule are Temporal Ships (aka ‘T-Ships’) who must always automatically make a surreptitious entry attempt on arrival and who must reveal themselves to receive any resupply or updates. See Dark Tea, 2 Temporal Technology, p. 821, and Surreptitious Entry, 3 Temporal Technology, p. 828, *infra*.

- For all other types of resupply from the colony, including providing *Supplies* to Log Ships, or providing or transferring Ship Missiles or Fighters and other expendable Enhancement Technologies to any Warship or Log Ship (or boats), or to ‘upgrade’ ships with new permanent Enhancements resulting from Enhancement Technology Patents, requires an activation of the Construction Power for the purpose of Ship Supply. One activation of the Construction Power at a colony for the purpose of Ship Supply allows an ‘unlimited’ number of provisioning and transfers (*ut supra*) to any number of friendly ships (or boats) which *begin* the Regular Turn in the colony’s system, limited only by the colony’s local Gross Domestic Product (GDP) (see 1 Construction, p. 662, *supra*). (*Costly Resupply*, 3 Construction, p. 679)
 - *Supplies* are measured in RP cost and a Log Ship’s capacity is measured in RPs of Supplies and Enhancements it can carry (see Take Your Protein Pills, 3 Movement, p. 860, *infra*). A 1st Era Log Ship has a capacity of 20 RPs, which may be improved by subsequent Continuous Operational Technology (COT) and Enhancement (EP) Patents (see 2 Patents, p. 740, *infra*).
 - *Supplies* transferred to Log Ships and any *permanent* Enhancement Technology, are assumed to be ‘constructed’ at the time of the transfer and thus, require the immediate expenditure of RPs by the colony (subtracted from the Treasury), up to and against the GDP limits of the colony during any activation of the Construction Power.
 - As a game artifact, *Supplies* only exist on Logistical Ships. They ‘store’ RPs, do not ‘age-out,’ but are also non-redeemable to RPs, and as a very general matter, are probably not transferrable or usable to aliens...but that is negotiable in [a] space-opera setting.
 - Like other activations of the Construction Power, activation for the purpose of Ship Supply may share a Scene with other Construction and Commerce Power Activations at the same colony in the same Regular Turn, for the purposes of Scrapping or Loading and Unloading Cargo Ships, as applicable.
 - A ship may receive from multiple colonies located in the same system, in the same turn, as long as the Construction Power is properly activated on each of the colonies that are transferring to the ships.
- There is no provision for transfers to or from non-sovereign colonies, however, see No Tribble At All, 2 Commerce, p. 1204, *infra*. (*Costly Resupply*, 3 Construction, p. 679)
- Preexisting Fighters and Ship Missiles and other *expendable* Enhancements may be transferred between eligible ships *or* between colonies and orbital defenses at a colony automatically, *with no Power Activation required*, at the *beginning of the turn* if the receiving units *begin the Regular Turn* in the same system. Enhancements may be transferred directly from bases to ships and vice-versa. (*Transfers*, 3 Construction, p. 680)
 - Ships executing a Short Movement arrive at the destination at the end of the same Regular Turn as they departed and thus are in the system at the beginning of the next Regular Turn. See Space Hop, 2 Movement, p. 850, *infra*.
 - Ships completing a Long Movement arrive before the first Power Activation of the Regular Turn and thus do not begin the Regular Turn in the system. This bit of timing can be crucial. See, Long Jump, 2 Movement, p. 851, *infra*.
 - Because the transfer occurs at the beginning of the Regular Turn, items that are transferred cannot be built during the same turn they are transferred, they must preexist the transfer turn.
 - Transfer of Fighters, Ship Missiles and other *expendable* Enhancements from a colony to any eligible ship requires that the Fighters, Ship Missiles or expendable Enhancements be located on the colony before the beginning of the current turn (they may be constructed by a previous activation of the Construction Power for the purpose of Colony Enhancement). That is, unlike loading *Supplies* to Log Ships or upgrading current ships with permanent Enhancements, Fighters, Ship Missiles and generally expendable Enhancements are not assumed to have been “constructed” on the turn they are transferred; they must already exist on the colony.

- All provisions and transfers using an activation of the Construction Power for the purpose of Ship Supply are subject to two checks related to inactive Constructural Elements. First, the target colony must be checked to see if it obeys the Power Activation. If it does, it will attempt to execute the Ship Supply as ordered, and thereafter, each target ship must be checked individually to see whether it obeys the Power Activation and accepts the transfers and provisioning. If the colony fails to obey the Power Activation, nothing will be transferred, ship checks are irrelevant. (*Transfers, 3 Construction, p. 680*)
 - Transfers to, from and between ships and colonies at a planet with a non-sovereign **alien colony** (i.e. a Balkanized planet) also require *apostasy* checks, see Alieney Apostasy, 3 Disruption, p. 283, *supra*.
- RPs and most other transferable items may not be transferred between colonies in the same system without some appropriate means of transporting them, however, Fighters are easily capable of making the transfer between any two colonies owned by the same position located in the same system, without the need for assistance from a ship. The transfer may be made instantaneously if neither colony is currently besieged (see Besieged Colonies, 3 The Sidereal Stage, p. 124, *supra*) and the receiving colony is capable of accepting the incoming Fighters. (*Bye, Bye Birdie, 3 Construction, p. 680*)
 - Logistical Ships (or Boats) can be used to transfer enhancements between colonies in the same system, but not Fighters (*ut supra*), RPs or Supplies.
 - For transfer of RPs between colonies in the same system, see Carting, 4 Commerce, p. 1229, *infra*.

Scrapping:

- Anything that can be brought to a Friendly, Converted, or Naturalized Colony, or that is located on any Colony (that is, belongs to the colony) can be scrapped, with the exception that any ship (i.e. Colony Ship) or Orbital City with population still on it cannot be scrapped. There is no limit to the amount of ‘stuff’ that can be Scrapped at a colony in a turn (based on the same argument offered earlier regarding unloading Cargo Ships). (*Junkyard Blues, 3 Construction, p. 682*)
 - Scrapping is a separate activation of the Construction Power that may be accomplished concurrently with (and separately from) another activation of the Construction Power for another purpose, and concurrently with activation of the Commerce Power for the purposes of Loading or Unloading Cargo Ships at the same colony in the same Regular Turn.
 - The ‘scrapping’ process occurs automatically for Colony Ships when they are Landed to establish a new colony. No RPs are received for this particular type of ‘scrapping’ activity, but a new colony is established. Be happy with that result! See, Pandorum, 4 Expansion, p. 923, *infra*.
- The amount of resources (RPs) received from Scrapping anything is generally between 25% and 50% of the cost of building the item. The amount received is solely at the discretion of the Concierge, however, in most cases the Concierge may simply resort to a die roll to determine the amount received back from Scrapping. For that purpose, even though all of the Power Activation costs for the Construction Power are the same, Scrapping would have to be resolved first. To be consistent with the other Construction Power rules, all RPs received from Scrapping must be either used for other Construction Activations at the same colony on the same turn, or loaded onto Cargo Ships at the same colony in the same turn. RPs received from Scrapping will not be added directly to the Treasury. Because of this, the Concierge and players may need to predetermine RPs received from Scrapping before the Power Activation to avoid guessing, confusion or waste of RPs. (*Recycling Containers, 3 Construction, p. 682*)

Technology (Vital Power)

- The Technology Power must be activated to advance technology. The Technology Power must be activated for the following purposes:
 1. Basic Research,
 2. Develop Application,
 3. Patent Prosecution,

4. Reverse Engineering.

- Technology is a cultural effort and is never centered in any place (even if there is a College), therefore, a Scene is rarely required to activate the Technology Power and the Technology Power *cannot fail due to inactive Constructural Elements*. The exception to this is activation of the Technology Power for the purpose of Reverse Engineering, which is location specific and requires a Scene *but not an Act*. Activation of the Technology Power for the purpose of Research requires one Act and for the purposes of Development or Patent Prosecution, requires two Acts. (*Technopower, 1 Technology, p. 689*)
- The activation of a Writ based on the Technology Power by actualization of a Fuzzy Group may be used to satisfy the Interpretation requirement of a Technology Power activation on the same Regular Turn, for any purpose. (*Copenhagen Interpretations, 1 Technology, p. 689*)
 - A successful Patent must be used to satisfy the Interpretation requirement for the Technology Power on the turn that the Patent is successfully prosecuted, but may not be used for that purpose *at any subsequent time*.
 - Of course, in the event of the failure of the Patent, or the unavailability of a Writ, the News Event is the default Interpretation and must be provided with the Regular Turn actions. Just in case. A Writ may not depend in any way on a Patent.

Research:

- All technology (except Existential Patents purchased during set up) begins with placing a Research Piece in the Public Space. Research Pieces are received as a result of successful Research and must be immediately placed on an unoccupied Monad in the Public Space (which becomes occupied). (*Research, 2 Technology, p. 700*)
- Two Research Pieces occupying adjacent Monads at least one of which is adjacent to a *Friendly, Naturalized or Converted Colony* with an active Epistemological Constructural Element, form a Research Group. (*Research Groups, 2 Technology, p. 700*)
 - A previously-placed Research Group that is no longer adjacent to an eligible colony with an active Epistemological Constructural Element is *disrupted* (but not removed), and will not be eligible for Development actions.
 - Research Groups are required to develop Applications. Each Research Piece belongs to a specific Research Area (see following section), that is, it represents a specific type of research. Research Groups must consist of two Research Pieces from the same Research Area.
 - A new Research Piece may be placed to form a Research Group that is automatically disrupted.
- Each Research Piece or attempt must be assigned to one of ten Research Areas, which can be conceptually divided into two groups of five each. (*Research Areas, 2 Technology, p. 701*)
- **Research Areas in GGDM:**

Energy	Stardrive
Matter,	Ships
Information	Weapons
Life	Defenses
Planets	Industry

 - *The preceding list is offered for brevity, see original GGDM text for full descriptions.*
- Research requires the activation of the Technology Power for that purpose with the use of one Act and no Scenes. Research consists of the following steps:
 1. Choose Research Area (i.e. ‘select the target’),
 2. Dedicate Resources (i.e. ‘pay the money’),
 3. Resolve Research (i.e. ‘roll the dice’),
 4. Place Research Piece (if successful, do the Hokey Pokey). (*Research Action, 2 Technology, p. 702*)

- When the Technology Power is activated for the purposes of Research, the Actions sent to the Concierge must include a designation of the Research Area and a commitment of a specific amount of RPs for the Research Attempt. A position may not commit more RPs to research than they have available in the Treasury at that time. Because one Act is required to activate the Technology Power for Research, Research Attempts will be resolved before other Power Activations in the same turn that require more than one Act. (*Black Hole, 2 Technology, p. 702*)
 - The basic chance of a successful Research Attempt is 50%. The chance of a successful Research Attempt may be influenced by many factors, chief among them being the sufficiency of the resource commitment. Prior to resolving the Research Attempt, the Concierge will first determine if the Research Attempt is sufficiently funded via two die rolls using ten sided dice (results 0-9). For the purposes of resolving Research Attempts, “0” die roll results are zero, not 10. Enlightenment may (wisely!) be assigned to Research Attempts. (*Schrödinger’s Cat, 2 Technology, p. 702*)
 - The first die roll will determine if the Research Attempt is overfunded or underfunded. The resource commitment is divided by three (fractions rounded down), and a ten-sided die is rolled. If the die *roll is less than or equal to* the resource commitment divided by three (fractions rounded down), the research is overfunded, if it is *greater than* the resource commitment divided by three (fractions rounded down), the research is considered underfunded.
 - The second die roll determines the extent to which the Research Attempt is over- or under-funded. The second roll on a ten sided die, is multiplied by 5% to determine the extent of the over- or underfunding.
 - For example, a position commits 9 RPs to a Research Attempt. The amount is divided by three, for a result of 3. The die is rolled and the result is a “5.” Since the die roll of 5 is greater than 3, the Research Attempt is considered underfunded. A second die is rolled and the result is a “1” which is multiplied by 5%, meaning the research is underfunded by 5%. Only a “0” result on the second roll produces no effect from over/under funding.
 - Application of Enlightenment to over- or under-funding of Research Attempts – whether it is a ‘failed die roll’ is governed by the rules in *Harsh Mistress, 2 Colleges, p. 478, supra*. Enlightenment application could make it worse on the reroll, but that’s a chance to take, and over- or under-funding rolls can exhaust Enlightenment.
- The base chance of successful Research Attempt is adjusted by the previously-determined percentage by which the research is over- or underfunded. If the research is overfunded, the base chance of a successful Research Attempt is increased by that percentage; if it is underfunded, the base chance of a successful Research Attempt is decreased by that percentage. After adjustments, two ten sided dice are rolled to determine the final results of the research as a percentile. If the result is *less than or equal to the adjusted base chance*, the attempt was successful and a Research Piece is added to the Public Space. (*Cure for the Common Cold, 2 Technology, p. 704*)
 - Continued Example: The underfunding result of 5% means that 5% is subtracted from the base 50% chance of success for an adjusted 45% chance of success. Two ten-sided dice (2d10%) are rolled for a percentile, and the final die roll is 43%, which is less than 45%, thus the Research Attempt was successful. A Research Piece is then added to the Public Space as a result of successful Research.
 - The adjusted base chance of successful research is never greater than 90% or less than 5%.
- Faculties may be committed to any roll related to a Technology Power activation increasing the odds of a favorable result. It may also be possible through Writs focused on the Technology Power to alter the results of Technology Power activations in various, creative ways. But all of this is added cost to get more bang for the buck (e.g., Faculties, Fuzzy Groups expended). (*Lab Assistants, 2 Technology, p. 703*)
 - Zero divided by three is still zero, so a Research Attempt with zero RPs committed, is underfunded on any result of “1” or greater on the first die roll. The second die roll determines how

much, to a maximum of 45%. Thus a zero RP commitment Research Attempt might still have a minimum 5% chance to succeed (and a maximum of 50%). (*Lab Assistants, 2 Technology, p. 703*)

- Finally, the resources expended during the Research are subtracted from the position's Treasury, **regardless of whether the research was successful or not**. The only remaining issue is to determine the amount that was expended. If the research was overfunded, the amount of the committed Resources will be reduced accordingly; if the research was underfunded, the amount of committed Resources will be increased accordingly (all fractions rounded up), and the final amount will be removed from the Treasury, even if this means that insufficient resources will be available during subsequent Power Activations in the same turn (i.e. a 'budget shortfall'). (*Big Money, 2 Technology, p. 704*)
 - **Continued Example:** Since the previous rolls determined that the Research Attempt was underfunded by 5%, that 5% is added to the 9 RPs research commitment, for a result of 9.45 RPs. The final cost is rounded up to 10 RPs. Research in GGDM is an expensive process, balancing expediency and cost management.
 - If there are insufficient funds in the Treasury, half of the amount will be taken, or whatever is currently available from the Treasury, whichever is lesser, *and the remaining amount will be taken from the Treasury the next time the Technology Power is activated for any purpose*, before any further Research, Development, or Patents are processed. If the research was successful, but there are insufficient resources to pay for it, the Research will not be received until the research is fully funded (i.e. 'paid for,' stamped Paid in Full!).
 - Zero RPs commitment to a Research Attempt will never cost any RPs because adding a percentage to zero (see previous section discussion) will always be zero. So, yes, it is possible for a position to proceed through the game not paying anything for Research, but depending on the luck of the die (95% of the time the Research Attempt will be underfunded, by up to 45%) for an occasional success. Each attempt still costs an Act and a Power Activation however. Thus, astute players will never waste a Power Activation due to *lack of RPs* and zero RP commitment to Research Attempts will never risk disturbing later Power Activations. This may be a necessity in some cases to pass Conflict Checks. (*Big Nothing, 2 Technology, p. 704*)¹⁵
- New fully-paid Research Pieces must be immediately placed on an unoccupied Monad in the Public Space (which is then occupied) and the positions' Actions must contain information as to the desired placement of the Research Piece should research be successful. If this information is not provided, the Concierge will do whatever looks right and move on. (*Space Race, 2 Technology, p. 705*)
 - More than two Research Pieces of the same type may be placed adjacent on the Public Space, there is no limit to the number of adjacent pieces or types, but exactly two Research Pieces of the same type – no more, no less – form a Research Group. It may be possible to 'rescue' a *disrupted* Research Group by placing a new Research Piece adjacent to both an eligible colony with an active Epistemological Constructural Element and a Research Piece from the disrupted group. This is an alternative to attempting reactivation of the inactive Constructural Elements by Cohering (see 5 Culture, p. 421, *supra*).

Development:

- Development is the process by which Research Groups in the Public Space become Applications on the current Era Matrix (i.e. finding something useful to do with the research), which in turn, are used for Patent Interpretations that introduce new **major** technologies into the game. (*Development, 2 Technology, p. 707*)
 - Development attempts require the activation of the Technology Power for that purpose with the use of two Acts and no Scenes.

¹⁵ "An institute for advanced research with no funds for research. It's a provocative concept." – Dr. Harry Wolper, Creator (1985).

- Development also requires that the position currently have on its Public Space at least one Research Group, as well as, some small, variable amount of RPs in the Treasury.
- Each Research Piece can only be involved in one Development attempt per Regular Turn, even if part of two or more overlapping Research Groups.
- When attempting Development, the position must specify one existing *non-disrupted* Research Group as the target of the Development. Further, the Actions sent to the Concierge must contain the locations of one or more currently open spaces on the current **Era Matrix** for the position. At the time the Actions are submitted, a number of RPs will be deducted from the position's Treasury equal to the number of Matrix locations specified in the Actions times the current Era number squared. (*Development Fund, 2 Technology, p. 707*)
 - Example, a position chooses a non-disrupted Energy Research Group on the Public Space and specifies two open spaces (by coordinates) on the current Era Matrix to which the Energy Research Group could be Developed into an Application. The position is currently in the 1st Era. Thus the cost of the Development attempt will be just 2 RPs ($2 \times 1^2 = 2$) which will be subtracted from the Treasury. If the position is currently in the 2nd Era, the cost of the Development attempt will be 8 RPs ($2 \times 2^2 = 8$) and in the 3rd Era, the cost will be 18 RPs ($2 \times 3^2 = 18$).
 - Each undisrupted Research Group may be the target of only one Development attempt each Regular Turn.
- An attempt to Develop the target Research Group will be made by the Concierge each time the position's Regular Turn Actions are processed, until either successful, or until all of the specified Matrix locations are exhausted. Each turn that the Development is not successful, the target Research Group type (e.g., Industry Research Group, Defense Research Group) is permanently blocked from becoming an Application **at the specified Matrix location**. The next turn's Development attempt moves to the next specified Matrix location *as long as it is still open*, until all Matrix locations in the Action are exhausted. (*The Kitty Incident, 2 Technology, p. 708*)
 - If the Development of the Research Group into an Application fails on the first turn, Development on subsequent turns *will not require any additional activations of the Technology Power* or expenditure of additional RPs, it will be processed automatically. Development attempts will terminate if the Research Group becomes disrupted and will **not** restart automatically when restored. Because Enlightenment *can only be assigned to Power Activations*, there is no opportunity to add Enlightenment on the second and subsequent Development attempts. Unused Enlightenment will be returned when either it fails or is successful, see Vampire Suicide, 2 Colleges, p. 478, *supra*.
 - Multiple Development attempts may be ongoing at any time as long as there is a *separate and specific Research Group assigned to each* (i.e. two Development attempts may not be made on the same Research Group in a turn). Multiple Development attempts can target the same Matrix location; if one is successful, the others following will be blocked. Development attempts will be processed in the order submitted.
 - It is possible through incredibly bad luck and/or Development of other Applications at the target locations to permanently foreclose Development of a specific Research Group in the current Era Matrix. The group will again become eligible for Development in the next Era Matrix when it becomes available (see The Progress of Eras, 1 Eras, p. 759, *infra*).
- The base chance of Development of the Research Group each turn is 50%. If there is only one remaining space on the current Era Matrix, the Development of the Research Group is automatically successful. The base chance is increased by 5% if any of the adjacent spaces contain an Application with the same Research Area. The base chance is reduced by 10% if there are no Applications adjacent to the target space on the Matrix, including instances where there are no Applications currently on the Era Matrix. (*Short One Wingnut, 2 Technology, p. 708*)
 - Thus, the base chance for Development of the first Application on an Era Matrix is 40%. Breaking into a new Era is an entire scientific revolution.

- When the Research Group is successfully developed into an Application, it is removed from the Public Space (freeing up two Monads) and placed on the specified single space on the Matrix as an Application. All Applications on the Era Matrix occupy one space and are labeled with the Research Area from which they were Developed (e.g., Weapons Application). Applications on the Era Matrix do not have Constructural Elements. (*The Better Mousetrap, 2 Technology, p. 708*)
 - There is no rules provision in GGDM for removing single Research Pieces from the Public Space, only for removal of Research Groups by successful Development into Applications. There is no process for removal of Research Groups other than by successful Development.

Reverse Engineering (of Alien Technologies):

- Activation of the Technology Power for the purpose of Reverse Engineering is an attempt to find out how an alien technology works so that it can be used or adapted to the position's technology. The Technology Power Activation costs only a Scene at the location to be examined, no Acts are used. (*De-conjunction Junction, 3 Technology, p. 713*)
 - If the junk is floating in system space, the Scene must be on the star, if not, then it must be on the planet location.
 - Deconstructing an alien technology requires two basic parts: The opportunity to view or have the alien technology for study, and second, the not inconsequential task of figuring out what it does and how it works.
 - The 'opportunity' may also come as a result of successful Special Operations...
- When the Technology Power is activated for the purpose of Reverse Engineering the Scene must be at the location of the proposed Reverse Engineering attempt. The position's Regular Turn Actions must describe in sufficient detail the specific alien physical object or colony and the level of contact with the target alien object or colony. Finally, the Action must describe the objective (or 'sub-purpose') of the Reverse Engineering as either Xeno-archeology, Alien Patent or Alien Stardrive. (*Alien Artifact, 3 Technology, p. 714*)
 - Alien Stardrive objective requires possession of a reasonably intact alien starship (e.g., 'flying saucer'), and is a slightly different procedure described separately below.
 - For the purposes of Reverse Engineering in GGDM, Xeno-archeology is not limited to 'dead worlds' or ancient civilizations; it broadly encompasses physical examination of all alien technologies, including on current 'living worlds' controlled by the position.
 - Previously colonized worlds can count as colonies for Reverse Engineering purposes; for example, see designated Special Planets which are former **alien colonies**, Resources from Special Planets, 2 Taxation & Census, p. 307, *supra*.
- The starting point to resolve all Reverse Engineering activations of the Technology Power is a judgment by the Concierge – quantified in a number from 1 to 9 – of the 'Quality of the Contact' with the proposed alien object or colony. A value of '1' represents very weak contact – such as a fleeting glimpse of a UFO – while a value of '9' represents the best quality of contact, such as possession of an undamaged major alien artifact at a urbanized colony, or a colony on a planet containing the remains of a previous alien civilization. Other factors may, at the judgment of the Concierge, include whether or not First Contact has been made with the (former) alien owners (in some cases, they are extinct in the playing area), length of contact, whether **alien colonies** have been Conquered, Converted or Naturalized, and whether Diplomatic Spaces or Shared Meanings exist with the alien originators. Establishing a Specialized Colony for that purpose at the location of a dead/abandoned **alien colony** is a major effort by the position, and Colleges may also be considered. (*Champollion, 3 Technology, p. 715*)
 - The position will not be informed ahead of time (and players should not ask) what the Concierge might consider the Quality of Contact for any situation or what factors may be considered; there will be no pre-discussion or arrangements or prejudgment opinions issued.

- The Quality of Contact judgment by the Concierge is extremely important to all Reverse Engineering attempts. It should not be treated randomly, the Concierge should not abdicate their responsibility to a die roll when one is not dictated by the rules.
- The position's Turn Actions must include, as with regular Research attempts, a number of RPs committed to the Reverse Engineering attempt, which will be immediately subtracted from the position's Treasury (this amount will not be modified as in regular Research attempts). Note that with a cost of *no Acts and one Scene*, Reverse Engineering attempts will normally be processed before Actions costing just one Act. (*Tourist Attraction, 3 Technology, p. 715*)
- Reverse Engineering attempts for the purpose of 'Xeno-archeology' seek to gain Research Pieces, which are placed on the Public Space, and may sometimes result instead in a new Application placed on the Matrix (i.e. a Development). These attempts are resolved like normal Research Attempts (see *2 Technology, p. 702 et seq., supra*) with the following differences:
 - No Research Area is chosen for Reverse Engineering attempts, if the attempt is successful, the Research Area is determined randomly (or by Concierge judgment).
 - The *base chance* of success is 5% x the Quality of Contact modifier determined by the Concierge, which produces a base chance range of between 5% and 45%.
 - The RPs committed to the Reverse Engineering attempt are divided by four instead of three, and the attempt is overfunded if the second die roll is less than (rather than less than or equal to) the RPs divided by four. Otherwise, it is underfunded; there is a greater chance of underfunding in Reverse Engineering attempts than normal research.
 - The chance of success of a Reverse Engineering attempt is the base chance plus or minus the over- or under-funding percentage, just like a normal Research Attempt. (*Alien Prometheus, 3 Technology, p. 716*)
- Finally, for each successful Reverse Engineering attempt for the purpose of Xeno-archeology, there is a chance equal to the Quality of Contact assigned by the Concierge that a Development will be received on the Matrix instead of a Research Piece on the Public Space. This creates an 'exponential' effect for the Quality of Contact assigned by the Concierge, as it both influences the chances of success and the chances of obtaining an alien Application instead and careful judgment should be exercised. (*Alien Prometheus, 3 Technology, p. 716*)
 - The Application will be received when the research is fully paid, in cases of underfunding and insufficient RPs in the Treasury.
 - The Application received will be either one listed on the Patent of the alien item being examined, or randomly determined (e.g., for an abandoned alien world) and it will be placed in a randomly determined open location on the Matrix but not connected (see Patent Prosecution, 3 Patents, p. 747, *infra*). The Concierge can also substitute judgment based on what is being examined.
- Reverse Engineering with the objective of 'Alien Patent,' if successful, will result in one random connection being established on the Matrix between two Applications [that] are adjacent on the Matrix and not currently connected. There does not have to be an actual alien Patent. (*Itsappe Who Stole Fire, 3 Technology, p. 717*)
 - The process does not directly lead to copying of or obtaining the Alien Patent.
 - A Reverse Engineering attempt for the purpose of Alien Patent costs 1 RP.
 - The chance of success of the Reverse Engineering attempt is equal to the Quality of Contact expressed as a percentage, that is, from 1% to 9%.
 - If successful, a connection will be established between two Applications currently on the Matrix as described above. If there are multiple possible connections, one will be chosen randomly (meaning there is likely little reason for the Concierge to exercise judgment on this).
- Stardrive Patents are different from regular Patents in GGDM.... If the Reverse Engineering purpose is 'Alien Stardrive' – one of which must be present e.g., from a crashed or captured alien ship, and the reverse engineering attempt is successful on the same Regular Turn as an attempt is made to prosecute a

new Stardrive Patent, the chance of success of the latter is increased by 5-15%. That is, rather than possibly receiving a Research Piece (or Application) or a connection between Applications on the Matrix, Reverse Engineering of the Alien Stardrive may result in improvement of a chance to successfully develop a new Stardrive on the same Regular Turn. (*Flying Saucers, 3 Technology, p. 718*)

- This effect cannot be obtained if 1) the ship being examined had a Generic Stardrive (GSD, see 2 Stardrive, p. 791, *infra*) and 2) the position attempting the Reverse Engineering already has the Generic Stardrive (GSD) Existential Patent. In these cases, the Reverse Engineering attempt will be converted to Xeno-archeology and resolved accordingly (as the position may not know in advance what sort of Stardrive was on the ship being examined, and this is a risk), and will have no effect on Stardrive Patent prosecution.
- This process does not allow improvements in Ship Speed of the Generic Stardrive (or any other Stardrive) through Continuous Operational Technology (COT) Patents (see 2 Patents, p. 740, *infra*), it only applies to prosecution of a new Stardrive Patent as described in Stardrive Patent Prosecution, 2 Stardrive, p. 796, *infra*.
- The chance of success in Reverse Engineering an Alien Stardrive is the Quality of Contact (QOC) number determined by the Concierge plus the Current Era of the position. (*E115, 3 Technology, p. 719*)
 - This means that the range of probabilities is from 2% to 11% (QOC 1-9% plus 1-2% for 1st or 2nd Era, min 2%, max 11%); it is unlikely unless the 4th Era is opened in the game (optional), that a 3rd Era position will attempt to Reverse Engineer an Alien Stardrive.
 - The percentages range from a 1st Era position looking at a totally smashed alien ship trying to figure out how it goes (2%) to a 2nd Era position examining an intact alien ship (11%).
 - The attempt also costs 3 RPs from the Treasury.
- Upon a successful Reverse Engineering of an Alien Stardrive, the bonus of 5-15% to concurrent Stardrive Patent Prosecution on the same Regular Turn is randomly determined and applied. The position does not need to know the bonus received, only that they successfully Reverse Engineered the Alien Stardrive. Each type (that is, the type of Stardrive on the ship, each ship can have only one type) of Alien Stardrive may only be Reverse Engineered once. (*E115, 3 Technology, p. 719*)
 - As an aside, a Minor Race (pre-1st Era) would have a 1-9% chance of figuring out the flying saucers they captured, if the government can surreptitiously budget (over say, 50 years or a century) the 3 RPs without the taxpayers noticing.
- ... each major alien object or general location (i.e. Special Planet) may be the subject of a limited number of Reverse Engineering attempts by a single position. That is, a position should not be able to ‘milk’ or ‘mine’ one find for the entire game; the find should be investigated and *then civilization moves on*, whether or not anything was gained from the investigation. Any continuing research at the site is subsumed under normal Research and Development rules described in 2 Technology generally, *supra*, without specific reference to xeno-archeology. How many attempts are allowed for each site or object is at the judgment of the Concierge, but an entire dead/abandoned alien planetary civilization should not merit more than three Reverse Engineering attempts (in one to three consecutive Regular Turns), perhaps one of each objective (i.e. Xeno-archeology, Alien Patent, Alien Stardrive) while a single crashed alien ship should get only one attempt of any type. (*Alien Tourist Trap, 3 Technology, p. 719*)
 - The Concierge, through use of an Intervention, *may* change the initially set Quality of Contact modifier on the second and third Reverse Engineering attempts at the same location; e.g., the researchers may do damage through carelessness or lack of understanding, thereby reducing the chances of success, or they may improve chances through diligent, careful, considered analysis. This should be done for story purposes and the Concierge should prudently avoid doing it to solely ‘level up’ ‘reward’ or ‘punish’ a position...
 - Reverse Engineering attempts could be made at the location of Conquered **alien colonies** or **alien colonies** of other Native Population Types in the game that have recently been abandoned or obliterated. This very much affects the Concierge judgment of quality of the contact (the scale of 1-9, *ut supra*); a Conquered Colony, intact, will rate high on the scale, whereas, there might

not be much left to find if the subject colony has been largely obliterated before surrender or being forcibly Balkanized.

- There is a *blurry continuum* from scavenging to intelligence to reverse engineering...

Patents (Technology Power)

- The Patent is the process by which players may create and introduce new milestone technologies into the game in relation to the position's technology grid (i.e. Matrix). A Patent is an Interpretation, and a successful Patent – which is not published – must be used as the Interpretation accompanying the Technology Power activation used to prosecute the successful Patent on the Regular Turn it is introduced. If the Patent is not successfully prosecuted, a News Event must be used as the Interpretation for the Technology Power on that turn (though what the News Event reports is up to the players). Both must be provided with the position's Regular Turn actions. (*The Patent Process, 1 Patents, p. 728*)
 - To begin the Patent process, the proposed Patent must be submitted to the Concierge with the position's Actions, and the Technology Power must be activated on the same Regular Turn for the purpose of Patent Prosecution. The proposed Patent must contain all of the elements of the Patent, except the User Manual, at the time of the submission. Other than the Power Activation cost, there is no other cost to prosecute a Patent Application. (*The Patent Application, 1 Patents, p. 728*)
- ...the Concierge serves both an adversarial and advisory role with regard to Patents (and throughout the game in general). The Concierge is adversarial to Patents (and players and positions) in that the Concierge serves as the critical eye, the 'devil's advocate,' 'Big Brother,' the personification of Entropy, and the limiting factor to prevent abuse of the Patent Interpretation (or anything else). (*The Galactic Patent Office, 2 Patents, p. 735*)
 - Balance should not be construed to mean that there will be no advantage from the technology, or even that it's fair to the rest of the positions in the game. *Balance means a fair (and playable) advantage gained for the effort expended.* Balancing in GGDM terms is not an equal sign in an equation; the resulting equation must be unbalanced to have gain (e.g., synergy, emergence, profit, capabilities, 1+2 must equal 5). (*Balancing the Pin, 2 Patents, p. 736*)
 - The Concierge may take into account the circumstances of the game and any relevant factors at the time the Patent application is submitted. (*Razor Blade Floating on Water, 2 Patents, p. 736*)

Existential Patents:

- The Existential Patents are the only 'pregame' technologies allowed, players may only develop new technologies after the game starts. (*Existential Patents, 1 Patents, p. 729*)
- It is impossible for any position to 'purchase' all of the Existential Patents with their Inheritance Points (IPs, not to be confused with, Resource Points/RPs). Any Existential Patent not obtained during set up **may not** be later 'purchased' by any means, but must be submitted, and processed as a regular Patent by any position once that position has the correct alignment of Applications on the 1st Era Matrix required by the Patent. (*Patent on Posterity, 1 Patents, p. 729*)
 - ... all Existential Patents must be completed to advance to the 2nd Era of technology. A position should start with as many Existential Patents as possible and is initially restricted from prosecuting new Patents.

Patent Parts:

- A Patent form consists of five parts (see Appendix EPAT1 for samples of Patent formats), as follows:
 - Theory
 - Operational Quality
 - Effects
 - Costs
 - User Manual
 - *This summary list is provided for the sake of brevity, for details, see original GGDM text.*

- Any Patent which gives the ability to construct a new thing in the game (and by extension, introduces a new physical thing to the game), must begin with a statement creating the existence of the thing and the Power Activation required to build it. Additionally, any activity relating to the new thing must contain a statement as to the Power Activation required for that activity to occur. Not all Patents create new things in the game. (*eXistenZ, 1 Patents, p. 731*)
- All of the statements of the Effects, Costs, and User Manual sections are assumed to be absolutely true unless they are designated as absolutely false. Statements on the Patent may each only be either absolutely true or absolutely false. Patents are official Interpretations and like other Interpretations, create the reality of the GGDM in-game universe. (*Patent Truths, 1 Patents, p. 731*)
- Each Effect or Cost statement should relate to one attribute and be effectively, one statement, but when necessary, may contain two closely related statements. (*Fuzzy Things, 2 Patents, p. 735*)

Operational Qualities:

- Physical Item Technologies introduce into the game the capability to produce new physical items, mainly ships, that function as the major units of the game (see View from a Height, 1 Construction, p. 660, *supra*, for discussion of game units concept). Generally, these physical items are intended to be mass produced and available throughout the entire position, wherever the capability exists to produce them. Any Patent for a ship *must have at least one Stardrive Application*. (*Physical Item Technologies, 2 Patents, p. 739*)
 - Patents for Physical Item Technologies must have at least two and no more than seven Applications, and do not have an automatic ‘base cost’ (in RPs), rather, due to the variable nature of the possible physical items, the cost will be determined by the Concierge. PIT Patents include and assume all of the minor and lesser technologies required to make the new physical item work within the game.
 - ‘Base Cost’ as used here refers to the Cost section of the Patent where cost per unit is set in RPs; ‘base cost’ is simply a relative RPs cost guideline for Patents, it does not refer to any cost in RPs to prosecute the Patent (there is **no RP cost** to activate the Technology Power for the purpose of Patent prosecution, see Back to the Drawing Board, 3 Patents, p. 748, *infra*.) The ‘cost’ of Patent Prosecution is getting Applications on the Matrix and Technology Power activations.
 - A PIT Patent for any starship may not be prosecuted (or bought with IPs during the setup process) unless the position has first obtained a stardrive patent (i.e. the Generic Stardrive Existential Patent), because what is a starship without a stardrive? Further, only the Scout Ship Existential Patent may be obtained if the position does not have the Ship System Existential Patent.
- A Continuous Operational Technology is one that presents a minor, non-expendable, improvement in an existing technology (i.e. Patent), e.g., gradual improvements in ship speed, or industrial production, or the range of an existing weapons system. Continuous Operational Technologies *may not add new capabilities* to units or installations, only improve the performance or output of existing systems/units. (*Continuous Operational Technologies, 2 Patents, p. 740*)
 - Continuous Operational Technology Patents may only have two **Effects** and must specify another previously successful Patent for a Physical Item Technology, Enhancement Technology or Continuous Operational Technology, to which the COT Patent is related. The COT Patent may not be submitted in the same Regular Turn as the Patent upon which it depends. Generally speaking, the ‘base cost’ of the COT Patent is the cost of developing it, and as such, *in most cases*, no RP cost will be assigned per unit to ‘upgrade’ the units, installations or enhancements to which the COT Patent relates. The Concierge may take into account, however, the number of current items to be affected, and may impose minimal RPs cost to ‘balance’ the COT Patent. Time delays while upgrading are also an option for balancing the proposed COT Patent, e.g., upgrade when ships return.
 - Because Effects must equal the number of Applications minus one, this means that all COT Patents will use three Applications, no more, no less. See Effects, 1 Patents, p. 731, *supra*.

- Enhancement Technology is the only means to add new capabilities or ‘dimensions’ to existing physical items, colonies, and colony installations technologies. Such enhancements may be expendable, like Ship Missiles, or may require a unit upgrade cost for the existing ships and installations to use the new capability. Most things built on colonies, such as industry and defenses, will be colony enhancements and are thus Enhancement Technologies. (*Enhancement Technologies, 2 Patents, p. 740*)
 - Enhancement Technology Patents must use at least two Applications. If an ET Patent is not a colony installation or if it improves on existing colony installations, it is required to list an existing Patent upon which it is based, and an ET Patent may not be processed in the same turn that the Patent upon which it is based is approved. The base cost in RPs of an ET Patent is 5 RPs times the number of Effects used in the ET Patent. An ET Patent may use between two and four Applications (hence, have one to three Effects).
- Technological Devices are the ultra-powerful, extraordinary (within the setting), possibly one-of-a-kind or rare physical items that are not generally capable of being mass produced. ... Technological Devices are sometimes installations on colonies, sometimes they can be enhancements to existing ships, and sometimes, they can be a third major unit in the game. (*Technological Devices, 2 Patents, p. 741*)
 - Technological Device Patents require at least five, and no more than nine Applications, and have a base cost of 50 RPs times the number of Applications for production of each such device. Additionally, the Cost section must contain a statement limiting the number of such items on some logical basis, such as one per planet, one per system, or even one of a kind, for example. This may involve some storytelling.
 - Technological Device Patents can act as either Physical Item Technologies (PIT) or Enhancement Technologies (ET), *ut supra*. Not all Technological Devices have to be massive weapons or useable as a weapon, but they usually are in video science-fiction.¹⁶

Connecting the Dots (Patent Prosecution):

- Patent Prosecution is the process by which the connectivity of all of the Applications in the Patent are tested on the Era Matrix. (*Patent Prosecution, 3 Patents, p. 747*)
 - During the final processing of the Patent Application, the Concierge will check to see if all of the Applications listed on the Patent Theory section (by location) are connected. Only unconnected Applications will be tested; previously connected Applications are ignored. The base chance of connecting any two Applications is 50%. (*Connecting the Dots, 3 Patents, p. 747*)
 - The connectivity of all listed Applications will be tested on the Era Matrix even if the Patent ultimately fails. Once any two Applications are connected, they are permanently connected. [*the inspiration for the connectivity test was probably the Twixt board game*]
 - If all Applications on the Patent are connected on the Era Matrix, forming a line exactly in the order specified in the Theory (and approved by the Concierge), the Patent is successful and a new technology is introduced into the game. It is possible for a position to submit a Patent for links that have all already been tested, and thus have an automatic Patent (after Concierge approval), however, as indicated in the following Eras section, that may not always be a good strategy. (*Stamp of Approval, 3 Patents, p. 747*)
 - A new Patent may be used on the Regular Turn after it is approved and also must serve as the Interpretation (but not published on the forums) for the Technology Power activation for the purpose of Patent Prosecution on the Regular Turn of the Patent’s approval.
 - The Patent will fail if any two Applications fail to connect. A failed Patent cannot be used as an Interpretation on that Regular Turn; instead, the News Event required when submitting a Patent,

¹⁶ GGDM text discusses in detail some ‘technological devices’ in video science fiction; the line is fuzzy though. The bombs dropped on Japan in 1945 were arguably technological devices, but when the Cold War heated up, the nuclear powers were producing thousands of nuclear weapons, by the 1980s, the Soviets had 75,000 nuclear warheads and the U.S. had about 40,000. Still, the process of producing nuclear weapons is limited by the insanely complicated and delicate process of refining the uranium, a process which, so far, only sovereign governments of fairly wealthy countries have engaged. So, it’s not a bright shining line for what constitutes TDs.

see Patent Process, 1 Patents, p. 728, *supra*, will be used. Connections established by the Patent check will not be lost by the failure of the Patent. (*Patently Baaad, 3 Patents, p. 747*)

- A failed Patent may be submitted again on any subsequent *turn by another activation of the Technology Power* for the purposes of Patent Prosecution. A position may alter or change the failed Patent prior to resubmission, and each Patent Application will be treated by the Concierge as a new Patent Application for review and balancing purposes. If a link between Applications is tried enough times, it will eventually connect, and the connection only needs to be made once.
- Successful Patents are ‘locked’ and cannot be changed – ever – or disrupted.
- A Patent prosecution is different from a Development Attempt in that it will not continue automatically from turn to turn until successful or disrupted. However, Patents don’t cost RPs and cannot be disrupted. (*Back to the Drawing Board, 3 Patents, p. 748*)

Patent Ownership (Frankenstein!):

- A Patent is the property of the position that created it and is available for the exclusive use of that position. A Patent is secret – not published on the forums (one of the advantages of having a Concierge run the game), and the successful Patent serves as the Interpretation on the Regular Turn of its approval (only). An approved Patent may never be changed by any position or destroyed and is unaffected by other game events (except *Uber Alles*). (*Letters Patent, 3 Patents, p. 748*)
 - Patents may be affected by later Patents (such as COT Patents), and may become effectively obsolete (see Eras).
 - Patents may be *stolen* by Special Operations Black-ops (see specific discussion in Fuzzy Ops, 3 Special Operations, pp. 1306-1307, *infra*), and may also be shared with other positions under the proper conditions (e.g., through MegaCorporations, see 2 Commerce and 2 Corporations, generally, *infra*). [*I recommend watching A Short History of Time Travel – very useful stolen patent!*]
 - If other positions reverse engineer or ‘inadvertently’ create similar Patents, their Patents are for their exclusive use, even if everyone has basically the same Patents. Even Existential Patents are ‘exclusive’ to their owners, and can be modified by COT or ET Patents so that the technology eventually differs from others.
- As all positions are governed by the same physical laws of the universe, what one position can do with a Patent can be done equally by another. Once a Patent is successfully prosecuted, the abilities granted by the Patent become a permanent part of the ‘laws’ of the game universe ... and are equally applicable to everyone who has a Patent granting those abilities, even if the Patent is secret. Another position could create a Patent to grant them the exact same, or very similar set of abilities by accident, observation or reverse engineering, though they may accomplish it in a different way. (*Patent Consistency, 3 Patents, p. 749*)

Eras (Technology Power)

The Matrix:

- The Era Matrix is a separate two-dimensional grid to which Research Groups are moved when they become Applications. It is not part of the Public Space, and is not affected by events in the Public Space. The Matrix contains only connectors and Applications, and each position has its own Era Matrix which (like the Public Space) is hidden from the view of others. (*The Matrix, 1 Eras, p. 756*)
 - Each Era has a different Matrix, however, all positions have the same Matrix for each Era, such that, unlike Public Space, they are not unique to the position. The 1st Era Matrix is a *four by four* square where Applications are placed one each in the squares of the grid. Thus, the 1st Era Matrix has room for sixteen Applications and connections may be made vertically, horizontally, and diagonally. (*First Era Matrix, 1 Eras, p. 757*)

- One is added to each dimension of the Matrix for each Era following the first. That is, the 1st Era Matrix is 4x4 and has spaces for 16 Applications, the 2nd Era Matrix is 5x5 and the 3rd Era Matrix is 6x6 with space for 36 Applications. (*#IGY, 1 Eras, p. 757*)
- Whenever the rules refer to the ‘current Era Matrix’ the term means whatever Matrix they are currently using. When a position passes to the next Era, the Matrix from the previous Era remains and is available, however, there is little reason for positions that have passed to the next Era to continue to use the previous Era Matrix to develop technologies; it is kept mostly for reference. (*Current Era Matrix, 1 Eras, p. 757*)
 - Applications **are not** transferred to the next Era when a position advances, rather, in each Era, each position must start over again (*tabula rasa*) developing Applications and prosecuting Patents for that Era.
- An Era is complete when:
 - 1) All Applications spaces on the Era Matrix are filled, and
 - 2) All Applications are connected to at least one adjacent Application.
 - When this occurs, the position automatically progresses to the next Era (however, see next section regarding the 1st Era) and the next Era Matrix becomes available, a new Current Era. (*The Progress of Eras, 1 Eras, p. 759*)
- There are two additional requirements that must be met to exit the 1st Era:
 - First, in order to progress to the 2nd Era, the position must have obtained a Stardrive Patent. This is not negotiable, a 2nd Era position cannot exist without Stardrive.
 - Second, before exiting the 1st Era, a position must have obtained or successfully prosecuted **all** of the Existential Patents (if possible, see below).
 - The Generic Stardrive Existential Patent *satisfies both requirements*, as it is also an Existential Patent. The 1st Era may be quite long for some positions, most positions will spend the majority of the 1st Era developing technological basis for interstellar culture: The Stardrive and the Existential Patents, with one or two new unique technologies. Further:
 - A 1st Era position may only prosecute Existential Patents until it has successfully prosecuted (and/or ‘bought’ during the setup) 11 Existential Patents, excluding GSD. (*Event Horizon, 1 Eras, p. 760*)¹⁷
- Upon advancing to the next Era, a roll is made for each Patent completed in the Era to see if a new Monad is added to the position’s Public Space. There is a 10% chance x the level of the new Era for each Patent to result in an added Monad, e.g., there are 17 Existential Patents in the 1st Era, each of which has a 20% chance to add a Monad to the position’s Public Space (average result would be 3-4 added Monads). The new Monads are randomly inserted into the Public Space. (*All Things Are in Motion, 1 Eras, p. 760*)

Advanced Technology:

- There is no difference in the Research process in any Era, as Research occurs in the Public Space. Research and Research Groups are the same throughout the game, for everyone in all Eras. (*Advanced Technology, 1 Eras, p. 761*)
- Positions may attempt to Develop Applications on the next Era before completing the current Era. Positions *may not* attempt to develop Applications two or more Eras ahead of their current Era Matrix. The next Era Matrix becomes available for Patents as soon as a position successfully Develops the first Application in that Era. (*Advanced Development, 1 Eras, p. 762*)
 - If a position intends to attempt to Develop an Application in the next Era, that must be indicated in the Actions sent to the Concierge, otherwise, it will be assumed that the Application is being

¹⁷ As I recall, this was an issue I debated – whether all Existential Patents needed to be obtained to exit the first Era or if not, how many? I think this rule was sort of a compromise. I am still not convinced entirely, for example, do you *need* 1st Era Carrier? So it is possible that on this point, anyone running the game might decide to slightly change this rule or to make it changeable in a program.

Developed in the current Era Matrix. The cost of Developing an Application in the next Era is tripled and the base chance of Development of the Application is reduced by the percentage (fractions are truncated) of uncompleted Applications in the current Era.

- For example, the normal base chance of Developing a Research Group into an Application is 50% (see Short One Wingnut, 2 Technology, p. 708, *supra*). When attempting Advanced Development into the next Era, the base chance is 50% minus the percentage of uncompleted Applications in the current Era. Thus, if attempting Advanced Development into the 2nd Era, the position would need to have completed more than 8 of the 16 Applications on the 1st Era Matrix and would pay triple RPs.
- Additionally, for the first Application Developed in the next Era, there would be a negative adjustment (see Short One Wingnut, 2 Technology, p. 708, *supra*) for the first Application in a new Era. Thus, practically, a position may not attempt to Develop Applications in the next Era before most of the current Era Matrix has been filled.
- Continuing the previous example, there is a 10% penalty to the normal chance of Development for the first Application in a new Era (see Short One Wingnut, 2 Technology, p. 708, *supra*). Thus, a 1st Era position would need to Develop 10 Applications on the 1st Era Matrix before attempting Advanced Development of the first Application on the 2nd Era Matrix (50% base chance minus 10% for first Application minus 37% uncompleted Applications on the 1st Era Matrix = 3% chance of Advance Development of the first Application on the 2nd Era Matrix). Once the first Application in a new Era is successful, future Applications can take advantage of adjacency bonuses.
- Conversely, if a position has filled the current Era and is merely waiting (and a bit unlucky) for the last connections to be made between Applications to trigger the automatic progression, then there is minimum adverse effect on Development in the next Era, except the cost.
- Advanced Development should not be confused with or considered as advancing to the next Era, which cannot occur until the current Era Matrix is completed and all requirements are met.
- Advanced Development may be an option if a Research Group has failed Development in all remaining Applications in the current Era and is foreclosed from the current Era. See The Kitty Incident, 2 Technology, p. 708, *supra*.
- Positions may attempt to prosecute non-Stardrive Patents in the next Era as soon as the position has enough Applications in the next Era to try a Patent (i.e., a minimum of two Applications). Because Patents operate on the connection of all Applications listed on the Patent, a Patent *may not contain Applications from different Eras*; that is, all Applications used in a Patent must be found on the same Era Matrix. It is possible, if difficult, to create COT and ET Patents in the next Era based on a PIT Patent in the current Era. (*Advanced Patents, 1 Eras, p. 763*)
 - The cost of prosecuting a Patent in the next Era will be 5+1-10 RPs per attempt (based on a die roll on a ten sided die) and the base chance (50%) of connecting any two Applications is reduced by 10 minus the number of successful Patents in the *current* Era x 5%. Thus, if a position has 5 successful Patents (of any type) in the current Era, the chance of making connections for Advanced Patents is 25%, whereas if the position had 10 successful Patents in the *current* Era, there would be no adjustment to the base chance of making connections.
 - The RP cost of prosecuting a Patent (above) *only applies* to Advanced Patent attempts. There is no RP cost for normal Patent prosecution attempts in the current Era. See Physical Item Technologies, 2 Patents, p. 739, and Back to the Drawing Board, 3 Patents, p. 748, *supra*.
 - While the number of successful Patents is being used as a criteria for Advanced Patents, there is no rule specifying any number of Patents required to advance to the next Era, except that a position must successfully prosecute one Stardrive Patent and all Existential Patents to advance to the 2nd Era Matrix, *ut supra*.

- Advanced Development or Patent Prosecution **does not entitle** the position to any abilities granted by the *Uber Alles* for the next Era, see 2 Eras, p. 767, *infra*, or any other advantages of the next Era (e.g., see Player Piano, 2 Eras, p. 770, *infra*). (*Future Shock*, 1 Eras, p. 763)

Uber Alles (Era Progression):

- *Uber Alles* is a German phrase that means “above everything else” – not a pair of overalls. Here the term represents an intangible quality or dimension, due to the combination of the discovery of physical laws and the accumulation of Applications such that their combined effect advances technology by an order of magnitude, and the changed worldview that results. (*Uber Alles*, 2 Eras, p. 767)
 - The *Uber Alles* for each Era is provided to each position by the Concierge, as soon as the position successfully prosecutes its first Patent in the new Era. The *Uber Alles* is provided by the Concierge to insure consistency in the physical laws (even if we don’t know the details) of the game universe. The *Uber Alles* won’t be the same for each game or for each Era, and constitutes a set of ‘mini rules’ that adds an extra ‘dimension’ to the technology of the new Era that sets it apart from the technology of the previous Era, and renders previous technology obsolete. The rules of the *Uber Alles* might affect Patents, the Matrix, and/or social factors of the position. Finally, the *Uber Alles* of an Era may continue to operate into the next Era (with a new *Uber Alles* being added) or it might be rendered obsolete by the *Uber Alles* of the next Era. (*Ut Supra*, 2 Eras, p. 767)
 - There is no *Uber Alles* for the 1st Era.
 - Each *Uber Alles* consists of two parts, one is related to activation of the Technology Power and the second is not related directly to the Technology Power. The pairing of Technology Power and non-Technology Power effects provides endless interesting combinations of effects (with no explanation necessary, it is effectively ‘magic’) and sufficiently simulates the perpendicular nature of emergences. Ten pre-generated *Uber Alles* are provided for each category so that the Concierge may simply generate – either randomly or by considered choices – new *Uber Alles* pairs for each Era. It may also be possible for participants to create new *Uber Alles* effects. (*Uber Emergents*, 2 Eras, p. 769)
 - Within GGDM, the Concierge may optionally, allow more Acts and Scenes to positions that have reached the 2nd Era, for example, one Act plus one Act or Scene received per undisrupted Government Title. And in the 3rd Era, either two Acts or two Scenes (a choice to keep it interesting) received per undisrupted Government Title. (*More or Less*, 2 Eras, p. 771)
 - This does not equate to a position receiving more Power Activations in a Regular Turn (cf. *Gone with the Wind* discussion in 1 Government Titles, p. 582, *supra*); extra Acts and Scenes represent only the *power of opportunity* – technology and ‘advanced cultural sophistication.’

Stardrive (Technology Power)

- GGDM requires that certain assumptions be made that would not be approved by current science. Whether we (or anything) can travel at FTL speeds is not as clearly prohibited as it seemed previously. The game must assume, *for the setting*, that reliable, repeatable FTL travel is possible. (*Assumption of Light*, 1 Stardrive, p. 781)

Stardrive Patent:

- A Stardrive is not a Physical Item Technology (PIT) because it is not a ship or installation, rather it is part of a ship. (*Stardrive Patent*, 1 Stardrive, p. 788)
 - A Stardrive might in some cases, approach the status of a Technological Device (TD), for example, if some limitation of one Stardrive per system were in place, however, Stardrives (however expensive) are generally meant to be mass manufactured and more common than singular Technological Devices (if there were only one Stardrive in existence, it might be a Technological Device, but in space opera that is not likely). [*see previous nuclear weapons discussion in FN*]

- A Stardrive is not an Enhancement Technology, you cannot just strap one on the back of the space shuttle and fly to Alpha Centauri and then discard it.
- And a Stardrive is not a Continuous Operational Technology, because it is far from a ‘minor’ upgrade to an existing system.
- A Stardrive is special, it is the core technology of interstellar culture – a propulsion system capable of moving living creatures and cargo to other stars in an efficient and timely manner (relatively speaking) and returning. Therefore, Stardrives are defined in the game by use of a special type of Patent, the Stardrive Patent.
- While a position or a game may have many different Stardrive types (Stardrive Patents), each ship may have only one type of interstellar propulsion system and must be constructed with that drive system. Additionally, it will generally be prohibited for ships to be refitted with new types of Stardrives (when and if it is allowed, expect the cost to be quite high) and each ship may only have one unit of any type of Stardrive, both for eminently practical economic reasons. (*Exclusion Principle, 1 Stardrive, p. 788*)
- Positions are limited to successful prosecution of one Stardrive Patent per Era, except in the 1st Era if Generic Stardrive (GSD) was not acquired during the game setup process. Stardrive Patents may only be prosecuted in the current Era Matrix. (*And One Moving Violation, 1 Stardrive, p. 789*)
 - The GSD is required (as it is an Existential Patent, see Event Horizon 1 Eras, p. 760, *supra*) to progress to the 2nd Era, but does not exclude prosecution of another Stardrive Patent in the 1st Era. Thus, a 1st Era position could prosecute two Stardrive Patents, if it started the game without GSD, which would be an arduous task in the early game. Only one successful Stardrive Patent is required to advance to the 2nd Era, however. Stardrive Patents are not available as Advanced Patents, see 1 Eras, p. 763, *supra*.

Generic Stardrive (the ‘dumb drive,’ hereinafter “GSD”):

- The Generic Stardrive is the only interstellar propulsion system available as an Existential Patent. Positions are not required to purchase the GSD during set up, *unless required by their chosen Primal State*, but in most cases, it would be a very wise choice, not the least, because ships (even Scout Ships) cannot be built without it. (*Generic Stardrive (GSD), 2 Stardrive, p. 791*)
- The GSD is the prototype Stardrive Patent. The base speed for GSD is a painfully slow two per Regular Turn, with movement distance being calculated as indicated on the Stardrive Patent. This is what is referred to in the game as “ship speed,” the maximum speed at which ships move between coordinates (see FTL Missile, 2 Movement, p. 849, *infra*). (*Dog Star, 2 Stardrive, p. 792*)
 - The GSD ship speed may be increased in *increments of one* by use of COT (Continuous Operational Technology) Patents based on the GSD Stardrive Patent. A maximum increase of one ship speed is allowed per COT Patent of the GSD. [*this could be changed by an Era Uber Alles*]
 - Like Stardrive Patent prosecution (*ut infra*), the COT Patents (and ET Patents) based on the GSD Stardrive Patent do not require the listing of Applications or the establishment of connections on the current Era Matrix, rather, the success of each prosecution of a COT Patent to improve the Ship Speed of the GSD Drive will be determined by a single ten sided die roll, whose result must be *less than or equal* to the absolute value of current Ship Speed minus ten to be successful. A die roll result of ‘0’ is interpreted as 0 and not 10, so that the range of numbers is 0-9.
 - For example, the current Ship Speed for the GSD is 2 per turn, a ten sided die is rolled for a COT Patent to improve Ship Speed. Any result of 8 (2 minus 10 = -8, the absolute value of which is 8) or less will be a successful prosecution of the COT Patent to increase Ship Speed by one increment to 3. Increases in Ship Speed for the GSD Patent will become more difficult as Ship Speed increases, until finally, at Ship Speed 10, it can only be increased on a roll result of 0 (i.e. less than or equal to 0).
 - The use of absolute value in this equation makes an interesting flip situation when GSD Ship Speed reaches 11, as the absolute value of 11 minus 10 is 1 and each increment thereafter gets easier. But that requires a large number of Power Activations (roughly, I’d estimate about 20-25,

late middle to end game) due to the maximum increase of one Ship Speed increment per COT and each increment after 11, even when nearly guaranteed of success, still uses a precious Power Activation each turn. The maximum Ship Speed of GSD is infinite, requiring at some later point, only a Power Activation to increase speed (plus the energy content of an entire universe!), unless the Concierge wants to cap the top speed.

- These rules specifically and only apply to increasing Ship Speed of the Generic Stardrive Patent and are a general guideline for other subsequent Stardrive Patents. However, the game is not bound by these rules beyond the GSD and the participants are free to experiment; for example, a new Stardrive might be developed that has a good initial ship speed that can never be increased until late in the 3rd Era. There are many other possibilities.
- While Generic Stardrive is an Existential Patent, the COT to increase Ship Speed is not (extensions of Existential Patents are not Existential Patents), therefore there is no requirement to increase Ship Speed of GSD to progress from the 1st Era. (*Spindizzy, 2 Stardrive, p. 792*)
- Positions that chose not to, or are unable to acquire the GSD Stardrive Patent during the game set up, have three options: try to develop the GSD Stardrive early in the game, try to develop a new Stardrive Patent, or stay home. In-game prosecution of the GSD Stardrive Patent is processed in the same way as the prosecution of any other Stardrive Patent (*ut infra*). The GSD is only available as an Existential Patent either during set up or in the 1st Era (by operation of the rules for Era progression, see Event Horizon, 1 Eras, p. 760, *supra*). (*Brown Star, 2 Stardrive, p. 793*)

Stardrive Patent Parts:

- A Stardrive Patent is constructed differently than a normal Patent; most importantly, a Stardrive Patent does not depend directly upon and does not list specific Applications. However, like other Patents, the Stardrive Patent must contain sufficient information so as to be playable and balanced within the game. A Stardrive Patent must have the following parts:
 - A Stardrive type must have a name (e.g., warp drive, wave engine, shaft drive, put-putt drive, etc.) that is somehow related to or indicative of its operational theory. The GSD ('generic') drive is so named because it lacks an operational principle; it could have been called the Dumb Drive, but GSD sounded better. (*What's in a Name, 2 Stardrive, p. 794*)
 - The Stardrive must contain a section with information sufficient for the Concierge to be able to calculate the movement rate (i.e. speed, distance) for ships using the new Stardrive (see FTL Missile, 2 Movement, p. 849, *infra*). Any formulas must be repeatable and understandable by all involved, and may require the functions of a regular calculator. (*How it Moves, 2 Stardrive, p. 794*)
 - Based on the formulas given in the previous section, the Stardrive Patent must establish an initial speed for ships using this Stardrive system. Of course, ship speed may be improved gradually through the use of COT or ET Patents based on the Stardrive Patent. The initial base ship speed should be painfully slow for 1st Era Stardrive Patents, somewhat faster for 2nd Era Stardrive Patents, and perhaps moderate for 3rd Era Stardrive Patents. Unless it would be interesting to do otherwise... (*Blurry Hurry!, 2 Stardrive, p. 794*)
 - Stardrive Patent prosecution in the 2nd and 3rd Eras may be able to take advantage of the *Uber Alles* for those Eras if constructed properly, giving them unimagined powers. See 2 Eras generally, *supra*.
 - This [Operational Characteristics] section should contain any additional operational characteristics not found in the previous sections, and especially, those describing limitations on the performance or operation of this particular Stardrive (e.g., "Disturbulence Modifiers," 2 Movement, p. 846, *infra*). As a matter of balancing principle, a Stardrive Patent will not be allowed that doesn't describe some reasonable limitations on the operation of the Stardrive and/or some

unique characteristics of the Stardrive system. Stardrives should not be allowed which are capable of instant unlimited speeds (unless it would be interesting and costly...). (*Operational Characteristics Wanted, 2 Stardrive, p. 795*)

- As with other Patents, there will be a section for the Concierge to insert rulings and operational notes on the Stardrive Patent as the game progresses and those rulings become necessary. As before, rulings will only be made when necessary, leaving all else undefined until a situation arises where the Concierge must decide, and no advance rulings will be given. (*User Manual, 2 Stardrive, p. 795*)
- The Stardrive Patent should contain a loose statement indicating the spirit and/or worldview symbolizing or identifying with the operational principles of the Stardrive. This is more in the spirit of good science-fiction literature than game requirement, and players should not regard this as an adversarial situation where the Concierge is going to ‘use’ this statement ‘against’ the position. The *stimmung* is also not an official Interpretation and cannot be used for that purpose. (*Stimmung, 2 Stardrive, p. 795*)

Stardrive Patent Prosecution:

- Unlike the other Patents, Stardrive Patent prosecution does not rest upon establishing connections between specific Applications; rather, Stardrive Patents rely upon the overall status of the Applications and Connections on the current Era Matrix at the time of prosecution. (*Stardrive Patent Prosecution, 2 Stardrive, p. 796*)
 - The chance of successful prosecution of the Stardrive Patent is the average of the percentage of Applications complete on the current Era Matrix and the percentage of all possible **connections** completed on the current Era Matrix.
 - For example, in the 1st Era, there are sixteen spaces for Applications and forty-two possible connections (count them!) between Applications. If the position prosecuting the Stardrive Patent had six Applications (37.5%) and six connections made (14.2%), the chance of successful prosecution of the Stardrive Patent would be 25% (fractions truncated). Successful prosecution of the Stardrive Patent does not – unlike Patents – create any connections between Applications on the current Era Matrix.
 - Finding an alien ship could be helpful... a position could receive a one-time concurrent bonus to prosecuting a new Stardrive if the position also successfully reverse engineers an ‘Alien Stardrive’ (see Flying Saucers, 3 Technology, p. 718, *supra*).
- As with the GSD, COT Patents are used to increase the base speed of an original Stardrive Patent (*ut supra*). ET Patents may be used to give Stardrive Patents other capabilities. Subsequent COT and ET Patents based on the Stardrive Patent are prosecuted in the same way as the original Stardrive Patent. (*Need for Speed, 2 Stardrive, p. 797*)

Temporal Technology (Technology Power)

- ...implicit in any sort of faster-than-light travel or transport system (e.g., FTL, Stardrive, Stargate) is likely some sort of temporal technology to abrogate the time-dilation effect of relativistic travel. Arguably, there may be some means of FTL travel – such as taking a ‘shortcut’ through an alternate universe – that would not necessitate a temporal abrogation. Most players are not likely to envision that a turn represents generations and centuries of real time, so the admission of Stardrive technology necessitates the admission of some level of temporal knowledge/effect (even if as a side effect of Stardrive), which opens the door to temporal technologies in the game. (*Thumbing Our Nose at Einstein, 1 Temporal Technology, p. 802*)
- Unfortunately, this game is designed by and played by pre-interstellar primitives living before the 1st Era of interstellar technology (i.e. people who can only see the shadow of a hyperbolic cube), and therefore, is severely limited in its possibilities. Generally speaking, this game (and the Concierge) is not capable of handling the complications, alternate universes, and paradoxes, e.g., grandfather paradox, ontological

paradox, causal loop, predestination paradox, quantum headache paradox – I made that last one up, but who’s to say I didn’t already invent it before I made it up? – that would result from allowing unlimited or largescale temporal technologies. Therefore, any temporal technologies developed in GGDM will be extremely limited (most professional writers and movie directors don’t do a good job with temporal technologies either). The Concierge should not allow any sort of temporal technology that causes the game to collapse into cracked causality chaos. (*The Door to that When is Closed, 1 Temporal Technology, p. 804*)

- Some positions in the game may progress into the 4th Era, sans any automatic assumption that doing so implies or necessitates temporal traverse technology. The acceptance of temporal technology will depend in large part on the cleverness of the players in designing such technologies; the meaning of such within the game and the current game circumstances, and the record that the players proposing such technologies have established with the Concierge.

Temporal Technology Patent:

- The successful prosecution of the Temporal Patent does not depend on any die rolls or Matrix criteria, rather, successful prosecution is solely and arbitrarily at the discretion of the Concierge. In regards to Temporal Patents, the Concierge will err on the side of ultra-cautious preservation of the orderly play of the game without undue delays. The form of the Temporal Patent is not set, however, when submitted to the Concierge, it must contain a careful and detailed description of the game operation of the proposed temporal technology and especially, limitations of the technology and any anticipated problems that might arise during game play of the technology. (*Temporal Patents, 1 Temporal Technology, p. 814*)

Temporal Ship (T-Ship for short!):

- The following sections detailing the Temporal Ship (hereafter “T-Ship”) are an example of an extremely limited and detailed (if not particularly clever) temporal technology that *might* be acceptable in the game. A sample Temporal Ship Patent is not provided. (*Temporal Ship, 2 Temporal Technology, p. 817*)
 - Although many of the following concepts and rules, specifically surreptitious entry and ambush combat, were developed specifically for Temporal Ships, those rules exist independently from Temporal Ships and would be applicable (more or less, with necessary modifications) to any similar situation, such as the development of cloaking and/or stealth technologies by positions during the game. (*A Moment of Caveat, 2 Temporal Technology, p. 818*)
- Unlike the regular Era Warships, the Temporal Ship (hereinafter, ‘T-Ship’) Warship System requires two special technologies. The first technology is the Temporal Sensor which allows the T-Ship to realtime scan a short distance into the future and past, and enables the T-Ship’s tactics but at the same time, allows opponents to defend against the T-Ship if they have Temporal Sensors. The Temporal Sensor is a prerequisite technology to the T-Ship technology, which allows short movements of the T-Ship into the immediate past or present, and spatial movement to points within the range of the Temporal Sensor, while protecting the time sense of the crew onboard. It is all very strange. Don’t close your eyes now. (*Tea Time, 2 Temporal Technology, p. 820*)
 - Like sonar and radar, and any other detection technology, it is capable of being used on the offense and the defense. If a Temporal Ship can use the Temporal Sensor to see a short distance into the future and the past, then the Temporal Ship’s opponents can also use it to defend in the same way. It is suggested then, that Temporal Sensors would become a key component of fleet and colony defense, perhaps in the form of a special Temporal Sensor ship, or as expensive permanent enhancements to warships, or in colony defense, as a Technological Device protecting the system. You only need one at a location. (*Temporal Sensors, 2 Temporal Technology, p. 820*) [*the T-Ship is the ‘submarine’ of space-opera starship warfare... that was the basic idea*]

- Temporal Ships are warships that have the limited ability to move about in local time, short distances into the future and the past. This gives them a huge tactical advantage over other ships that cannot move about in time and opens whole new areas of combat possibilities. However, T-Ships are very expensive compared to their normal counterparts, and the ability to move about in time takes quite a bit away from their firepower. T-Ships may not be constructed until the Temporal Ship Patent has been successfully completed. (*How to Make Friends Over Tea*, 2 Temporal Technology, p. 820)
- Theoretically, temporal technology sufficient to make a T-Ship could be available in any Era (after a successful Stardrive Patent), so T-Ships could appear in the 1st, 2nd or 3rd Eras. It must also be assumed that Stardrive does not interfere with Temporal Technology. (*T-Eras*, 2 Temporal Technology, p. 820)
 - As noted in Assumptions of Light, 1 Stardrive, p. 781, *supra*, FTL Stardrive (or anything around even half-light speed), implies necessarily some kind of temporal abrogation. The Concierge may also consider 1st Era Warship Existential Patent a predecessor requirement for T-Ship.
 - As discussed in Terminus, 1 Temporal Technology, p. 801, *supra*, the 4th Era does not automatically equate to Temporal Technology, and thus, Temporal Technology is not specifically limited to the 4th Era.
 - Like Era Warships, Carriers, and Fighters, T-Ships do not receive the benefit of any automatic Era progression, and a new Patent must be designed for each Era of T-Ship. Temporal Ships should be very expensive to construct and strain the limits of most positions.
- T-Ships generally may receive the benefit of all defensive technologies available to their owner, unless they are deemed incompatible with the T-ship technology, for example a cloaking device may require too much power or may interfere with the temporal fields. (*T-Bones*, 2 Temporal Technology, p. 821)
 - Offensively, they receive the benefit of all offensive and weaponry technologies, except that T-Ships may reasonably be prohibited from carrying or using the more potent weapons due to energy or because the weapons malfunction or become unstable in the temporal field; mainly, Temporal Ships will need to use energy conservative and less exotic or field disruptive weapons available in their time.
- Because of the peculiarities of the operation of a T-Ship, T-Ships have one more turn of Operational Flight Limitations (OFL) and Operational Supply Limitations (OSL) than normal ships (see 3 Movement, pp. 855-856, *infra*). However, in order to be resupplied, they must give up their temporal abilities for the Regular Turn or Combat Round of resupply, and become just regular warships, and are thus vulnerable to normal attacks. Unlike normal ships, T-Ships do not automatically reset their Operational Flight and Supply Limitations when they arrive at a supporting colony, thus T-Ships are not automatically revealed. (*Dark Tea*, 2 Temporal Technology, p. 821)
- The presence of T-Ships in a system is never revealed to other positions until they either initiate or join a combat, they are revealed by a Temporal Sensor Array, or if they fail their Surreptitious Entry of the system or took a resupply when others are present. (*T-tection*, 2 Temporal Technology, p. 821)
- The Concierge should note all paradoxes, but what happens or doesn't happen as a result is entirely within the purview of the Concierge. (*Cosmic Conundrum No. i*, 2 Temporal Technology, p. 823)

Surreptitious Entry:

- One of the primary abilities of the T-Ship is its ability to enter an occupied starsystem undetected and wait hidden for the perfect opportunity to attack. Upon arrival of the T-Ship at a destination system the T-Ship must attempt a Surreptitious Entry of the system. (*Surreptitious Entry* 3 Temporal Technology, p. 828)
 - The Surreptitious Entry attempt is made even if the owner of the T-ship does not intend to enter surreptitiously. It is the nature of T-ships. If it is desired to reveal the presence of the T-Ship, the owner can subsequently do something that would reveal its presence in the system. As discussed *ut supra*, T-ships do not automatically resupply when upon arrival at a supporting colony (see Free Resupply, 3 Construction, p. 678, *supra* and Supporting Colony, 1 Movement, p. 840, *infra*), so are not revealed.

- The basic chance of a successful Surreptitious Entry is 50%. Ten percent is subtracted from the base chance if the T-Ship by entering the system is also exploring the system for the first time, and the base chance is increased by 20% for a 2nd Era T-Ship and by 40% for a 3rd Era T-Ship. (*Riding the T, 3 Temporal Technology, p. 828*)
 - A separate Surreptitious Entry roll must be made for each T-Ship entering the system, *each time* the system is entered surreptitiously. A successful Surreptitious Entry result means that the T-Ship has entered the system without alerting those already in the system (if any), and thus others present will not be informed of the arrival of the T-Ship; failure means that the T-Ship has been detected and its arrival must be announced to anyone with ships or colonies currently in the system.
 - The detection rules in GGDM are very generous; in reality finding a ship (unless it is planet sized or bigger) in system space is a needle-in-a-haystack endeavor. However, we must assume detection abilities have advanced as much as the rest of technology in the GGDM universe; if we can have FTL speed, then we can have generous system space detection abilities. See also ABBA Arrival, 2 Information, p. 1340, *infra*.
- In many cases, a ship with a ‘cloaking device’ can do approximately the same as a T-Ship, but never quite as well. A ship with a cloaking device *may not* Surreptitiously Enter a system, however both T-Ships and ‘cloaked’ ships may remain undetected in a system if they arrived before anyone else currently in the system, *or if the T-Ships were successful in a Surreptitious Entry of the system*, and are currently within their Operational Supply Limitations (OSL). T-Ships and cloaked ships that are beyond their Operational Supply Limitation and who must receive supplies from other ships or colonies may not maintain a surreptitious presence in the system if anyone else is present when they are resupplied, but may remain in the system if they are being supplied and may use Ambush Mode in combats if they are warships (cloaks could also conceivably be used for non-warships). (*Twilight Presence, 3 Temporal Technology, p. 829*)
- A surreptitious presence may not be maintained if anyone attacks any Friendly or Naturalized colony (except Raid or Strike, see World In Flames, 4 Carriers & Fighters, p. 1083, *supra*), the Capital Colony, or any Colony Ships or Cargo Ships owned by the owner of the ships maintaining a surreptitious presence in the system. (*Trip Wire, 3 Temporal Technology, p. 829*)
 - If the attacker commenced a Colony Combat against a colony on the belief that there were no warships in the system, and there are warships surreptitiously present in the system, the Colony Combat is cancelled and automatically becomes a Ship Combat between the would-be attackers and the ships whose presence was previously hidden.
 - If a:
 - 1) Ship Combat is initiated or ongoing in a system, or
 - 2) A Colony Combat is initiated against any colony that is not described above (including non-sovereign colonies), the T-Ships and/or cloaked warships *may join* the Combat at the beginning of any Combat Round.
 - If the owner of the hidden ships was not already a participant in the ongoing Combat, the Combat Power must be activated to initiate combat as described in Those Who Stand Looking, 3 Combat, p. 973, *infra*. They may also remain out of the Combat indefinitely but may later be automatically forced to intervene as described above.
 - T-Ships and cloaked ships are particularly effective in combination with the Combat Alert purpose of the Combat Power activation.
- T-Ships or cloaked warships which are in a system surreptitiously or which enter a system surreptitiously may initiate any combat against any other known unit or colony in the system as if they were normal warships. All normal procedures are followed for the combat, however, the attackers may be considered in Ambush Mode (see 7 Combat, p. 1038, *infra*). (*Crossing the T, 3 Temporal Technology, p. 830*)

Movement (Vital Power)

- Interstellar movement requires a starship...All interstellar movements that are not initiated by activation of the Expansion Power, Combat Power or Commerce Power, require the activation of the Movement Power. Specifically:
 - 1) Any ship **that is not carrying population** (e.g., not Colony Ships, Troop Transports),
 - 2) That is departing from *any* origin system,
 - 3) To any destination system that is currently colonized by the ship's owner (other than by ownership of Conquered Colonies, see Supporting Colony, next page, *ut infra*),

In this context, "colonized" means having a colony in the system, regardless of colony political status (except Conquered Colonies) or native population type.
 - 4) Where the departing ships are either unable to or do not intend to initiate combat upon arrival,
 - 5) Requires an activation of the Movement Power.
 - These conditions precedent must exist *only at the moment of departure*.
 - A specific set of conditions precedent exists – detailed appropriately in each rules section – for each of the four Power Activations that can initiate interstellar movement. The Movement Power is activated for initiation of movement that does not fit the conditions precedent for initiating interstellar movement under the Expansion, Combat, or Commerce Power, *ut infra*. (*Engage!, 1 Movement, p. 838*)
- All ship movement occurs in the Galactic Space. Activation of the Movement Power allows as many eligible ships as desired to *depart one starsystem to **any number** of destination starsystems*. One Act and one Scene *on the star of the origin starsystem* is required to activate the Movement Power for all ships in a system that are departing in the same turn. All types of ships may use the Movement Power activation to move, including warships; warships do not automatically require an activation of the Combat Power to move. (*Ad Astra, 1 Movement, p. 838*)
 - Despite the fact that ships appear on the Public Space – that is, they are within the consciousness of civilization – they do not move on the Public Space and the Public Space has no effect on their movement (other than the Scene requirement). See also Buzzing Lightyears discussion in 4 The Streams of Time, p. 101, *supra*.
- Because of the uncertain time periods represented by a Regular Turn, it is not prohibited for a ship to perform interstellar 'short' movement to more than one destination star in a Regular Turn (or more than one action per turn) by appropriate multiple Power Activations and if Scenes have been previously placed. See Space Hop, 2 Movement, p. 850. (*Flying Dutchman, 1 Movement, p. 839*)

Supporting Colony:

- Although many units will begin movements by the activation of other Powers, all ship movement follows the Standard Interstellar Movement (SIM) rules and the movement formula and current Ship Speed of the Stardrive Patent they are using. Movement by activation of the Expansion Power or the Combat Power are merely representative of extra preparation and intent in beginning of movement to expand or to go into a potential combat situation, otherwise, movement follows standard rules from the time they depart the origin until they reach the destination. The Movement Power is only activated when ships are departing from a supporting colony system to a destination where there is also a supporting colony. (*UniSIM, 1 Movement, p. 839*)
- Each ship that is ordered to move by activation of the Movement Power must be checked to see if it fails to obey the Power Activation due to inactive Constructural Elements on the ship (see Power Off, 2 Constructural Elements, p. 193, *supra*). A ship that fails to obey the Power Activation does not move, even if other ships at the same location depart due to obeying the Power Activation. If the ship that fails to obey the Power Activation is located at a Supporting Colony system, a **second check** is made using the Supporting Colony's Constructural Elements and if successful, the delinquent ship obeys the Movement Power Activation and departs as normal. An attempt may be made for each Supporting Colony in the

system. This applies only to *failed* Power Activations related to ship movement. (*Engines Offline, 1 Movement, p. 839*)

- The term “supporting colony” refers to any Friendly, Converted, or Naturalized Colony, including Low Population Colonies (see 4 Taxation & Census, p. 326, *supra*) which is owned by the owner of the ships in question (at the time of departure), that will automatically resupply the fleets on arrival (see Free Resupply, 3 Construction, p. 678, *supra*, and Operational Supply Limitation, 3 Movement, p. 856 *infra*). A Conquered Colony is not a supporting colony until it is Converted (see Conquered Colony, 2 Order, p. 539, *supra*). (*Supporting Colony, 1 Movement, p. 840*)
 - A Besieged Colony (see 3 The Sidereal Stage, p. 124, *supra*) or colony currently involved in Colony Combat at the time that the Regular Turn is processed cannot act as a supporting colony. This could be catastrophic as discussed in The Cold Equations, 3 Movement, p. 864, *infra*; ships arriving at the colony may be forced to run the blockade (see Blockade Running, 4 Commerce, p. 1233, *infra*).
 - As noted in 3 Construction, p. 678, *supra*, the ‘free resupply’ at Supporting Colonies does not require a Power Activation, and thus cannot be affected by Constructural Elements status on either the colony or ship.
 - As noted in Dark Tea, 2 Temporal Technology, p. 821, Surreptitious Entry, 3 Temporal Technology, p. 828, *supra*, T-Ships (Temporal Ships) do not automatically resupply at a friendly colony unless they reveal their presence. T-Ships must always attempt surreptitious entry when arriving at the destination system.
 - Supporting Colonies also often provide a second/back up check when starships initiating interstellar movement fail to obey the Power Activation, as described above and in Canned Food, 3 Expansion, pp. 913-914, Move Out!, 1 Combat, p. 942, Before You Go, 1 Commerce, p. 1189, and Blockade Running, 4 Commerce, p. 1233, *infra*.

Interplanetary Movement:

- Interplanetary Movement occurs when the origin and destination stars are the same, that is, between planets orbiting the same star, and does not require the activation of any Powers, *thus it occurs before any Action that requires the activation of a Power*. See Clockwork Universe, 3 The Streams of Time, p. 90, *supra*, regarding normal order of Regular Turn actions processing. (*Interplanetary Movement, 2 Movement, p. 844*)
 - Movement of ships, boats, and fighters between system space and planets in the same system is *instantaneous*, and will be executed secretly unless another position’s colony or ships are present.
 - Interplanetary Movement may not occur between planets owned by the same position if any of the colonies in the system owned by that position are besieged (see Blockade Running, 4 Commerce, p. 1233, *infra*).
 - Activation of the Expansion Power for the purpose of Transporting Populations (see Colonization, 1 Expansion, p. 876, *infra*) is only necessary for *interstellar movement* of colony ships (i.e. to another starsystem). Loading and Unloading or Landing colonist after *interplanetary movement* will still require Expansion Power activations regardless of distance moved.
- Normally, it is not important which planet ships in a system are located at; it is assumed that ships which are on a star occupy all of the system’s space as their ‘zone of control.’ Thus ships in a starsystem are never assigned a planet at which they are located, unless they have specifically moved there or taken shelter at the planet (e.g., retreats from Ship Combat, see The Better Part of Valor, 3 Combat, p. 981, *infra*, and Blockade Running, 4 Commerce, p. 1233, *infra*) but are instead placed on the system’s star in the Public Space for as long as they remain in the system. (*Ships in Port, 2 Movement, p. 845*)

Galactic Space:

- All positions use the same system of Galactic Space coordinates. That is, while the Public Space is subjective, Galactic Space is objective, necessarily universal. (*Cubed Space, 2 Movement, p. 846*)
- The initial playing area is a cubic section of Galactic Space and the Positional Value of each star, found on the Starlog next to the star's name, is that star's physical location within the playing area. In order to simulate the three-dimensional aspects of the playing area, each star's Positional Value is expressed as a set of numbers labeled X, Y, and Z. Positional Values are used to calculate the movement distance between stars. The method of calculating distance between the origin and destination stars is expressed in the Movement Formula section of the Stardrive Patent whose stardrive system the starship is using. (*Positional Value, 2 Movement, p. 846*)
- Positional Value is the location of the star system in 'real space' aka the Galactic Space in GGDM. The arrangement and relationship of the planets and stars in the Public Space bears no relation at all to the actual positions of the stars and planets in the Galactic Space and are not used in calculation of movement distances. Ships may move, using non-Movement Power Activations, to stars that are not currently in the Public Space; ships cannot move to star locations that are not in Galactic Space (i.e. not on the current Starlog). (*Real Space, 2 Movement, p. 846*)
 - Because of the conditions precedent to initiate interstellar movement via the Movement Power Activation, ships *may not move to* stars using a Movement Power Activation that are not also currently on the Public Space of the position.

Disturbulence Modifiers:

- There may be space-time Disturbulence around each star; this Disturbulence is expressed as a Disturbulence Modifier which forms a kind of terrain in Galactic Space. The Disturbulence Modifier of each star is particular to each Stardrive Patent and is unknown until a ship with that type of stardrive enters the starsystem for the first time (making Scouts very expendable—err, valuable). (*Disturbulence, 2 Movement, p. 846*)
 - Homeworld systems will never have a Disturbulence modifier for the very first Stardrive Patent obtained by that position as it is assumed that the scientists would have developed and tuned their first stardrive based on the properties of the system space around them. Homeworlds are only special to their starting position and may have Disturbulence Modifiers for other position's Stardrives.
 - The Concierge determines the Disturbulence Modifier for each star at the moment that a ship of that stardrive type attempts to enter the star for the first time. The Disturbulence Modifier for each star will be expressed in either *extra turns of movement required to enter the star*, or *extra movement distance*, or both. In short, Disturbulence modifiers cause ships to not arrive when expected, at least for the first ships going to that system, but can be accounted for later.
 - **Temporal Disturbulence** (extra turns) is very difficult to overcome, however spatial Disturbulence (extra movement) may be overcome by increasing Ship Speed through continuing research (see Dog Star and Spindizzy, 2 Stardrive, both p. 792, *supra*).
 - Temporal Disturbulence Modifiers are usually assumed to add extra turns, but it's not impossible that they may rarely make movement to a starsystem faster by subtracting a turn from the flight; that is, the star system seems to reach out and pull the ship through a 'barrier,' (mythopoeicly speaking?) skipping it ahead in time.
 - Disturbulence Modifiers are one of the major tools to shape the Operational Characteristics of the Stardrive Patent (see 2 Stardrive, p. 795, *supra*); it is suggested that the Stardrive Patent establish standard die roll ranges for the Disturbulence Modifiers.
- Each position will have its own running Starlog. All position Starlogs will contain the same coordinates, star colors and other basic *universal information* as well as links to the display for each star. Upon determining the Disturbulence modifier for each starsystem, the Concierge will record it permanently on

the position's Starlog. Once recorded, the Disturbance modifier for each star for each stardrive, probably won't change. You cannot change space or time, you can only change your stardrive, by either improving it, or abandoning it. Subsequent movement to the star will take into account the known Disturbance Modifiers. (*Starlogs, 2 Movement, p. 847*)

Standard Interstellar Movement:

- Standard interstellar movement is simply the amount of time, in Regular Turns, that is required for starships leaving the origin star to arrive at the destination star, taking into account Disturbance Modifiers. Disturbance Modifiers are only ***applied when entering the star***, not when leaving it, entirely for sake of convenience in play. Time of movement is calculated as the movement distance (calculated as described on the ship's Stardrive Patent) divided by the speed of the ship. Movement of the ship is then tracked solely in terms of the number of turns elapsed between the time it left the origin and until it arrives at the destination; the Concierge does not keep or record the current X, Y, and Z coordinates of any ship in interstellar space as they are irrelevant to the game (unless it is important to a story event). (*Time & Space, 2 Movement, p. 849*)
- A starship leaving on an interstellar voyage becomes, in effect, a missile traveling between stars at, presumably, faster than light speed. Thus, it is always assumed that starships depart at the maximum Ship Speed allowed by the current Stardrive Patent for that ship's Stardrive type, and that they travel in a straight, uninterrupted line toward the destination at a constant speed (constant speed is assumed for game convenience). (*The FTL Missile, 2 Movement, p. 849*)
 - Starships in interstellar flight will not obey new Power Activations until they arrive and do not require additional Power Activations to continue moving each turn.
 - Starships *en-route* to a destination star may not change destinations or ship speed, stop, alter course, or interact with or engage other starships in FTL combat in interstellar space. A ship also *cannot avoid* entering/arriving at the destination starsystem.
 - Improvements in ship speed will not affect the travel time of a ship which is en route to a destination star at the time of the improvement.
 - It is possible to design Stardrives which do not travel at a constant speed (for example, starts slow, gains speed), and this will be allowed by the Concierge only if it is fitting, useful, and/or interesting for the particular game or helps to balance the operational characteristics of the Stardrive Patent. It is also possible to design Stardrives which allow ships to depart at less than maximum Ship Speed (but why?).
 - Since the coordinates of ships are not recorded when they are between stars, there will be a *very strong presumption of unplayability* against any attempt by positions to create technologies or Stardrives that allow ships to change destinations or ship speed, stop, alter course, or interact with or engage other starships in FTL (or hyperspace or whatever) combat.
- Every ship which begins interstellar movement must have a destination star assigned and travel time calculated before it leaves the origin. From the coordinates of the origin and destination stars, the movement distance is calculated (including Disturbance Modifiers) and when the movement distance is divided by the departure speed, the travel time, in Regular Turns, is determined (fractions are rounded up). (*Departure, 2 Movement, p. 850*)
 - Ships may not plot destination stars that are beyond the range of the ship's current Operational Flight Limitation (OFL) (see 3 Movement, p. 855, *infra*); Scouts have extended OFL. See Imperial Interstellar Scout Service, 3 Movement, p. 855, *infra*.
 - When a starship departs the origin system, it is removed from the Public Space (that is removed from the origin star, it is 'removed from the universe') and the destination and travel time are calculated and recorded.
 - A Power Activation is only required for the departure of the ship – like sending off a paper airplane – additional Power Activations are not required for the continuous progress of the ship toward the destination star.

- The ship's progress toward the destination will be updated each time Actions for the position are processed, or, if no Actions are submitted, the ship's progress will be updated at the end of the position's time period for submitting Actions. Ships *en route* to a destination star will not stop traveling because the owning position did not submit Actions! Arrival cannot be avoided by not submitting Regular Turn Actions.
- Short Movement, a 'space hop,' occurs when a starship is able to move between two stars in one Regular Turn. Short Movement is accomplished in less than one Regular Turn if the current Ship Speed is equal to or greater than the movement distance between the origin and destination stars, including any applicable Disturbance Modifiers (*ut supra*). (*Space Hop, 2 Movement, p. 850*)
 - Short Movement must overpower all Disturbance Modifiers in order to be considered short movement. Temporal Disturbance Modifiers will usually wreck short movement (*ut supra*, p. 847) and sometimes, may make it possible when not possible.
 - When a Short Movement is accomplished, the ships arrive at the destination at the end of the same Regular Turn that they departed the origin and are available for Power Activations and supply functions at the destination at the beginning of the next Regular Turn.
 - The turn of departure counts as one turn of movement before the beginning of the next turn. This should be true of all interstellar movements. This is a concession to playability, to make the game move along, and a necessary acknowledgement of uncertainty of how much time is represented by a Regular Turn.
- GGDM does not prohibit a ship from moving more than once in a Regular Turn, due to the variable and unknown time periods represented by a turn. This implies that it is possible to plot movement of ships from origin stars at which they are not currently located; thus, a position could accomplish *heroic* movement by stringing together a number of Short Movements in one Regular Turn through a 'fast lane' of close stars that have Scenes, using multiple Power Activations for the same ship(s). However, the cost is that fast movement may consume most or all of the actions in a turn and a lot of Scenes. (*Heroic Movement, 2 Movement, p. 850*)
 - 'Leftover movement' upon arrival at each destination star via Short Movement is lost because the ship must pass through the starsystem. Thus, it cannot be added to any continued movement beyond the initial destination star. A movement is complete upon arrival at the destination star, farther movement requires another Power Activation.
- Long Movement, the 'long jump,' occurs when the moving starship is not able to complete the movement distance in one Regular Turn. No one can physically bar a ship from entering any starsystem, even if it is currently colonized or occupied. Starships engaged in Long Movement arrive *before* the first Power Activation on the Regular Turn of their arrival. Compare this to Short Movement in which ships arrive at the end of the Regular Turn in which they departed. Ships arriving via Long Movement are not in the same system as other ships and colonies at the beginning of the Regular Turn for whatever function that might require that as a condition precedent. (*Long Jump, 2 Movement, p. 851*)

Ship Systems (Operational Supply Limit/Operational Flight Limit):

- Ship Systems is an Existential Patent that represents the life support, crew accommodations, and general logistical aspects of interstellar flight. The practical limitations of interstellar flight are how much supplies the ship can carry, how quickly they are consumed, and the extent to which the ship systems can recycle supplies in interstellar flight and/or replace them from raw materials when they arrive in a system which does not have a supporting colony. Some items, such as high-end manufactured or refined items, especially those required for the operation of the Stardrive, will be impossible to replace without a supporting colony; the Stardrive is the single most complicated and finely-tuned device ever manufactured, and a piece of duct tape just won't fix it. Without this patent, a ship has no turns of OFL/OSL (*ut infra*), cannot move away from a Supporting Colony and, *except for Scout Ships*, cannot even be constructed (because it's system integral). (*Ship Systems, 3 Movement, p. 854*)
 - GGDM *does not* begin with the assumption of any Star Trek like 'replicator' technology...

- The Ship Systems Existential Patent is required for interstellar flight. The Ship Systems Existential Patent governs both Operational Flight Limitation (OFL or “offal”) and Operational Supply Limitation (OSL or “ossal”), detailed in the following sections. The Patent contains turn limits for each individually, beginning at two Regular Turns each. The individual limitations may each be improved by means of a Continuous Operational Technology or Enhancement Technology Patents, with each improvement being no more than one turn for either the OFL or OSL, per COT or ET Patent. (*Life Support, 3 Movement, p. 854*)
 - The one Regular Turn per step improvement scheme is similar to improvement of Ship Speed (see Dog Star, 2 Stardrive, p. 792, *supra*). Each improvement of Operational Flight Limitation extends the range of ships by the current maximum Ship Speed at time of departure.
- Scouts are the only ships that may be constructed without a Ship Systems Existential Patent. *With a Ship System Existential Patent, Scouts have two extra turns of Operational Flight or Supply Limitations (OFL/OSL), and may depart for any destination system, without it, they have two turns of OFL/OSL. (Imperial Interstellar Scout Service, 3 Movement, p. 855)*
- Operational Flight Limitation (OFL) is the number of Regular Turns of interstellar flight that a ship can travel when making a Long Movement ***beginning from a system where there is a supporting colony***, regardless of whether there is a supporting colony at the destination. The basic Operational Flight Limitation is two Regular Turns. Operational Flight Limitation generally becomes less of an issue as ship speed improves, because the range of the ship is however far it can travel at full speed in the time allowed by the current OFL. (*Operational Flight Limitation (OFL), 3 Movement, p. 855*)
 - Because it is usually irrelevant whether the destination has a supporting colony, OFL applies to the conditions precedent of all Power Activations that initiate interstellar flight, not just activation of the Movement Power. Cargo Ships, which must have a supporting colony at the destination as condition precedent to moving, may use an **alien colony** for OFL if trading with the **alien colony** (see Cold Lunch, 1 Commerce, p. 1189, *infra*). COT Patent improvements in OFL technology will not affect ships en route at the time of the improvement.
 - It is **imperative** that the initial Starlog contain 2-4 stars within two turns’ movement of each starting position based on the movement formula and starting ship speed of the Generic Stardrive Existential Patent. Other stars should be reachable from there.
- Upon arrival in a system with a supporting colony, the ship is automatically fully resupplied and may depart again with a fresh Operational Flight Limitation (OFL) or remain indefinitely in the system (this is an assumption purely for game purposes and may not accurately reflect the apparent facts). If the destination system does not have a supporting colony, then Operational Supply Limitation, ***the amount of time a ship can operate without a supporting colony in the absence of supply from a Log Ship (ut infra)*** – including subsequent interstellar flight to a system where there is a supporting colony – ***begins to run***. While it is certain that the ship could replace some of its supplies from raw materials in the system, as outlined above, eventually there will be some problems. Log Ships are not themselves exempt from Operational Supply Limitations. (*Operational Supply Limitation (OSL), 3 Movement, p. 856*)
 - OFL ends upon arrival in the destination star system, regardless of whether there is or is not a supporting colony. Unused turns of OFL do not convert to extra turns of OSL or toll OSL from running. OSL should always be equal to or greater than OFL in operational turns, so that the ship arriving in a system without a supporting colony can immediately retrace its route back to a supporting colony (running on OSL time). If a non-Scout Ship is going to a system without a supporting colony, *the owner should be prepared to drop a Scene there after arrival*. For each turn that OSL is greater than OFL, the ship might spend those extra turns in the unsupported system doing whatever it came to do (e.g., kidnapping Elvis) before being required to return to a supporting colony or leave on a longer trip. Planning is key.
- Absent creative Concierge Intervention (did the term “divine intervention” jump to mind?), a ship which has exhausted its Operational Flight and/or Operational Supply Limitations and/or has not arrived at a

supporting colony or has failed its Supply Roll (*ut infra*), will perish and may be removed from the universe (if in interstellar space), or left there to be rediscovered later as a floating derelict. (*Death Ship, 3 Movement, p. 856*)¹⁸

Logistical Support Ships (“Log Ships”):

- Ships which are in a system without a supporting colony may be supplied from Log Ships if they are carrying *Supplies*. “Log Ship” is short for Logistical Support Ship, and Log Ships may only be constructed after successfully acquiring or prosecuting the Logistical Support Ship Existential Patent. Log Ships cost 15 RPs each to build, Orbital Shipyard required; they are constructed in the same way as any other starship. (*Logistical Support Ships, 3 Movement, p. 860*)
 - Log Ships may never use anything they are carrying except Supplies. Log Ships are never required to use *Supplies* to extend their own OSL.
- Log Ships may carry four types of items: *Supplies*, Fighters, expendable Enhancements, and Ship Missiles. *Supplies* is a generic term that is used to abstractly represent all of the types of items that a starship needs (including replacement crew), except replacement Fighters and Missiles, and expendable Enhancements. (*Take Your Protein Pills, 3 Movement, p. 860*)
 - The capacity of a Log Ship to carry Supplies, Fighters, Missiles and Enhancements is measured in the RP value of what it can carry, and their initial capacity is detailed on the Logistical Support Ship Existential Patent. Like other PIT Patents, the 20 RPs capacity of 1st Era Log Ships are capable of being improved by use of COT and ET Patents and it is also possible to create specialized classes of Log Ships that carry only one type of resupply item and/or possibly perform additional services. Log Ships may not load or transport RPs, those may only be transported by Cargo Ships, nor may they be used to transport population.
- Log Ships *may not be used* to supply Colony Transports or any sort of Colony Ship or ship carrying population (other than Ground Units, see Beans, Bullets & Bandages, 4 Combat, p. 988, *infra*); it is just beyond their capacity to provide that much supply. (*Empty Cans, 3 Movement, p. 861*)
 - OFL represents the operational range of warships and colony ships not going to destinations with a supporting colony. Warships can remain indefinitely in a system as long as Log Ships provide Supplies. However, Log Ships also carry and deliver enhancements (from Enhancement Technology Patents, e.g., Fighters, Missiles) to any eligible ship, base, colony or installation.
- Transferring ***anything*** from Log Ships may only occur if both the Log Ship and the other ship or colony are in the same system *at the beginning of the Regular Turn*. Recall that ships conducting Short Movement (or ‘heroic movement’) arrive in the destination system on the same Regular Turn they departed the origin, that is, before the beginning of the next turn. So they could begin the Regular Turn in the same system as the target ship or colony. (*Running Outatime, 3 Movement, p. 861*)
 - Ships making Long Movements arrive before the first Power Activation of the turn, but would not be in the same system as the target ship or colony *at the beginning of the turn* of their arrival. See Long Jump, 2 Movement, p. 851, *supra*. However, arrival before the first Power Activation still allows Log Ships to receive Supplies and Enhancements from colonies using the Construction Power Activation (see Costly Resupply and Transfers, 3 Construction, pp. 679-680, *supra*) or perform other tasks.
- The transfer of anything from a Log Ship never occurs automatically in a non-combat situation (thus, the position that fails to submit Actions may lose ships), and it occurs before the first Power Activation of the Regular Turn, and should be included in the position’s Regular Turn Actions when submitted to the Concierge. (*Running on Empty, 3 Movement, p. 862*)
 - Transferring anything *from* a Log Ship does not require a Power Activation.
 - Transferring anything *to* a Log Ship *from another ship* does not require a Power Activation.

¹⁸ Exceed your “ossal,” become a fossil. It is just “offal” to exceed your “ossal”! ☺ (BOOO!, eyerolls, don’t quit your day job!)

- Transferring anything *to* a Log Ship (or any other ship) *from a colony* requires an activation of the Construction Power for the purposes of Ship Supply (see 3 Construction, Costly Resupply and Transfer, pp. 679-680, *supra*).
- Ships receiving Supplies from Log Ships do not have to make a Supply Roll if they have exceeded their OSL on the Regular Turn they receive Supplies (*ut infra*).
- Log Ships will automatically consume their own Supplies to avoid Supply Rolls if they have exceeded their own OSL unless otherwise indicated, and all Supply Rolls are made after Supplies are distributed to other ships, so Log Ships could be forced to make Supply Rolls to keep other units supplied.
- Nothing can be transferred or supplied to other ships while in interstellar flight, transfers may only be accomplished when the ships are in a starsystem together. However, Supplies may be transferred at any time before Operational Supply Limitation expires and the early transfer and consumption of supplies *tolls the running* of the OSL limit for the supplied ship for that turn (that is, the turn in which the supplies are transferred to the other ship does not count against the OSL), such that it becomes possible for the ship(s) to make it back to a supporting colony before their OSL expires. In short, Supplies buy extra OSL. A Log Ship may only transfer one turn of supplies to each ship each Regular Turn and cannot leave supplies (or anything) in cold, irradiated system space to be picked up; a Log Ship cannot dump and run; however, this is an area that might be improved by Colleges or Patents. (*Limping Home, 3 Movement, p. 862*)
 - A ship in an unsupported system that has expired OFL and OSL can be kept alive indefinitely turn by turn by being supplied by Log Ships. Supplies are transferred at the beginning of the turn, so the ship would need to be able to reach a supporting colony in one Regular Turn of movement (a Short Movement) before having to make Supply Rolls in flight. Log Ships cannot transfer Supplies by accompanying the ship during movement. At some point, a ship with expired OFL/OSL will either need to be abandoned, or a colony established in the system, or it will need to take chances on Supply Rolls to reach a supporting colony.
- No ship may transfer remaining Regular Turns of OSL (or OFL) to any other ship, and only Log Ships may transfer *Supplies*. Cargo Ships cannot transfer RPs to other ships (or System Boat) to be used as *Supplies* (or for any other use). The RP cost of supplying a ship for one *Regular Turn* is 10% of the base construction cost of the ship *plus the current* RP value of any Fighter Complement (or System Boats). Transfer of *Supplies are never required or allowed* during Combat Rounds; this should not be confused with Combat Resupply of Fighters, Ship Missiles and Enhancements described in 4 Movement, p. 868, *infra*. (*A Hot Dinner, 3 Movement, p. 863*)
 - System Boats on Tender Ships could be treated as Fighter Complements for this purpose; that is, while the Tender is within its OSL, the System Boats are assumed to be supplied by the Tender, but if being supported by Log Ships, the System Boats are supported at their base construction cost in RPs (and System Boats are a lot cheaper than starships so this is an interesting option in logistics). System Boats whose supporting colonies have been destroyed or captured require supply from a Log Ship or they will perish, as they have no inherent OSL. See System Boats, 3 Construction, p. 677, *supra*.
 - A Log Ship that, at the *beginning* of the Regular Turn, supplies units in any ongoing combat, except Ground Combat, will automatically join the combat, see Victuals & Vitals, 3 Combat, p. 975, *supra*, unless it initiates interstellar movement on the same Regular Turn (possible when arriving by Short ‘heroic’ Movement – arrive end of previous turn, supply, jump out).
 - The supplies are subtracted from the Log Ship at the beginning of the Regular Turn. An empty Log Ship still has its own OSL, and does not need to make Supply Rolls until its OSL expires, but cannot transfer its remaining turns of OSL to any other ship.
- Since a ship (theoretically) may never leave for a destination star whose travel time in Regular Turns exceeds its Operational Flight Limitations (and there is no FTL resupply) including known Temporal

Disturbulence modifiers, there is no need to track the OFL of a ship. Scouts should be used for exploration (having two extra turns of OFL), but it is possible that sometimes a non-Scout ship may run out of OFL and perish going to an unexplored system that has a Temporal Disturbance Modifier. (*The Cold Equations, 3 Movement, p. 864*)

- Any ship which has exceeded its Operational Supply Limitation (*including* during interstellar flight to a supported system) must make a Supply Roll on one ten-sided die prior to the first Power Activation of each Regular Turn, if the die roll result is less than or equal to the total number of rounds the ship has been out of supply plus 2, it is destroyed instantly for lack of supply. Note that an unlucky ship can be destroyed on the first Supply Roll if the result is '1,' '2' or '3.'
- Any ship, except Scouts, which departs from a system without a supporting colony may only have a destination system assigned which has a known supporting colony.
- If all supporting colonies in the destination system are eliminated or captured prior to the arrival of the ships *en route* from an unsupported system, those ships must make Supply Rolls on subsequent turns if they have exceeded their OSL and are not supplied by Log Ships. The ships may automatically initiate combat (at the discretion of the Concierge, based on the situation) without the need for a Combat Power Activation, if the ships (or System Boats) are capable of combat, to try to liberate the supporting colony (if it still exists).
- Empty Log Ships may be refilled at any eligible colony by activation of the Construction Power at that colony for the purpose of Ship Supply during any turn which the Log Ship began the turn in the colony's starsystem. (*Hollow Logs, 3 Movement, p. 864*)

Combat Resupply:

- Log Ships are the only ships capable of, and the only means to, resupply ships in combat by transferring Fighters and/or Ship Missiles, or replacements for whatever else has been expended during the combat (i.e. other Expendable Enhancements). (*Combat Resupply, 4 Movement, p. 868*)
 - Log Ships that execute Combat Resupply must join the combat (Victuals & Vitals, 3 Combat, p. 975, *supra*). This should *not be confused* with supply on Regular Turns.
 - During combat resupply, the target unit and the Log Ship may not do anything else for the Combat Round, including attempting a retreat. Usually, the target unit and the Log Ship are Combat Screened (see 3 Fighters & Carriers, *infra*); it is not required. The unit(s) performing the Combat Screen cannot be the target of the resupply.
 - If the Log Ship or the target unit are successfully attacked (including Engaged results, see Engaged, 2 Carriers & Fighters, p. 1055, *infra*) during the Combat Round, the resupply aborts. The supplies are not lost (unless the Log Ship is destroyed), but the Log Ship is unable to resupply the target unit due to enemy interference. Combat resupply occurs after all attacks have been resolved in the round.
 - A Log Ship may resupply any number of other units in a Combat Round, until its replacements are exhausted. A unit receiving a transfer from a Log Ship must be able to legally use or carry what is received or the transfer does not happen.
- Colonies may not resupply units *during Combat Rounds* (including Orbital and System Defense Bases), and units in combat may not transfer supplies and enhancements between themselves, excepting Fighters from a destroyed Carrier. (*Great His-Ku Arsenal, 4 Movement, p. 868*)
 - On the Regular Turn, the Log Ship could be refilled with whatever it can carry in the midst of Combat – because Combat Rounds run independent of Regular Turns (see Relativity, 2 The Streams of Time, p. 85, *supra*) – from a supporting colony in the same system by activation of the Construction Power for the purpose of Ship Supply. Again, timing is the key, as the Log Ship can Combat Resupply other ships if necessary during the Combat Round before the Regular Turn is run, so it may have extra capacity during processing of the Construction Power Activation.

- The rule regarding Combat Resupply from a colony is a gray area, on the assumption that either the colony is trying to resupply Defense Bases during an attack on the colony or that the colony is too far away to resupply ships involved in a wide-ranging system-space combat. That said, it is probably possible for colonies to resupply whatever they have to Ground Bases, their Fighter Complements, and Ground Units during Combat Rounds. Mainly, this resupply is accomplished by building new stuff on the Colony during the Regular Turn actions.

Expansion (Vital Power)

- The Expansion Power must be activated for any of the six following purposes:
 1. Looking (Exploration),
 2. Scouting (Exploration),
 3. Loading Population (Colonization),
 4. Transporting Population (Colonization),
 5. Unloading Population (Colonization),
 6. Landing Population (Colonization). (*A Hitchhiker's Guide, 1 Expansion, p. 875*)
- Activation of the Expansion Power for the purpose of Looking requires one Act, and one Scene on the star that is being used for the Looking while activation of the Expansion Power for the purpose of Scouting requires one Act. One activation of the Expansion Power for the purpose of Scouting allows any number of Scout Ships to depart from one starsystem (no Scene required), whether or not controlled by the Scout Ship's owner, to any number of *unsupported* destination systems (i.e. no Supporting Colony). (*Exploration, 1 Expansion, p. 876*)
 - No checks are made for failure to obey Expansion Power Activations for the purpose of Looking or Scouting, that is, they will never fail to execute due to inactive Constructural Elements (see Power Off, 2 Constructural Elements, p. 193, *supra*).
 - Looking attempts may not receive the benefit of Enlightenment, but Scout Ships can if their Epistemological Constructural Element is active.
 - Scout Ships do have Constructural Elements like any other ship, regardless of assumptions (above) which they receive from their origin colony at the time they are built (see Maiden Voyage, 3 Construction, p. 677, *supra*) and thus may receive the benefit of Enlightenment (where applicable) if their Epistemological Constructural Element is active (see Skool Tyme, 2 Constructural Elements, p. 190, *supra*).
 - Conversely, if the Scouts were *departing for* any destination system with a Supporting Colony, that would require activation of the Movement Power (see Engage! and UniSIM, 1 Movement, pp. 738-739, *supra*) costing a Scene, instead of the Expansion Power and a check to see if the Scout obeys the Power Activation using the rules in 1 Movement, *supra*.
- Activation of the Expansion Power for the purpose of Loading Population requires one Act and one Scene on the *colony planet* from which the population is Loaded. (*Colonization, 1 Expansion, p. 876*)
 - Activation of the Expansion Power for the purpose of Transporting Population requires one Act and one Scene on the *star* of the destination starsystem to which the population is being transported. See also Canned Food, 3 Expansion, p. 913, *infra*.
 - The game mechanical difference between Movement and Transporting Population is the placement of the Scene and of course the Vital Power activated (which may be important, e.g., for Government Title Conflict Checks).
 - One activation of the Expansion Power for the purpose of Transporting Population may be used to initiate interstellar movement of any number of Colony Ships from any number of origin systems to the destination starsystem (the opposite of normal movement where the Scene is on the origin star, convergence instead of divergence).
 - Finally, activation of the Expansion Power for the purpose of Landing or Unloading (these are two separate purposes, Landing and Unloading are not the same, see Opening the Can Of..., 3

Expansion, p. 914, *infra*, The Landing, 4 Expansion, p. 920, *infra*) requires one Act plus one Scene on the star where the Landing occurs or on the colonized planet where Unloading occurs.

Wagon Train to the Stars (Expansion Existential Patents):

- There are three Existential Patents available to positions prior to the start of the game (see 1 Patents, p. 729, *supra*) that are directly related to and necessary for the Expansion Power: Scout Ships (which allows positions to build Scout Ships), Colony Transport Ships (“CTs,” which allows positions to build the basic Colony Ship of the game, the name is self-explanatory), and Controlled Environment Technology (CET) – the classic domed cities of science-fiction lore – which is necessary to colonize Unpleasant and Hostile Class Planets (see The Air that I Breathe, 3 Taxation & Census, p. 315, *supra*). It is strongly suggested that positions obtain these technologies before the game (are sometimes required to), or soon thereafter. (*Wagon Train to the Stars, 1 Expansion, p. 878*)
 - There is no ability to move population in the 1st Era without a Colony Ship or Boat.
- Scout Ships (hereafter, “Scouts”) are the primary means of exploration in the game because they are small, self-sufficient *non-warships* that have two extra turns of Operational Flight and Supply Limitations (OFL/OSL) *with* a Ship Systems Existential Patent (see 3 Movement, pp. 855-856 *supra*), or two turns OFL/OSL without it. ... Scouts are unarmed targets, can never be armed but they are slippery, they receive one Defensive Shift in Combat which helps them retreat safely. Scout casualty rate is high, which saves on pensions and health care costs as well. (*Scouts Honor, 1 Expansion, p. 879*)
- Any ship designed for the purpose of transporting large populations (i.e. population factors) over interstellar distances is called a “Colony Ship.” The 1st Era Colony Ship, the Colony Transport is the only early game ship that can move population. ... The purpose of a Colony Ship is generally incompatible with that of a Warship or Cargo Ship and thus, Colony Ship technologies should not be combined with any Warship or Cargo Ship functions. (*Colony Cans, 1 Expansion, p. 879*)
- Colony Ships and Scout Ships are built, as any other ship, by activation of the Construction Power (see Laying Keel, 3 Construction, p. 675, *supra*) for that purpose at any colony that is eligible to build ships, when the position has the proper Existential Patents. Colony Ships cost 10 RPs, and Scout Ships cost 8 RPs to construct. Unlike Colony Ships, however, Scout Ships *do not require* an Orbital Shipyard, but then cost 10 RPs. (*Building Up, 1 Expansion, p. 880*)
 - CET technology is a COT Patent (Continuous Operational Technology Patent, see 2 Patents, p. 739, *supra*); once completed, it is automatically assumed to be in use whenever a colony is established on an Unpleasant or Hostile Class planet. CET is specific and unique to each Native Population Type and must develop independently.

Looking:

- The stars listed on the Starlog are obviously not the only stars in the universe or even in the galactic neighborhood. Activation of the Expansion Power for the purpose of Looking allows positions to look from certain locations to find other stars outside those listed on the Starlogs. Looking attempts may not receive the benefit of any Enlightenment (i.e. no rerolling) as that would be rather absurd. (*Horkeimer’s Rule, 2 Expansion, p. 899*)
- Any colony, Scout, or Warship that begins the Regular Turn at a starsystem that has any X, Y, or Z coordinate less than or equal to 5, or greater than or equal to 25, may Look for new stars not currently on the Starlog. Each eligible star may only be used for Looking *once* in each game; that is, once one position has used a star to Look, no other position may Look from that star for the rest of the game for the simple sane reason that once the stars beyond are discovered, they cannot and should not be changed or added to by subsequent looking from the same star. A record, visible to all, will be kept of stars used for looking on the central Starlog page so that positions are informed and do not waste Activations. (*Looking Up, 2 Expansion, p. 899*)

- Remember, a Scene is required and thus, the star must have been on the Public Space at the end of the previous Regular Turn. Thus the ship or colony must begin the current turn in the starsystem used for Looking.
- New stars can appear nearby as a result of Looking from other locations; thus, the edges of the Galactic Space can be fluid until all stars in an area have been used for Looking. This can, admittedly, create some strange game situations that are a consequence of this particular looking mechanic; for example, if a position begins the game near the edge, stars can appear nearby that should have been there initially.
- Looking begins with a d10 roll to determine how many stars are nearby; the number of stars currently within 8 movement distance based on the Movement Formula used by the Generic Stardrive Existential Patent, is subtracted from the die roll. If the resulting number is greater than zero, that number is the number of new stars discovered by Looking. (*Looking Out, 2 Expansion, p. 899*)
- For each star discovered by Looking, a ten-sided die is rolled once for each coordinate. The result of the die roll is subtracted from the X, Y, or Z coordinates of the Looking location *if any coordinate is less than fifteen, or added if any are greater than fifteen*. Negative numbers or numbers higher than 30 are possible and likely. (*Looking Sideways, 2 Expansion, p. 900*)
 - For example, the Looking location is X5, Y20, Z18. Looking is allowed from this star because of the X5 coordinate, *ut supra*. The others are irrelevant.
 - One new star is located by Looking from that location, the die is rolled once for each coordinate with 8, 6, and 2 results.
 - Subtracting and adding from the Looking location's coordinates as described above, the location of the new star would be at X-3, Y26, Z20, located 16 movement from the Looking location using the Generic Stardrive Patent's Movement Formula.
 - Further Looking may subsequently be done from stars discovered by previous Looking, so that the Galactic Space is effectively infinite. Since stars are large bright physical objects in the sky, their location is perfectly obvious to everyone, therefore, a new star 'discovered' by Looking is added to the game's central Starlog and is available to all positions, and may be announced via Special Bulletin.
- The initial Starlog has coordinates in X, Y and Z from 0 to 30, and all of the starting positions and starsystems are located within that +++ quadrant. The initial Starlog does not have any negative coordinates. Thus, stars with coordinates from 0 to 5 and 25-30 represent the stars on the outer edge of the initial Galactic Space. (*Looking Inward, 2 Expansion, p. 900*)
 - This system makes the initial Galactic Space playing area of the game inviolate; no new stars should appear inside the initial playing area (for game sanity). It must be assumed then that the 30 stars on the initial Starlog are all of the stars within the cube of X1-30, Y1-30, Z1-30. Either this represents a truly miniscule piece of Galactic Space, or, if the initial Galactic Space represented a spherical radius of say, 50 LY, then it is unrealistic that new stars would not be 'discovered' within the sphere of only 30 stars (*ut infra*, next page).
- Finally, for each new star, one die must also be rolled for the stellar class of the star (i.e. the color), on a result of 1 the color is red, on a result of 2 or 3, the color is orange, on a result of 4, 5 or 6, the color is yellow, on a result of 7, 8 or 9, the color is green, and on a result of 10, the color is blue. This information will be recorded, available for all. (*Looking Through, 2 Expansion, p. 900*)
 - Each position will be assigned, during set up, a stellar class of their Homeworld star, even if their homeworld (i.e. the world on which their species evolved) is not in the Galactic Space. During the game, the stellar class of each star in GGDM is a determining factor, in percentages, of Habitability Class of planets in the starsystem, with positions most likely to find Optimal and Hospitable Class planets in starsystems with a stellar class identical to or close to the stellar class of their home star. It's only natural. But it creates an interesting dynamic.

- For example, a position whose Native Population Type evolved in a system with an ‘orange’ star (in GGDM stellar classifications) will most likely find Optimal and Hospitable Class planets at orange starsystems. The chance of finding Optimal Class planets at either red or yellow class systems is significantly less, and is extremely unlikely in green or blue starsystems. But the chance of finding Hospitable and Habitable Class planets is still decent or good in red or yellow class systems. *Und so weiter.*
 - The stellar classes do not loop, that is, red class stars are not next to blue class stars on the spectrum. Thus, species that evolved in blue or red class stars (the extremes) will likely find less stars of those classes in the Galactic Space, and also, will only have one adjacent color, which will also be slightly less numerous than the orange and yellow mainline stars. On the other hand, paw, tentacle, orb, whatever, there will be significantly less competition for living space in blue and red stars than among species evolved in orange, yellow, or green stars.
- Discovery of a new star via Looking does not grant ownership or any rights not enforced by arriving with warships first. New stars are like the old stars, they are *terra incognita* and *terra nullius* and may be subsequently explored, colonized, and conquered as any other starsystem. (*Looking Around, 2 Expansion, p. 901*)

Through the Never (Scouting):

- Any *Scout Ship* that:
 - 1) Departs from any system (no Scene required),
 - 2) Whose destination is a system that does not have a supporting colony,
 - 3) Must do so by activation of the Expansion Power for the purpose of Scouting. (*Through the Never, 3 Expansion, p. 907*)
- Whenever a Scout (or any non-warship) arrives in any starsystem unexplored by its owner, a ten-sided die must be rolled, exploration attempts are automatic and do not require a separate Power Activation. ***Each ship entering at the same time must make a separate roll.*** On a result of 1-4 (or 1-5 for any other non-warship that may accidentally find itself in an unexplored system), the Scout is destroyed by unknown hazards in the system, or because the Scout’s systems failed, or just because whatever. If at least one Scout (or ship) survives the Hazard Roll, the system is automatically explored and planetary and other information is received for the system. See 2 Information generally, *infra*, regarding what information is received in GGDM. Additionally, a star must be placed on the Scout owner’s Public Space and the Scout is then placed on the star. Planets of the system are not placed on the Public Space until they are colonized or conquered. (*Then Never Comes, 3 Expansion, p. 908*)
 - As noted previously in Exploration, 1 Expansion, p. 876, *supra*, Scout Ships are considered to have Constructural Elements and thus can benefit from Enlightenment in Hazard Rolls if the ship’s Epistemological Constructural Element is active. Enlightenment must be assigned/attached to a Scout Ship individually whenever the Expansion Power is activated for the purpose of Scouting in order to be used during Hazard Rolls or Combat. It will be subtracted from the Colleges and remain with the Scout until a Hazard Roll (or Combat) situation causes it to be used or the Scout is destroyed.
- It does not matter how many times the system has been explored by other positions previously, *the process of exploration is individual for each position due to the unique Native Population Type of each position’s species (ut supra)*. The first time a system is explored, the Concierge will establish the number of planets in the system, which could be from zero to ten, and the orbit numbers those planets occupy. This data is completely objective, all positions exploring a system will see the same number of planets and the same orbital information; what is relative to the species is the other half of the planetary data: Each species will see only their own *subjective* Habitability Class and Maximum Habitability data for each planet. See Habitability and Day World, 3 Taxation & Census, pp. 315-316, *supra*. (*The Air You Breathe, 3 Expansion, p. 908*)

- Warships may be used for exploration; Cargo Ships and Colony Ships are each respectively limited to destination systems that have a supporting colony (Cargo Ships) or that have a Scene (Colony Ships), thus can never be sent to an unexplored star by operation of the rules (e.g., see Colonization, 1 Expansion, p. 876, *supra* and Cargo Ships in Combat and Green Goods, 1 Commerce, pp. 1186, 1188, *infra*). Warships departing for any destination that does not have a supporting colony, must do so by activation of the Combat Power for the purpose of Combat Movement (see Move Out!, 1 Combat, p. 942, *infra*). (*Send the Enterprise!*, 3 Expansion, p. 909) [*a sure and steady but expensive and slow way to explore*]
 - Each warship entering an unexplored system must make the same Hazard Roll as Scouts. The difference is, that if a warship fails the Hazard Roll, it may reroll the Hazard Roll (the only time a warship is ‘enlightened’!), and is only destroyed if it failed all Hazard Rolls. A 1st Era Warship must reroll once if it fails the Hazard Roll, a 2nd Era Warship may reroll twice, and a 3rd Era Warship may reroll up to three times. Warship Hazard Roll rerolls stop as soon as the ship survives a Hazard Roll. (*Dead Before the Opening Credits*, 3 Expansion, p. 910)
 - It is possible, by activation of the Combat Power for the purpose of Combat Movement, to send Log Ships to an unexplored system, either with or without escorting warships. For all Hazard Rolls, *Log Ships are the same as Scouts*, but a lot more expensive. (*Punk Wood*, 3 Expansion, p. 910)

Colonization (Load Population):

- Colony Ships are the only ships that may Load and Transport population factors, the Colony Transport is the 1st Era Colony Ship. Population from any Friendly, Naturalized, or Converted colony (or Orbital City) owned by the ship’s owner, may be loaded onto Colony Ships if the ships began the Regular Turn at the location of the colony and the Expansion Power has been activated for the purpose of Loading Population. Uprooting a population from a planet (or Orbital City) and placing them on Colony Ships (or Orbital Cities) is a Herculean logistical task. Because of the vagaries of how much time is represented by a turn, how much population is represented by a population factor, politics, economics, and so forth (and the fact that some of the population might not want to be moved), a Loading Roll must be made for each population factor sought to be moved to Colony Ships or Orbital City in a Regular Turn. (*Sardine Tins*, 3 Expansion, p. 911)
- Prior to attempting to Load the first population factor, a check must be made to see if the Expansion Power Activation for the purpose of Loading Populations is obeyed (pursuant to Power Off, 2 Constructural Elements, p. 193, *supra*). *For this check only*, the status of the Constructural Elements on the origin colony are used, *no second check* is made for the Colony Ship(s); if the Power Activation is obeyed at the colony, Loading attempts may commence:
 - The base chance of the first population being successfully loaded to a Colony Ship is 85%, and 5% is thereafter subtracted for each population that has been successfully loaded to Colony Ships at that location in the same Regular Turn.
 - Positions may continue to load one population factor at a time during the same Regular Turn until a Loading Roll fails after which no more population may be transferred to Colony Ships at that location that turn. A Loading process can fail (15% chance) with no populations loaded.
 - On Naturalized Colonies, the base chance is 75%, and on Converted or Conquered Colonies, the base chance is 65% with decreasing chances of success as described above. Population may never be Loaded from a Conquered Colony to Colony Ships *unless* the Conquered Colony is also Looted in the same turn (see Looting, 3 Commerce, p. 1210, *infra*).
 - See Colony Politics, 2 Order, p. 538, *supra*, regarding Colony Political Status; Political Status is the determining factor in Loading population to Colony Ships representing in this case incentives, trust, willingness (and desperation) of population.
 - Loading Rolls are *location specific* to the colony and not the ships. Thus, when Loading Rolls have failed at the colony, the ships may not each attempt to Load more population. Application

of Enlightenment (marketing, carrot & stick, propaganda...) to Loading Rolls depends on the status of the colony's Epistemological Constructural Element (see Skool Tyme, 2 Constructural Elements, p. 190, *supra*) and not those on any ship.

- A single Colony Ship or Orbital City may not contain population factors of different native population types due to environmental differences. This may, of course, eventually be overcome by technology developed during the game, but this is the baseline rule.
- Population successfully Loaded to Colony Ships will be placed on one Colony Ship until it is full, and then further successful Load Rolls will place population on the next available Colony Ship and so on. The Load Rolls *automatically fail* when the receiving Colony Ship(s) (or Orbital City) cannot accept more population (i.e. are full).
 - A Colony Transport can hold 3 population factors and an Orbital City can hold 15 population factors.
- Loading population from a Balkanized planet with a non-sovereign **alien colony** may cause **apostasy** on the Colony Ship, see Alieny Apostasy, 3 Disruption, p. 283, *supra*.
- It is possible to fully evacuate, especially small colonies via Load Population. (*Sardine Tins, 3 Expansion, p. 911*)
- Population will remain on the Colony Ships until they are Landed or Unloaded; they will not grow if a Census occurs while the population is on the Colony Ships and will not produce resources during Taxation. In addition to being in population limbo, unarmed Colony Transports are extremely vulnerable in combat (they may never be armed or attack), and Colony Ships must obey all of the other rules concerning ships, including Operational Flight and Operational Supply Limitations (OSL/OFL). (*Colonies in a Can, 3 Expansion, p. 913*)
 - Population located on Colony Ships that are destroyed by any means are also lost. It is permissible to emergency Unload the population back onto the same colony that Loaded them, but this would be a monumental waste of previously-committed resources and time, and require another activation of the Expansion Power for the purpose of Unloading Population, and is generally counterproductive.
 - Populations from Converted Colonies placed on Colony Ships **will not** automatically revert if not accompanied by a warship.

Transport Population (“Mr. Chambers, don’t get on that ship! ... It’s a cookbook!”):

- Departure of Colony Ships from a system requires an activation of the Expansion Power for the purpose of Transport Population:
 - 1) A Scene is required on the star of the destination star system,
 - 2) This in turn, requires that the destination system be currently located on the position's Public Space, and if the destination system has not yet been colonized, that would require that at least one ship be currently located in the destination system to place hold the target/destination star on the Public Space (see On the Soapbox, 3 The Sidereal Stage, p. 122, *supra*),
 - 3) This in turn, requires that the destination system has been successfully explored (pp. 907-909, *ut supra*), in order to have a guide ship waiting in the system. (*Canned Food, 3 Expansion, p. 913*)
- Colony Ships may not depart for any system where *any* colony owned by the Colony Ships' owner is currently Besieged (see Besieged Colonies, 3 The Sidereal Stage, p. 124, *supra*). If a sovereign colony becomes Besieged while the Colony Ships are *en route*, there is no effect, except that they may need to run a Blockade upon arrival (see Blockade Running, 4 Commerce, p. 1233, *infra*) because they cannot be resupplied or Unloaded. The conditions precedent only apply to movement by Transport Population at the time it is initiated. If the destination system is removed from the Public Space or a colony becomes Besieged before arrival of the Colony Ships, they will still arrive (which will return the system to the Public Space).

- Colony Ships have their own Constructural Elements status, received at the time they were constructed (see Maiden Voyage, 3 Construction, p. 677, *supra*) independent of the Constructural Elements status of the population Loaded to them.
- For the purpose of determining whether each Colony Ship obeys the Expansion Power Activation for the purpose of Transport Population, the Constructural Elements of each ship are used in individual checks. If the Colony Ships are still at a Supporting Colony and fail to obey the Power Activation, a second check is made using the Supporting Colony's Constructural Elements in the same manner as described in Engines Offline, 1 Movement, p. 839, *supra*, for Movement Power Activations to see if the Supporting Colony gives them a good 'ol kick in the can (jump or die!). (*Canned Food, 3 Expansion, p. 913*)
- There are thus two activation purposes of the Expansion Power that initiate interstellar flight: Scouting for Scout Ships (*ut supra*) and Transport Population for Colony Ships. Movement, Expansion, Combat, and Commerce are the four Powers (not to be confused with the Four Powers of the Cold War☺) whose activations initiate interstellar flight. (*Canned Food, 3 Expansion, p. 913*)

Unload Population (aka "Get off my ship!"):

- The Unload Population activation of the Expansion Power, removes population from Colony Ships onto an existing colony (or eligible Orbital City) of their Native Population Type. Hence, there must be an existing colony.... (not the same as Landing). (*Opening the Can Of..., 3 Expansion, p. 914*)
 - Prior to the first population factor being Unloaded, a check is made to see if the receiving colony (*optionally*, an exception could be Low Population Colonies) and each ship involved obeys the Power Activation. These checks are made separately based on each's current Constructural Elements. If the Colony fails to obey the Power Activation no population may be unloaded to the colony and the other checks are unnecessary. If the colony obeys the Power Activation then each ship involved makes an individual check and those that obey commence downloading (note that this is different than Loading, where only the colony is checked, *ut supra*, p. 912).
 - Colonist may not be Unloaded onto a planet surface if the existing colony is at its Maximum Habitability unless there is room in Orbital Cities, and colonist Unloaded onto a planet assume the political status of the colony to which they are added.
 - Like Loading Population onto Colony Ships, there are equally problematical logistical issues in offloading population to an existing colony.... Despite the possible integration problems described previously, population Unloaded to an existing colony have no distinction in GGDM, are not separate in any calculation, and adopt the status of the Constructural Elements of the colony, for better or worse.
 - Therefore, an Unloading Roll must be made for each population factor sought to be transferred to the new colony. The Unloading Roll operates the same as the Loading Roll; that is, if the Unloading Roll fails, no additional populations may be Unloaded to the colony (or Orbital City) during that Regular Turn.
 - Unloading Population is also considered *location specific* to the colony and follows all the same rules as described previously for Load Population procedures, including application of Enlightenment for failed Power Activation checks or Unload Rolls.
 - Colony Ships are not 'consumed' (*unlike* Landing, see Pandorum, 4 Expansion, p. 923, *infra*) by Unloading Populations, they are simply emptied (like an unloaded Cargo Ship or Logistics Ship) and can continue operating.
 - There is an operational triangle here: Loading population from planet to Colony Ship or Orbital City, unloading population from Colony Ship to Orbital City or planet, loading or unloading population from Orbital City to Colony Ship or planet. All are governed by the same procedures.
 - The Unload Population activation may be used to transfer populations from Colony Ships to existing Orbital Cities (or from Orbital Cities to the planet surface) that are either empty or have

the same Native Population Type. See *Orbital City Existential Patent and Dayworld*, 3 Taxation & Census, p. 315 and *Orbital City*, 2 Construction, p. 667, *supra*.

Ticket to Ride! (and there are no free tickets):

- In addition to the problems of moving populations, there is also an economic cost in the form of *disruption checks*, lost production, and the actual cost of the operations. Each Load or Unload roll costs 2 RPs (you knew it was going to cost RPs!), regardless of success or failure, and counts against the colony's GDP limit for the Regular Turn (see *Gross Domestic Product*, 1 Construction, p. 662, *supra*). A colony may not exceed its GDP, nor may the Treasury be exceeded, with the cost of Load and Unload Rolls. Thus, the Loading or Unloading process may also be stopped, without a failure result, by reaching the GDP turn limitations or by running out of RPs in the Treasury. (...*Vienna Sausages*, 3 Expansion, p. 915)
 - Adding or subtracting population from a Friendly or Naturalized colony is a Disruption Event, triggering Disruption Checks on the colony (see *Highschool Friends and The New Neighbors*, 2 Disruptions, pp. 272-273, *supra*). It's a bit of a gray area, but moving populations to and from Orbital Cities is probably not a Disruption Event, as they have not been added to or subtracted from the colony as a whole.
 - Finally, pursuant to *Alieney Apostasy*, 3 Disruptions, p. 283, *supra*, Unloading Population – even to an Orbital City – at a Balkanized planet with a non-sovereign **alien colony** requires an **apostasy** check.

Landing (aka, “The Million Year Picnic”):

- Landing is the process of using Colony Transports to establish a new colony on an uncolonized planet, only Colony Transports can Land to establish new colonies in the early game. An ‘uncolonized planet’ is a planet without a colony of the Native Population Type that is on the Colony Ships, it does not mean no colonies. As noted in 3 Taxation & Census and 2 Order, *supra*, ‘Balkanized’ planets are possible where different Native Population Types may coexist on the same planet. (*The Landing*, 4 Expansion, p. 920)
 - Colony Ships are never required to Land by being located in a system where there is a colonizable planet, but may be forced to Land due to OSL. A Scene must be on the star of the system where the Landing is to occur (see *Colonization*, 1 Expansion, pp. 876-877, *supra*) or no Landing can be made (*ut infra*, p. 922) because of bureaucratic indecision.
 - The Controlled Environment Technology (CET) Existential Patent is required to Land on any Unpleasant, Hostile or Uninhabitable Planet.
- Colony Ships that have expired OSL and CET will never refuse to obey a Power Activation to Land on an uncolonized planet *as long as they can legally do so* (i.e. it is not [at] Maximum Habitability); if they have expired OSL but not CET, they will never refuse to obey an Expansion Power Activation to Land on an uncolonized planet that does not require CET to colonize. (*Spiffy Spaceman*, 4 Expansion, p. 920)
 - *If the above conditions do not apply*, each Colony Ship designated to Land must check to see if it obeys the Expansion Power Activation to Land (see *Power Off*, 2 Constructural Elements, p. 193, *supra*). If the Colony Ships are in the same system with a supporting colony (i.e. colonizing another planet in the system) and they fail to obey the Power Activation, a second check is made by the Supporting Colony as described in *Engines Offline*, 1 Movement, p. 839, *supra*. Of course, if at least one Colony Ship Lands, it establishes a Supporting Colony for the other Colony Ships that didn't Land (whether they weren't ordered to or refused) and thus the other Colony Ships cannot thereafter Land (as there is now a colony on the planet) but can Unload Population or move away. As there are no die rolls involved in Landing, Enlightenment cannot and need not be applied, except to Power Activation failures.
- There can be only one colony of each Native Population Type per planet, (see *Lebensraum*, 3 Taxation & Census, p. 321, *supra*). All populations of the same Native Population Type Landed (or subsequently

Unloaded) on the same planet *form one colony* for game purposes. A colonized Planet must be placed on each colony owner's Public Space adjacent to either the star to which the colony's planet belongs or another planet in the same system. Planets do not need to be laid in Orbit Number order. While Stars may come and go from the Public Space as exploration moves outward, once a planet is colonized, it and its star will remain on the Public Space until the colony is destroyed, captured, or moved, plan accordingly. (*Island Motes, 4 Expansion, p. 921*)¹⁹

- All colonies must be connected on the Public Space by a Pathway to at least one Government Title at all times (see *The Claaaw is Our Master, 2 Government Titles, p. 597, supra*). A new colony requires the immediate establishment of a legal Pathway. The new colony begins with the active Constructural Elements of the population that formed the colony. (*Lines of Communication, 4 Expansion, p. 921*)
- Population on a new colony will retain the political status of their origin planet. If Colony Ships from multiple origins are Landed at the same time, the lower political status will prevail. A new colony established with Converted populations will revert if not guarded by a warship (they will not revert while on Colony Ships, *ut supra*). (*Prison or Paradise?, 4 Expansion, p. 921*)
- There is no way to prevent Colony Ships from Landing on a planet which already has colonies (causing a Forced Balkanization Disruption Event on the **alien colony**, see *2 Disruption, p. 273, supra*) – or on any planet – unless they are destroyed before the Landing or unless the planet is at Maximum Habitability. Of course, this rule does not account for technologies that may develop during the course of the game. Populations may not be Landed on Unpleasant or Hostile Class Planets without Controlled Environment Technology. Colony Ships that are in an unsupported system will perish if their Operational Supply Limitation (OSL) has expired, they have failed their Supply Roll (see *3 Movement, supra*) and they cannot Land. This may even justify Scene Snitching, see *3 The Sidereal Stage, p. 124, supra*, if someone else has placed a Scene on the star. (*Survival & Ethical Dilemmas, 4 Expansion, p. 923*)
 - While forced Balkanization from Landing will not cause **apostasy**, as explained in *3 Disruption, p. 283, supra*, subsequent Loading or Unloading of anything might.
- Colony Transports (CTs) are consumed ('scrapped'/'cannibalized') by Landing populations to establish a new colony. (*Pandorum, 4 Expansion, p. 923*)
 - Colony Transports that only Load, Transport, and Unload Population at established colonies are not consumed (see *Opening the Can Of..., 3 Expansion, pp. 914, supra*).
 - Consumption of Colony Ships during Landing applies only to Colony Transports, see *Colony Transport Existential Patent*. It is possible to develop Colony Ships that are not consumed by Landing through later Patents.

Specialized Colonies:

- All colonies, unless otherwise designated, are considered to be basic colonies (i.e. 'general colonies'), self-sufficient generally, and representing a general cross-section of the population of that type (both genetics and sociocultural classes), carrying on all of the culture and general functions of civilization in that place. It is possible to create Specialized Colonies (or 'special purpose colonies') to perform specialized functions in a manner superior to that of a general colony. (*Specialized Colonies, 4 Expansion, p. 925*)
 - Specialized Colonies, not to be confused with *Special Planets* (see *Resources from Special Planets, 2 Taxation & Census, p. 307, supra*), are created by Special Writ similar to a Land Grant Writ (see *Land Grant, 3 Colleges, p. 488, supra*), which describes all of the advantages and disadvantages of a *type* of Specialized Colony and the Writ would be activated in conjunction with either Landing a new colony or Loading Population to Colony Ships to send outward.

¹⁹ Planets and stars on the Public Space do not move, there is no celestial motion on the Public Space, therefore, positions do not need to 'leave room' for the planets to move around the star on the Public Space; there is no game mechanic described for such motion. A star or planet on the Public Space is simply a point of consciousness, an appearance, in the position's worldview.

- It is probably *nearly* impossible to change an established general colony to a Specialized Colony – think of the retooling, reorganization, displacement of non-specialized population.
- A Specialized Colony may become a general colony by informing the Concierge of the revocation of the Specialized Colony status and Unloading enough population onto the colony to double the size of the colony.
- A colony cannot be both a general colony and a Specialized Colony, and a Specialized Colony cannot exist within or be hidden in a general colony. ... Even if there were an alien Specialized Colony hiding inside a general colony of another Native Population Type, it would still be a separate colony for game purposes, the only issue would be the concealment.

Combat (Vital Power)

- The Combat Power may be activated for the following four purposes:
 1. Combat Movement,
 2. Initiate Combat,
 3. Combat Alert,
 4. Seize Initiative.
 - The general purpose of activating the Combat Power is to *initiate combat* which are represented by the first three purposes of the Combat Power Activation, above. Activation of the Combat Power for the purpose of Combat Movement requires two Acts and one Scene which must be placed on the *star* on the Public Space where the movement begins. Activation of the Combat Power for the purpose of Initiate Combat or Combat Alert requires one Act and one Scene on the star of the system. Activation of the Combat Power for the purpose of Seize the Initiative requires one Scene on the *star* of the system where the combat is ongoing.
 - It would be problematic to require the attacker to have a Scene on the target planet of a Colony or drop-in Ground Combat to Initiate Combat, esp. after a Short Movement.
 - Units involved in an ongoing combat **cannot do anything** during the Regular Turns (will not obey Power Activations) until they either retreat or the combat ends. (*The Combat Power, 1 Combat, p. 941*)

Warships:

- A warship is defined in GGDM as a starship or system boat capable of initiating offensive combat in either system space or in orbital space over a planet (but not at FTL or in interstellar space; Colony Combat against Ground Bases is initiated from orbit). Specifically, they include Era Warships (see 2 Combat, p. 951, *infra*), Carrier Ships (see 1 Carriers & Fighters, p. 1049, *infra*) and armed system boats, with or without a Tender starship to transport them. See System Boats, 3 Construction, p. 677, A Hot Dinner, 3 Movement, p. 863, *supra* and Carrier Operations, 1 Carriers & Fighters, p. 1050, *infra*, for discussion of Tender starships. (*Warships, 1 Combat, p. 941*)
 - Colony-based Fighter Complements effectively make the colony an armed system boat for the purposes of *initiating offensive combat*.
 - A Log Ship is not a warship (at least initially) and thus must be addressed separately in the Combat Movement rules below. Carrier starships are capable of initiating combat without a Fighter Component (i.e. Carrier direct fire) and are thus a warship, Fighter Components, whether on a Carrier or Colony, can initiate combat but are not starships (at least initially). This is a bright dividing line in GGDM: Each ship or boat (unit) is either capable of initiating combat or not, there is no middle space, thus is a warship defined; conversely, all Defense Bases are not capable of initiating combat, such that the inability to initiate combat (as well as the inability to initiate movement, at least initially) is congruent with the definition of a Defense Base.
 - Tender starships – which may or may not be offensively armed, should be considered warships if they are transporting armed system boats – what Traveller RPG called Battle Riders – which

may initiate combat upon arrival. Otherwise, the GGDM rules provide no means by which a military Tender can move to a system and deploy the system boats to initiate combat on arrival.

- Tender Ships violate the Law of Excluded Middle (or Third) in the GGDM rules as they fit neither the definition of a warship (*ut supra*) nor are they Log Ships, but must be able to initiate Combat Movement if carrying armed system boats.
- Alternatively, Tender starships could function as Log Ships beyond the normal OSL, for their system boats (a system that would need one or more successful Patents) making them Log Ships for the purpose of Combat Movement (*ut infra*). See A Hot Dinner, 3 Movement, p. 863, *supra*.

Combat Movement (Interstellar Movement):

- Combat Movement is the special movement for:
 - 1) Warships and/or Log Ships,
 - 2) When moving from any system to any destination system that does not currently have a supporting colony, **and/or**
 - 3) Where the warship's owner desires to initiate combat upon arrival.
- Activation of the Combat Power for the purpose of Combat Movement allows as many warships and/or Log Ships to depart from the origin system to any and as many destination systems – either unsupported (condition 2, above) or supported (condition 3 includes movement to a supported system) – as desired. Combat Movement is required when sending warships and/or Log Ships to an unexplored system (see Send the Enterprise!, 3 Expansion, p. 909, *supra*) or when sending Log Ships by themselves to an unsupported system (conditions 1) and 2) above).
- There are only two conditions precedent necessary for Combat Movement, the “and/or” means that either (**1 and 2**) apply or (**1 and 3**) apply. Those two sets cover all possible situations for moving warships. Obviously, 3 can never apply to Log Ships moving by themselves.
- Whenever the Combat Power is activated for the purpose of Combat Movement, each ship designated must be checked to see if they obey the Combat Power activation. Like Movement (see Engines Offline, 1 Movement, p. 839, *supra*), if there is a supporting colony in the system, a *second check* is made for any ship that failed to obey the Power Activation. Any ship that fails to obey the Power Activation will be left behind. Enlightenment could be applied to these obedience rolls if the target unit (or Supporting Colony) has an active Epistemological Constructural Element (see Skool Tyme, 2 Constructural Elements, p. 190, *supra*).
- If warships or Log Ships are moving to a system with a supporting colony, and do not intend to initiate combat upon arrival, they can and should use the Movement Power instead, which only costs one Act and one Scene (see Ad Astra, 1 Movement, p. 839, *supra*). If they are moving to a destination system with a supporting colony and intend or anticipate engaging in combat upon arrival, they must use the Combat Movement activation. There is no requirement that the anticipated enemy forces, or any enemy forces, be present in the destination system, or known, when Combat Movement is initiated; such Combat Movements may be precautionary. (*Move Out!, 1 Combat, p. 942*)
- ... four basic principles of space combat. First, no one can be forced to initiate combat. Second, except when defending planets or any other important point in space, no one can be forced to defend in a combat (because space is big and three dimensional). Third, combat only occurs in starsystems, combat does not occur between ships traveling at FTL speeds between stars (or wherever they happen to be while moving between stars). And last, no one can be barred from entering a starsystem, the only way to stop someone from entering a starsystem or doing anything is to destroy them or provide a credible threat of destruction. (*Space!, 1 Combat, p. 943*)
 - Ships *en route* will arrive in the star system at the end of their flight, see The FTL Missile, 2 Movement, p. 849, *supra*, that is, in GGDM, ships are assumed to be incapable of avoiding arrival in the destination starsystem once interstellar movement commences.

- Combat Movement only gives the moving warships the option of initiating combat upon arrival at the destination; the warships are never *required* to initiate combat upon arrival and Combat is never automatically initiated. Warships arriving in a system via Combat Movement, may either initiate a Ship Combat against any opposing ships (of any type) currently in the system, or if there are no opposing warships present (or they have retreated already), may initiate combat against any and all unconquered **alien colonies** in the system. *As each warship may only initiate one combat per turn*, initiating combats against multiple enemy colonies upon arrival will require dividing the force (even if some of the targets are undefended, you must send a warship to convince them to surrender). (*Attack!*, 1 Combat, p. 943)
- Participation in combat, except for colony Defense Bases and colony-based Fighters or armed System Boats defending a colony, is always ‘voluntary.’ Units will always defend themselves if attacked, regardless of whether they have initiated combat in the current Turn Cycle, or how many combats they have fought recently, or whether or not they are on Combat Alert. Activation of the Combat Power is not required to defend in combat, and no Acts or Scenes are used to simply defend in combat. Certain defenders, namely starships and some System Boats and perhaps Fighters, may always retreat at the end of the first round of combat, as described later. Retreating the warships defending a system, may, however, expose any colonies in the system to subsequent attack. (*Defend!*, 1 Combat, p. 944)
- Warships whose owners decline to initiate combat at the end of a Combat Movement lose the opportunity. Upon arrival in the destination system, the owners of the warships will be informed within their turn results of what they see and anyone in the destination system will be informed of the arrival of the warships (see One-Way Mirror, 2 Information, p. 1340, *infra*). (*Run Away!*, 1 Combat, p. 944)
 - The owners of the warships have one day (24 hours) after their ships arrive (i.e. after their Regular Turn is processed) to initiate one or more combats by submitting Combat Orders for the first Combat Round. Failure to timely do so is considered a ‘pass’ and the opportunity to initiate combat from the Combat Movement is forever lost.
- Ships arriving in the destination system by Combat Movement *may* automatically join any ongoing combat in the destination system. If they join the defense of a colony, on the second Combat Round after they join forces, the Colony Combat is ended and the remaining combat is fought as a Ship Combat in system space, as those attacking the colony will seek to escape being caught between the defenses and approaching warships. This is not considered a retreat, unless the attackers actually issue retreat orders to their ships. (*Meteora!*, 1 Combat, p. 944)

Initiate Combat (“Mom! He hit me!”):

- Activation of the Combat Power for the purpose of Initiate Combat requires one Act and one Scene on the star on the Public Space where the combat is initiated (one reason why you might use Combat Movement instead in some situations). Activation of the Combat Power for the purpose of Initiate Combat allows all friendly units in the same starsystem:
 - 1) That are capable of initiating combat,
 - 2) That are not currently involved in a combat, and
 - 3) That *began* the Regular Turn in the starsystem (possibly arriving by Short Movement on the previous turn),

...to initiate combat against any number of opposing ships and/or colonies as appropriate. The side initiating combat becomes the attacker and the other(s), the defender(s) in the combat. (*Initiate Combat*, 1 Combat, p. 945)

 - Activation of the Combat Power for the purpose of Initiate Combat requires one Scene on the star of the system where the Combat is to be initiated. Thus, the star must already be on the Public Space in order to place a Scene on it, and that means that either a ship or a sovereign colony must be in the target system. This is a place where Scene Snitching can really ‘hurt.’
 - Except for Pacification Combat, each unit designated to Initiate Combat must check to see if they obey the Power Activation. The Supporting Colony(s) second check rule applies as described in

Engines Offline, 1 Movement, p. 839, *supra*. If the units involved are Ground Units attacking another colony on the same planet, they check based on the Constructural Elements of their colony. If the Ground Units are landing on the planet to initiate combat, they check based on the Constructural Elements of their Transport Ship (see Lift & Separate, *et seq.*, 4 Combat, p. 987, *infra*). Units that fail to obey the Initiate Combat action will not fire in the first Combat Round and are not part of the combat initially; but likely can be joined later (see Those Who Stand Looking, 3 Combat, p. 973, *supra*) into the ongoing combat.

- Ships using Short Movement (see Space Hop, 2 Movement, p. 850, *supra*) arrive in the same Regular Turn as they departed, and thus, would be in the system at the *beginning* of the next Regular Turn. So it is possible to combine Short Movement one Regular Turn with Initiate Combat on the next Regular Turn *as long as the destination system is not an unsupported system* (requiring Combat Movement instead) and if the moving ships don't want to initiate combat upon arrival. Remember to pre-place a Scene on the star of the system. (*Short Shot, 1 Combat, p. 945*)
- *Friendly units* that are:
 - 1) Capable of initiating combat,
 - 2) Not currently engaged in combat, and
 - 3) In the system where combat is initiated by ships arriving by Combat Movement may automatically join that combat and do not need to separately Initiate Combat. (*Uncles Sam and Albert Want You, 1 Combat, p. 945*)

Combat Alert (DefCon 1):

- Activation of the Combat Power for the purpose of Combat Alert requires one Act and one Scene on the star of the system where the alert is placed. Combat Alert applies to all friendly forces, whether ships or colony defenses, in the system where the Alert has been placed. (*DefCon 1, 1 Combat, p. 946*)
 - A position which has placed a system where they are present on Combat Alert and has at least one suitable available combat unit may **initiate one combat** between their position's Regular Turns. Available units are any friendly unit that is:
 - 1) Capable of initiating combat,
 - 2) Located in a system where a Combat Alert has been placed,
 - 3) Not currently engaged in Combat, and
 - 4) Able to engage in combat in that theatre or sphere (e.g., Ground Units cannot initiate combat against Ships, see Keep Your Friends Close, Your Enemies Closer, 3 Combat, p. 972, *infra*).
 - The side initiating combat becomes the attacker and the others, the defender(s) in the combat. The Scene is used by the Power Activation regardless of whether or not combat is initiated.
 - Defense Bases do not benefit from Combat Alert, the reference to colony defenses is to armed System Boats, colony-based Fighter Components and Ground Units.
 - Combat Alert may be particularly useful in timing of Raid/Strike Combats, see 4 Carriers & Fighters, *infra*, either before or immediately after the target's Regular Turn.
- A Combat Alert expires at the beginning of the position's next turn period (see Law of Periods, 2 The Streams of Time, p. 84, *supra*), not when Regular Turn processing occurs. Thus, to keep up a continuous Combat Alert, a position must submit their Actions at the earliest opportunity, and activate the Combat Power for that purpose every turn in the same or different systems, which will hamper the position in other ways. (*Nervous from the Service, 1 Combat, p. 946*)
- There is a difference between Initiate Combat and Combat Alert. It's all about timing. Initiate Combat begins a combat shortly after the position's Regular Turn, whereas Combat Alert, running from the end of the position's current turn to the beginning of the position's next turn period, allows initiation of combat in the starsystem between turns. Because ships arriving by Combat Movement must decide to initiate combat within one day of their arrival, their decision may be preempted by Combat Alert in the destination system, making the prospective 'defenders' the 'attackers' and taking the decision for combat

out of the other position's hands. Combat Alert, unlike Initiate Combat, may *put off* the decision to start a combat to see what happens, *to allow for diplomacy time*, time to build, or to wait for other position's ships to arrive in the system on their turns. Both activations cost the same. (*Firebreak, 1 Combat, p. 946*)

- There is no check to see if a system placed on Combat Alert disobeys the Power Activation. However, if the position subsequently chooses to initiate combat, the Combat Alert is effectively changed to an Initiate Combat, and all units designated to initiate the combat must check, as described above, to see if they obey the Initiate Combat. (*Jumping the Ditch, 1 Combat, p. 947*)

Warship Eras (“Float like a butterfly, sting like a bee!”):

- Warships are classified by Era; that is, there are 1st Era Warships, 2nd Era Warships, and 3rd Era Warships. The Era Warship represents the best of all of the technology and engineering of its Era. Positions, may of course, improve Era warships by use of permanent or expendable Enhancement Technologies, and small improvements by use of Continuous Operational Technologies developed during the Era, such that, with skill and luck (see *Army of Light, 2 Colleges, p. 479, supra*), a 1st Era Warship might give a 2nd Era Warship a good fight. (*Era Warships, 2 Combat, p. 951*)
- The 1st Era Warship Patent is an Existential Patent which positions may obtain before the game begins. ... Warship Patents are Physical Item Technologies (PIT) as they create the basic units of the game. See *View from a Height, 1 Construction, p. 660*, and *Physical Item Technologies and Technological Devices, 2 Patents, pp. 739, 741, supra*, regarding game units. Each position will need to develop their own PIT Patent for 2nd and 3rd Era Warships, pursuant to the rules of this section and the applicable *Uber Alles*. (*First Era Warship, 2 Combat, p. 951*)
 - Completion of the 1st Era Warship Existential Patent allows a position to build warships at any sovereign colony that has an Orbital Shipyard, for 30 RPs.
- The difference between warships of successive Eras is not just a slight or a linear improvement in capabilities, rather, the difference between a 1st Era Warship and a 2nd Era Warship is a systemic order of magnitude, progress in warship technology of each Era is near exponential. Second and later Era Warships may gain new dimensions of capability over their predecessors due to the *Uber Alles* of their Era (see *2 Eras, p. 767, supra*). (*Magnitude of Eras, 2 Combat, p. 952*)
- The cost of warships will also increase by magnitudes by Era progression. (*Era Inflation, 2 Combat, p. 953*)

Colony Defense Bases:

- Colony Defense Bases are the colony's main and last defense against **aliens** or enemy warships. Colony Defense Bases are considered installations, and are built on sovereign colonies by activation of the Construction Power for the purpose of Colony Enhancement. There are three Defense Base Existential Patents available: Ground Defense Base, Orbital Defense Base, and System Defense Base (detailed previously in *2 Construction, p. 668, supra*). (*Colony Defense Bases, 2 Combat, p. 954*)
 1. Ground Defense Bases are on or under the surface of the colony Planet which limits their effectiveness against warships, but they are important as a defense against Raiders and in Ground Combat.
 2. Orbital Defense Bases may/must have some orbital maneuvering capability, but obviously cannot leave the orbit of their colony. They control the planetary approaches.
 3. System Defense Bases are huge, heavily armored, imposing, and are placed farther out (perhaps at Lagrange Points) to keep attackers at a safe distance from the colony.
 - Bases *do not have* Constructural Elements, using their colony's instead, magnifying the effect of an inactive Epistemological Constructural Element at their colony. Defense Bases may receive the benefits of permanent and expendable Enhancements, and new Continuous Operational Technologies improvements, as appropriate. Positions may develop variations and new levels of

Defense Bases, and other defenses, by use of Patents. Defense Bases may not initiate combat against either ships or colonies *on other planets*. Though that would be a cool ability....

- Although Defense Bases are Colony Enhancements, an enhancement to a game unit (see View from a Height, 1 Construction, p. 660, *supra*), they are treated as ‘units’ in combat; ‘units’ in combat (or combat unit) is not exactly the same as a game unit; a *combat unit* is one capable of combat interaction with the enemy, which is not the same as initiate combat. Thus, Defense Bases are ‘combat units’ not capable of initiating combat. Not all ‘combat units’ have their own Constructural Elements.
- However ... it may be possible for at least Orbital Defense Bases to join or initiate combat against **alien colonies** *on the surface of their planet* or in Orbital Cities.
- All three types of Defense Bases are available to positions in the 1st Era through Existential Patents. Unlike warships, Defense Bases do not have an ‘Era progression’ arc (that is, no PIT Patent is needed for 2nd Era Ground Base, etc., positions only need one of each Defense Base Patent), and would soon become obsolete, except that, upon reaching the next Era, *existing* Defense Bases can be upgraded to the position’s current Era by use of an activation of the Construction Power for the purpose of Colony Defense Era Upgrade using one Act and one Scene on the sovereign colony where the upgrade occurs. (*Colony Defense Era Upgrade, 2 Combat, p. 954*)
 - Colony Defense Era Upgrade never includes or effects Fighter Complements, see Next Generation Fighters, 1 Carriers & Fighters, p. 1048, *infra*.
 - The cost of upgrading a colony’s Defense Bases one Era is 25% of the collective cost of building all of the Defense Bases originally (fractions truncated).
 - A Defense is only as strong as its weakest point; therefore, all of the colony’s Defense Bases must be upgraded to the next Era, before any of the colony’s Defense Bases can gain the benefit of the next Era in combat.
 - Upgrading a Colony’s Defense Bases may be done in installments with several activations of the Construction Power for that purpose, but no benefit is received until the upgrade has been completed.
 - The primary problem with Colony Defense Era Upgrade is that it is a construction project, and thus location specific, with local GDP limitations, and requiring activations of the Construction Power on specific colonies using Scenes. There are no shortcuts. Thus, it is most efficient to complete upgrades with one Power Activation.
 - Colony Defenses cannot be upgraded two Eras with a single activation of the Construction Power for the purpose of Colony Defense Era Upgrade. Thus, colonies that have 1st Era Defenses will need two *completed upgrades* to be brought up to the 3rd Era when technology has progressed to the 3rd Era.
- New Defense Bases may be constructed at any eligible colony *after* a colony defense has progressed to the next Era; these Bases will cost the same as their predecessors, but the additional cost must be paid to upgrade them when upgrading the colony defenses (i.e. no free upgrade). Defense Bases built in the new Era will not receive any benefits of the new Era in combat until the entire Era upgrade is completed at their colony. (*New Era Bases, 2 Combat, p. 955*)

Combat Types (Theatres or Spheres of Combat Operations):

- There are six types of combat: Ship Combat, Colony Combat, Orbital Bombardment, Ground Combat, Colony Pacification Combat and Raid/Strike Combat. Any Combat Power Activation that allows for the initiation of Combat will, under qualifying circumstances, allow the initiation of any of these types of combat, which location, target position and/or colony, and type must be specified in the Regular Turn Actions (except Initiate Combat), along with all participating attacking units. Additionally, first round combat orders must be included. (*Combat Categories, 2 Combat, p. 959*)

- Ship Combats are between ships of at least two sides in system space; at least one participant in a Ship Combat must be able to initiate combat in system space. These are the classic naval combats from short skirmishes, ship duels, to great fleet battles. A Ship Combat is not a direct attack on any colony, thus Defense Bases may not participate in a Ship Combat, but some units (e.g., Fighters) based on colonies may initiate or join Ship Combat. A Ship Combat ends when all of the units of one or both sides have been destroyed or have retreated (this could occur simultaneously in some instances). (*99 Luft Balloons, 2 Combat, p. 959*)
 - During Ship Combats, each ship uses its own Epistemological Constructural Element status to determine whether or not it can receive the effects of Enlightenment during the combat (see Skool Tyme, 2 Constructural Elements, p. 190, *supra*). This may have the effect of reducing the use of Enlightenment as applicable during the combat and/or channeling application of Enlightenment to certain units (which will perform better or even heroically).
 - See definition of warship discussion, Warships, 1 Combat, p. 941, *supra*. Per the previous discussion in The FTL Missile, 2 Movement, p. 849, *supra*, ships in interstellar flight (FTL) cannot be affected, and combat cannot occur during FTL or in interstellar space. Thus, Ship Combats are only fought in system space.
 - All Fighters in GGDM are assumed to be both space fighters and atmospheric fighters (like in most science-fiction television and movies), see Fighters, 1 Carriers & Fighters, p. 1046, *infra*.
 - Losing a Ship Combat in a system where there is a colony is a Disruption Event at the colony, see Burning Sky, 2 Disruption, p. 275, *supra*.
- Units which were victorious in a Ship Combat may immediately initiate an attack of any available type against any colony in the same system unless warships remain in the *system space* that belong to the owner of that colony. A Colony Combat may never be initiated if the colony's owner has warships in the system, *unless all of those warships are currently engaged in other Combats*. The attacker also must have at least one remaining unit that is capable of initiating combat. This follow-through Colony Combat does not require a separate activation of the Combat Power for initiation, it is all the same operation. To attack other ships, however, would require a Combat Activation. (*Panic Bells, It's Red Alert, 2 Combat, p. 960*)
 - Ships that successfully retreat from a Ship Combat must either retreat to a colony (and are located at the planet) or leave the starsystem, see Ship Zipped, 3 Combat, p. 982, *infra*. Other ships may remain in the system that did not join the Ship Combat.
 - While other **alien** warships in a system may pledge to defend any colony, for game purposes, only the ships belonging to the owner of the colony can be counted to stop the attack on the colony. If desired, other **alien forces** or arriving reinforcements can initiate combat against the colony attackers aiding the defense (or not).
- Colony Combat is an attack on a colony by warships (or armed system boats from a tender starship or another colony) with the intent of damaging or subjugating the colony. Defense Bases may not initiate combat against warships. The Colony Combat ends when either the attackers have all retreated or been destroyed, or all colony defenses, except Ground Units (see GROPOS, 4 Combat, p. 985, *infra*) have retreated (i.e. ships) or been destroyed. The defenders in a Colony Combat have no retreat usually, Defense Bases in particular may never retreat, but defending Fighter Components and any ships (*ut infra*) may retreat from the Colony Combat; Fighter Components may only retreat from a Ship Combat to the colony or a Carrier (thus, effectively, they may not retreat from a Colony Combat at their colony unless to a Carrier or another colony). The attacking warships may end the attack by retreating to system space. (*Something Here from Somewhere Else, 2 Combat, p. 960*)
 - If a colony has at least one System Defense Base, only System Defense Bases and Colony Fighter Components may be attacked in the first round of a Colony Combat, and

only System Defense Bases and Colony Fighter Complements may return fire in the first round of a Colony Combat. System Defense Bases can be defeated in detail.

- Ground Defense Bases may not fire until the second round of any Colony Combat, but may execute Close-in Defense fire against Missile and Fighter attacks on them. They may only be attacked in the first round of a Colony Combat *if there are no Orbital or System Defense Bases*.
- During a Colony Combat, the status of the Epistemological Constructural Element of the colony is used to determine whether or not the colony's Defense Bases and Fighter Complement can benefit from Enlightenment (see Skool Tyme, 2 Constructural Elements, p. 190, *supra*) or NSF acting as Faculties (see The First is Last, 3 Colleges, p. 493, *supra*) during the combat. If the Colony Combat lasts to the next Regular Turn, the owner of the Colony may attempt to reactivate an inactive Epistemological Constructural Element at the colony by Cohering (see 5 Culture, p. 421, *supra*).

Orbital Bombardment (No, the sky *really is* falling!):

- Orbital Bombardment is not really a combat, but is listed as a type of combat because it requires the *affirmative activation* of the Combat Power to initiate the bombardment. Orbital bombardment only lasts one Combat Round, there is no retreat option for either side, and each attacker only gets to fire once at the target planet. Orbital Bombardments may only be commenced on 1) colonies on which only Ground Units remain as defenders or on Conquered Colonies or 2) planets with no colonies. The intent is to kill the population *on the surface* of (i.e. 'de-infestation of the planet') and/or damage the *planet surface* (i.e. 'planet terraforming'). A planet may be Orbital Bombarded any number of times. (*In This Dust That Was a City*, 2 Combat, p 961)
 - Orbital Bombardment Combat always ends after the first Combat Round with the 'retreat' of the attacking units. Orbital Bombardment may be initiated against the same colony multiple times in a Regular Turn by the same units with appropriate Combat Power activations. This is the only instance where a unit is allowed to initiate multiple combats in a Regular Turn when not a follow-on combat (*ut supra*).
 - Orbital Bombardment cannot be used for, and should not affect, Orbital Cities or any other Orbital Platforms or anything in orbit around the target planet; destruction of unprotected orbital targets can be accomplished by Ship Combat using the civilian target rules, 3 Combat, p. 978, *infra*, or by Strike Combat using Fighters or Ship Missiles, see World in Flames, 4 Carriers & Fighters, p. 1083, *infra*.
 - If the colony has any Defense Bases, System Boats or Fighter Complements, GGDM *assumes* that they will try to prevent Orbital Bombardment as an existential threat. The attacker would first be required to eliminate the colony's defenses by Ship Combat and/or Colony Combat before Orbital Bombardment.
- The Concierge will adjudicate surface damages from Orbital Bombardment, but for guidance, each:
 - 1st Era Warship involved will destroy 3 population factors,
 - 2nd Era Warship involved will destroy 7 population factors, and
 - 3rd Era Warship involved will destroy 12 population factors.
 - Surface installations may be destroyed by Orbital Bombardment as well.
 - There can be, probably will be, collateral damage to other colonies present on a Balkanized planet surface, in addition to environmental damage to the planet.
 - The Maximum Habitability of the Planet will be reduced accordingly for all lost populations, and the Habitability Class will be reduced for (most) other positions by one class for every 20 population destroyed. Orbital Bombardment may trigger multiple Disruption Checks on the Conquered Colony, see Peaches for Mad Molly and Mars Bombing Run, 2 Disruption, pp. 273-274, *supra*.

- Obviously, there is no need to commit Enlightenment to the ‘unenlightened’ Orbital Bombardment Combat, as there are no die rolls! Anyone seeing the planet in the future will be informed that it has been damaged by Orbital Bombardment (like moon craters). Ships that participate in Orbital Bombardment of any [colony] (regardless of Native Population Type) have a chance of *apostasy*, see Alieneity Apostasy, 3 Disruption, p. 283, *supra*. (*In This Dust That Was a City*, 2 Combat, p 961)
- Strictly for the purposes of initiating Orbital Bombardment, the Native Population Type on the target colony or Balkanized planet is irrelevant (thus, *apostasy* may be triggered by the Orbital Bombardment of any colony, see 3 Disruption, p. 283, *supra*). But here’s the Bomb:
 - Orbital Bombardment of planets with Friendly or Naturalized Colonies will and must have major legitimacy ramifications, even if they are not the target. See previous “Supra-Legitimacy” discussions in Type 3 Fundamental Realities, 3 Beginnings, p. 42, Naturalization, 3 Order, p. 557-558, Meta Aspect, 4 Culture, p. 409, and Earthly Entanglement, 2 Government Titles, pp. 586-587, *supra*. The tough question to be answered is whether this will be accepted as a necessary and legitimate use of force?
 - Or alternatively, under what circumstances is bombing your own population or enemy-occupied friendly areas a legitimate use of force? When is collateral damage and risk to your own colony acceptable in Orbital Bombardment of an *alien colony*?
 - This question must be adjudicated by the Concierge within the context of the story and culture for each instance, with appropriate game solutions ranging from generation of an IP+ to difficulty in future naturalizations to loss of legitimacy of Government Titles and/or Diplomatic Spaces. Such an act will not be soon forgotten.
 - Whether colonies on Balkanized planet surfaces can be bombarded without damaging others is a question to be adjudicated by participants based on the technology used and other factors, such as whether the planet is near Maximum Habitability; reduction in Habitability Class could affect other non-targeted colonies on the planet. Once the rule is established for the game, others can do the same. (*The Bomb*, 2 Combat, p. 962)

Combat Procedure:

- Combat is resolved in rounds. During each round, each side in the combat gets their chance to either attack the enemy or retreat from the combat (if possible). All attacks and defenses in a Combat Round are considered to be occurring *simultaneously* for resolution purposes (not IGO-UGO), although in practice, each is resolved separately. As outlined in Relativity, 3 Streams of Time, p. 85, *supra*, Combat occurs and proceeds independently of the progress of the rest of the game; that is, the rest of the game does not stop for Combat; any number of Regular Turns and Turn Cycles, may be resolved during the course of a combat, or even a single Combat Round if the combatants are being dilatory. Forces involved in combat may not do anything else during Regular Turns until either they win or they retreat from the combat. (*Basic Combat Procedure*, 3 Combat, p. 969)
 - Enemy unit has nothing to do with diplomacy; enemy unit is the one shooting at you.
 - ‘Simultaneous’ combat resolution means that all units on both sides will execute their attacks or attempt other actions, even if they are destroyed during the Combat Round, and that all destroyed units are removed at the *end* of the Combat Round. (*Trading in Fire*, 3 Combat, p. 969)
- The side that initiates the combat is the attacker and the poor, hapless victim of the aggression is the defender. In the rare instance, due to the continuous Turn Cycle of the game, that both positions initiate combat on the same date in the same place against each other via appropriate Combat Power activation, the position that submitted Actions first is the attacker. Any number of positions may participate in any combat; additional forces and positions may arrive during the course of the combat (during Regular Turns) as well, and join the ongoing combat. Each force and/or position joining a combat at any subsequent point, 1) must be capable of initiating combat and 2) must do so by proper activation of the Combat Power. (*Attackers & Defenders*, 3 Combat, p. 970)

- Any side initiating combat *must* submit Combat Orders concurrently or the combat will not be initiated (but Acts and Scenes will still be consumed).
- There are only two possibilities, either a position is an attacker or a defender. If a position initiates combat against another, they are considered an attacker for GGDM purposes, regardless of when this occurs, who they help or hurt, or what they subsequently do (or who is blamed for the combat). All units belonging to a position involved in a combat share the same designation.
- For example, A attacks B, initiating combat via activation of the Combat Power. Therefore A is the Attacker and B is the Defender. After the first Combat Round, a Regular Turn is processed and C arrives via Combat Movement and initiates combat against A and/or B, because C initiated combat, C is also an Attacker and/or A and B are Defenders *as to* C.
- Attacker/Defender relationships only exist as to pairings of combatants; in multiparty combats, a side may have different designations as to different opponents. This is important for the Seize the Initiative Combat Power activation, below.
- Each Combat Round, each side must submit Combat Orders to the Concierge. The Combat Round will be resolved when all Combat Orders are received, with two exceptions noted below. When the Concierge receives *any* combatant's Orders, all other participants in the combat will be asked to submit Combat Orders within one day (24 hours) of the time the Combat Orders were received. (*Capoeira, 3 Combat, p. 970*)
- If the Concierge does not *timely* receive a defender's Combat Orders on the *first round* of a Combat, the attacker's Combat Orders will be executed and the defending forces will attempt to retreat, if possible. Any position initiating combat must send appropriate Combat Orders with the combat initiation notice or Regular Turn Actions. (*Capoeira, 3 Combat, p. 970*)
 - If the defender cannot retreat or does not successfully retreat, the defender will be given an opportunity each Combat Round to submit orders. If no orders are received, the above procedure will be repeated (the Defender who cannot retreat will simply get pummeled) until all Defending units are destroyed or retreat, or until the attacker retreats ending the combat.
 - If the Concierge does not timely receive a defender's Combat Orders but has received at least one set previously, the last Orders received for the defender will be repeated to the extent possible. The Concierge will not alter the Orders.
 - Thus, the defender cannot hold up the combat by refusing to submit orders. These exceptions, paired with the Seize the Initiative activation (*ut infra*) insure that most combats efficiently proceed to resolution while also leaving the players with some flexibility as to timing of Combat Rounds and Regular Turn processing.
- Generally speaking, the attacker drives the combat; if the attacker is not attacking, the defender does not need to defend (*ut supra*). Seize the Initiative allows the defender to flip the tables on a dilatory attacker:
 - If at the time the defender's next Regular Turn actions are *received* by the Concierge, an attacker in an ongoing combat has not submitted Combat Orders for three days, the defender in the combat pairing may choose to *become the attacker* by activating the Combat Power for the purpose of Seize the Initiative, if the defending forces are capable of initiating combat (i.e. Defense Bases cannot chase enemy warships). The previous attacker is now the defender.
 - Combat Orders must be submitted with the Regular Turn actions to Seize the Initiative (as if initiating combat, *ut supra*); Seize the Initiative can only be done by Combat Power activation on a Regular Turn.
 - Fighter Complements based on a colony are capable of initiating combat and thus may Seize the Initiative for their side.
 - When the defender becomes the attacker by Seizing the Initiative, that Combat Round is treated as if it were the first round of combat, *ut supra*.
 - Because the combatant forces are already locked in combat and cannot do anything else until someone either wins or retreats, Seize the Initiative only requires expenditure of one Act by the

defender, and serves to prevent dilatory tactics and inferior attacking forces from pinning down superior defending forces by not submitting Combat Orders.

- A Combat Power activation to Seize the Initiative *never* (in any context) requires a check to see if the Power Activation is obeyed.
- The three-day period for the attacker to submit Combat Orders is based on the idealistic time periods for the continuous action of the game presented in Three Daze, 2 The Streams of Time, p. 84, *supra*. It may or may not need to be adjusted if the periods for submitting Regular Turns are extended to accommodate real world schedules.
- It is possible for a Colony Combat to go stagnate if the defenders only have Defense Bases and the attacker is not attacking. This becomes a siege (see Besieged Colonies, 3 The Sidereal Stage, p. 124, *supra*). This situation is not bothersome to the GGDM combat rules because only the attacker is being inconvenienced by their own inaction; the defenders are not going anywhere because they are immobile defense bases. See also Blockade Running, 4 Commerce, p. 1233, *infra*. (*Seize the Initiative, 3 Combat, p. 971*)

Barroom Brawl & Roman Riot (multi-position riots/combat):

- Care should be taken against whom combat is initiated, a side may only issue orders to fire at 1) units involved in the combat, 2) belonging to positions against whom they have initiated combat *or* who have initiated combat against them. Combat initiation is between positions, not individual participating units. The position first initiating combat, the attacker, designates the type of combat and the participants – the attacking units, and the targets of the attack. (*Keep Your Friends Close, Your Enemies Closer, 3 Combat, p. 972*)
 - So, if C (in the example above) initiates combat against B only, C cannot fire at A and A cannot fire at C, unless one of them later initiates combat against the other by activation of the Combat Power.
 - A combat is conceptually a lethal struggle between a set of units in a particular theatre or sphere of operation described by the Combat Type. Thus, Combat Type may be alternately defined as the theatre of operations of the combat, i.e. system space, orbital space, planet surface, corresponding to Ship Combat, Colony Combat, and Ground Combat.
- The attacker may only initiate combat against units. Pursuant to the discussion in View from a Height, 1 Construction, p. 660, *supra*, the units of the game are ships (and system boats) and colonies; thus, there is Ship Combat and Colony Combat. Thus, an attacker cannot initiate a Colony Combat against some of the colony's Defense Bases and exclude others, as Defense Bases are enhancements to the Colony unit (combat in GGDM is between game units). Alternatively, as discussed below, the colony would simply voluntarily join any excluded Defense Bases with their first Combat Round orders. (*Targeting Unit, 3 Combat, p. 972*)
 - Generally, a combatant can only target (or join) units appropriate to the Combat Type being fought (and each ongoing Combat may be of only one type), thus Ground Units (introduced in 4 Combat, *infra*) cannot be targeted by or joined to a Ship or Colony Combat. It is possible however, for ships and non-Ground Bases to join a Ground Combat if they are at the planet, for the limited purpose of supplying Ground Units (i.e. Log Ships), landing units, or for fire support. They must successfully retreat to exit the combat (*ut infra*, p. 980) before taking any Regular Turn Actions.
 - Ships that have retreated to the colony previously from a Ship Combat (*ut infra*) may join or be targeted as part of a Colony Combat (therefore they might as well join), and the forces attacking the colony receive one Offensive Shift (*ut infra*) against ships participating in or sheltering at the colony during a Colony Combat.
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- During any combat, there may be other units present that are not part of the combat or involved in the combat, for example, they may be waiting just out of range to do their part or watching from a distance, avoiding being hit. Units which are not involved in a combat may not be targeted by participants (*ut supra*). Thus transports loaded with Ground Units, Carriers with Fighter Complements, Cargo Ships waiting to loot, or Colony Ships waiting to Land or Unload, may be held out of a Colony Combat, but if so, a Combat Power activation will be required for them to initiate any new separate combat. As noted in Move Out! and DefCon 1, 1 Combat, pp. 942, 946, respectively, *supra*, new units arriving via Combat Movement or units on Combat Alert may initiate combat and all friendly units present may automatically join them. (*Those Who Stand Looking, 3 Combat, p. 973*)
- Any participant may voluntarily join (i.e. feed) available eligible friendly units present into an ongoing combat at the beginning of any Combat Round **after the first** and those units may fire at the enemy or take other actions, immediately. Joining a combat *does not require a Combat Power to initiate combat* but units joining an ongoing combat must either be able to initiate combat, or must be Logistical Ships, and must be able to join the type of combat that is in progress (i.e. must be able to fight in that sphere, theatre). Since there is no Power Activation, no check is made to see if the units obey. (*Rule 20 Permissive Joinder, 3 Combat, p. 973*)
 - **However**, the attacker in a Colony Combat against a colony that has one or more System Defense Bases may choose to initiate combat (normally or as a follow-on) against only the System Bases. The defender may only join Fighter Complements, and any warships or armed System Boats sheltering at the colony (following a retreat). The attacker is not allowed to involuntarily join any Orbital or Ground Bases by attacking them. On the other hand, if the attacker destroys all of the System Bases, there is no follow-on option against the rest of the colony defenses, rather, a separate Power Activation is required to initiate combat against the remaining defenses, even if that is in the form of other units arriving by Combat Movement afterward.
 - Tender starships carrying armed System Boats that join a combat should, like a Carrier with Fighter Complements, be considered to join the combat even though a Tender Ship cannot itself initiate combat, it must come close enough to launch the armed System Boats and stay close enough to gather them in later. The Tender Ship may also be considered to be providing sensor and command support for the armed System Boats, and may retreat with or without the System Boats.
 - Units that join a combat may not do anything else until either they retreat successfully from the combat or the combat ends. There is no rule procedure, other than colony defense, to force uncommitted enemy units to join a combat, and they may not be fired upon. However, it is the nature of combat to draw in all available units.

- This is, of course, a way to shoo units into a combat when they failed to obey the Combat Power activation to Initiate Combat (see 1 Combat, p. 944, *supra*). The cost is that they are not available on the first round, *which can be critical*.
- Since the attacker must submit Combat Orders first and the defender has 24 hours to submit their Combat Orders (*ut supra*), units joining on the attacker's side will be known to the defender, who may issue orders to fire at them. (*Ticky Tock Timing, 3 Combat, p. 974*)
 - The defender should not be able to see the attacker's Combat Orders, as it may affect decisions to Combat Screen, Retreat, and/or Combat Resupply some units, however, the defender should be informed if additional uncloaked or non-Temporal Ship (T-Ship) units have joined the battle, as those units will have approached normally. The only time a unit should be able to join the battle undetected (until it attacks) is if the unit is in Ambush Mode (see Ambush Combat, 7 Combat, p. 1036, *infra*).
 - On the other hand, friendly units joining the defender's side will not be attacked normally in the Combat Round they join and may get a 'free shot' at the enemy because they were not part of the combat when the attacker issued orders. This sucks for the attacker but is not entirely unrealistic (e.g., the Battle of Austerlitz, 1805).
 - Units joining on the defender's side, however, can still be subject to Interception if they attack a unit that is Combat Screened (see 3 Carriers & Fighters, p. 1067 *et seq.*, *infra*), because the target of the Combat Screen is the unit being protected and interceptors take on whomever tries to attack the protected unit.
 - The defender is taking a risk intentionally holding out units until the second or third Combat Round so that they can join and get a free shot. Defense is usually an 'all hands on deck' event and units held out by the defender in the first Combat Round may not be targeted by the attacker, but also may not fire.
- Logistical Ships must join a combat in order to perform Combat Resupply (see 4 Movement, p. 868, *supra*). Additionally, any Log Ship that provides *Supplies* during a Regular Turn to units involved in an ongoing combat will automatically join the combat *unless* the Log Ship initiates interstellar movement in the same Regular Turn. Log Ships will have to perform a successful retreat to be able to move away. Log Ships are non-warships. (*Victuals & Vitals, 3 Combat, p. 975*)
- Units arriving by Combat Movement that join an existing combat do not change their side's designation in existing combat pairings. They may, however, initiate combat against other positions present, if appropriate, and if they are not already involved in combat with the arriving ships' owners (as in the example) or they may initiate new types of combat, as appropriate to the particular circumstances. (*The Cavalry, 3 Combat, p. 975*)
 - Continuing the above example, if the preceding combat is a Ship Combat, warships belonging to A arriving by Combat Movement, may join the existing multi-positional Ship Combat and A may or may not initiate combat against C. However, A could not initiate Ground Combat against a colony owned by D, if A did not bring any Ground Units as that would not be appropriate or possible.

Combat Resolution (Combat Round):

- The Concierge resolves all Combat Orders. Each Combat Round, each unit involved in the combat may fire at an enemy unit, attempt to retreat, or do something else (as provided by the rules, read on); basically, in each Combat Round each unit may do one thing, unless otherwise provided. This can be improved, for example, by multi-targeting technology. (*Combat Resolution, 3 Combat, p. 976*)
 - If a unit is ordered to do more actions than allowed, the first actions will be processed and all later actions ignored (necessary for game sanity purposes).
 - *Combat Orders will be resolved generally in the order provided*, within the framework of the combat rules; that is, all Fighter attacks are resolved first in the round and all Ship Missile attacks are resolved near the end of the round, before retreat attempts. Within each part, Fighter

Attacks, the main combat, then the Ship Missile attacks, then the retreat attempts, the orders will be resolved in the exact order provided by the position. Combat Screening assignments on all sides, however, must be necessarily addressed before the first Fighter Attack is resolved.

- Since Engaged results can affect the later parts of the Combat Round, Fighter attacks for both sides must be resolved first, after Combat Screening assignments.
- As explained in *Blacksheep, 2 Carriers & Fighters*, p. 1054, *infra*, Fighter attacks are always resolved first in the Combat Round, therefore, it would not matter if they were placed last in the orders and Ship Missile attacks are always resolved last in the round (but before retreats) and it would not matter if they were placed first in the orders (see *First Fire, 4 Carriers & Fighters*, p. 1079, *infra*).
- Enlightenment is assigned to the Combat, not Combat Round, so unused Enlightenment carries from Combat Round to the next Combat Round, until the end of the Combat when it is lost (see *Vampire Suicide and Army of Light, 2 Colleges*, pp. 478-479, *supra*). Enlightenment may be added at the beginning of any Combat Round, however, addition after the first Combat Round may lead to wastage. *Id.*
- The use of Enlightenment in combats may affect the order in which the side has its units perform actions; for example, it is possible to homogenize the odds of each unit hitting the enemy by having the units with less chance to hit fire first, thus allowing them to benefit from Enlightenment rerolls. This will likely use up Enlightenment before heavier units attack, though. However, as also noted in *Army of Light, 2 Colleges*, p. 479, *supra*, a side may choose not to use Enlightenment in Fighter attacks, and Enlightenment should not apply to Ship Missile attacks.
- Because retreats are processed last in the round, it is likely, unless the whole side is running away, that Enlightenment will remain to aid the units attempting to retreat.
- This resolution of Combat Orders will proceed without interaction between the Concierge and players; this is necessary for batch processing, to keep the game moving along, no matter how many combats are running at any time. Thus, there are limited situations where the Concierge may make some decisions that affect the combat (e.g., see *Combat Screening, 3 Carriers & Fighters*, p. 1067, *infra*).
- The Concierge will necessarily inform both sides of the results of the Combat Round, but will not inform anyone not involved in the combat unless required, however others may detect that a combat is ongoing (e.g., see *ABBA Arrival and Private Eyes, 2 Information*, pp. 1340, 1342 respectively, *infra*).
- The basic chance that any warship will be able to hit another unit in combat is 10%. The basic chance is multiplied by three for 1st Era Warships, by five for 2nd Era Warships, and by seven for 3rd Era Warships. So a 1st Era Warship has a 30% chance to hit, a 2nd Era Warship has a 50% chance to hit, and the 3rd Era Warship has a 70% chance to hit. (*Firing Solution, 3 Combat*, p. 978)
 - Ground Defense Bases have a basic 20% chance, times the current era of the colony's defense to hit, while Orbital and System Defense Bases have a basic 30% chance, times the current era of the colony's defenses, to hit. Partially completed Era Upgrades (see *Colony Defense Era Upgrade, 2 Combat*, p. 954, *supra*), count as the lower or last Era completed. In the 3rd Era, bases are more powerful than warships.
- These basic chances to hit may be adjusted by Combat Shifts to a maximum of 99% chance to hit. A Combat Shift either increases or decreases the chances of the attacking unit hitting the target by 10% per Shift. Shifts that increase the chances of a hit are called Offensive Shifts and shifts that decrease the chance of a hit are called Defensive Shifts. (*Combat Shifts, 3 Combat*, p. 978)
 - A unit (including Defense Bases) of a higher Era firing at a target of a lower Era (including Defense Bases) receives one Offensive Shift for each Era difference between the firer and the target. Thus, a 3rd Era Warship has a 90% chance to hit a 1st Era Warship (i.e. basic chance plus two Offensive Shifts), an 80% chance to hit a 2nd Era Warship, and a 70% chance to hit a 3rd Era Warship (i.e. no shifts).

- Conversely, equal Defensive Shifts of one shift per Era difference are applied if a lower Era unit is firing at a higher Era unit. For example, a 1st Era Warship has only a 10% (30% - 20%) chance of hitting a 3rd Era unit and a 3rd Era Warship has only a 60% chance of hitting a 4th Era Warship.
- Combat Shifts are always applied individually between one attacker and one target in each combat instance (including Probing defensive fire, see *Bloody Noses*, 2 Information, p. 1346, *infra*), the same Offensive or Defensive Shifts can be applied to several attacks by or against the same unit in the same round and over several Combat Rounds.
- Heavily armored Orbital and System Defense Bases receive one Defensive Shift in the first combat round of a Colony Combat. Defensive Shifts tend to draw multiple fires in a round...
- Fighters on FAP assignments (combat reconnaissance) also provide friendly offensive and defensive Combat Shifts, see *A FAP in the Night*, 7 Combat, p. 1041, *infra*.
- The Era shifts also apply to non-warship targets: Scouts, Cargo Ships, Colony Ships, Orbital Shipyards, Orbital Cities. Non-warship targets are considered to be at the Era of the Patent that allowed their construction for Era shift purposes; all non-warship targets in the game are initially 1st Era. In addition to Era shifts, combat units shooting at a civilian target also receive two Offensive Shifts (because they are not really combat units). (*Civilian Targets*, 3 Combat, p. 978)
 - For example, a 1st Era Warship or Orbital Defense Base attacking a 2nd Era Colony Transport, would have a 40% chance to hit (30% - 10% + 20% = 40%).
 - If the target is an orbital target (e.g., Orbital City, Orbital Shipyard, incomplete ship) *that is not an Orbital Defense Base*, an additional Offensive Shift is received by the attacking unit (as they cannot run). Thus, a 1st Era Warship firing at a 2nd Era Orbital Shipyard, would have a 50% chance to hit (30% - 10% + 20% + 10% = 50%).
 - Scout Ships receive one Defensive Shift in any combat to help them retreat safely.
- A hit equals destruction. There are no defensive rolls, or defensive adjustments, or blocks or saving throws, a unit that is hit in combat is destroyed. Positions may develop various defensive measures to increase the survivability of their units in combat through Enhancement and Continuous Operational Technology Patents, and given the lethality of 3rd Era weapons, it is probable that this will occur. (*A Hit*, 3 Combat, p. 979)
 - Additionally, if a hit equals destruction, then there is no damage and no damaged units and no need for repairs. Any damage sustained by units is assumed to be repaired following combat and/or as part of any resupply, and thus, damage does not carry from combat to combat or turn to turn. If a unit survived the combat, it was not sufficiently damaged to have been destroyed.

The Big Runaway (Retreats):

- A successful retreat ends the unit's participation in the combat, and when all units of a side have retreated or been destroyed, the combat ends. Units that have successfully retreated from a combat are free to execute Actions during the next Regular Turn or join other combats later (or just retire and collect their pensions). (*The Better Part of Valor*, 3 Combat, p. 981)
 - At the end of a combat, regardless of the results, all surviving ships have a chance of some active Constructural Elements becoming inactive. See *The B-Team*, 3 Disruption, p. 281, *supra*.
- Only units involved in a combat may retreat from that combat. Other units not involved remain present and may have to wait until the next Regular Turn to act. Once the combat ends, the victorious side will need to initiate a new combat to attack other positions or units that were not in the combat (except in automatic follow-through combat opportunities), i.e. they cannot continue attacking units that were not joined in the previous combat, e.g., troop transports. On the flip side, if it is desired that all ships of a side retreat from the combat, all ships of the side must first join the combat, i.e. those troop transports. Units joining a combat may attempt to retreat in the same Combat Round, *ut supra*. (*Operation Unthinkable*, 3 Combat, p. 981)

- A unit attempting to retreat from combat *may not do anything else* on the Combat Round in which it attempts to retreat. A unit attempting to retreat from a combat must have the capability of retreating; for example, colony Defense Bases may not retreat from combat (how? where would they go?). The basic chance of a unit successfully retreating from combat is 50% *if it is not destroyed in the same round*. Units that fail to retreat, and are not destroyed, are still in the combat and may try again the next Combat Round or do something else. (*Zigged When He Should Have Zagged*, 3 Combat, p. 981)
 - Again, two elements come into play in retreats. First, to increase the ship's chances of retreating, it should be placed near the top of the order so that it may benefit from an Enlightenment reroll if the retreat attempt fails. Second, combat is simultaneous, meaning that a ship might have been successful in the retreat roll, but was hit and/or destroyed by enemy fire before the end of the Combat Round. As noted in *Army of Light*, 2 Colleges, p. 479, *supra*, Enlightenment cannot be used to force enemy units to reroll successes.
 - Fighter attacks are resolved first. The results may make it more difficult for a unit to retreat. Units that are retreating should be Combat Screened if possible, but that is a tactical and circumstantial decision. See *Carrier Operations*, 1 Carriers & Fighters, p. 1050, and *Combat Screening*, 3 Carriers & Fighters, p. 1067, *infra*.
 - For discussion of Carrier-Fighter and System Boat-Tender Ship retreats, see *Carrier Operations*, 1 Carriers & Fighters, p. 1050, *infra*.
- Unless otherwise provided, ship speed for interstellar travel has no bearing on system combats in the base game rules (or *Blockade Running*, see 4 Commerce, p. 1233, *infra*). ... But as a baseline rule, the game assumes that there is no tactical difference between the in-system and combat maneuver of the units of various positions. (*Go Speed Racer!*, 3 Combat, p. 982)
- A unit that has retreated successfully from a *Ship Combat* without being destroyed must do one of two things:
 - The ship must initiate interstellar movement to a supported system within range of the unit's remaining OSL (if possible) or to a supported system within Short Movement (see *Space Hop*, 2 Movement, p. 850, *supra*). This movement does not require any separate Power Activation. Retreating units may go to different locations, or to locations other than from where they originated, if they have the OSL or movement range.
 - Retreat to a supporting colony within the remaining OSL must be the first option. If one is not available, then retreat to the closest supporting colony is allowed, taking chances on Supply Rolls in FTL (see *Limping Home* and *The Cold Equations*, 3 Movement, pp. 862, 864, *supra*). There may be a few extreme, special circumstances where the Concierge may rule otherwise, but what is stated above must generally be the rule.
 - It is possible, but not likely, that the enemy would be able to know to which system the retreated ships moved; much of it has to do with interpretation of the technologies used and the nature of the Stardrives. Think of it as trying to track which way a flea jumped.
 - Or, the unit must retreat to a colony that has at least one Orbital Defense Base to cover its retreat (to hide behind!). In these instances, the unit is considered to be *at the colony* (as an enhancement) and *not in system space*. The ship retreating from a *Ship Combat* may retreat to a colony engaged currently in *Colony Combat*, and automatically 'joins' that combat as a defender (or maybe attacker). The colony to which the retreat is made does not need to be a sovereign colony of the ship's owner, it may be an **alien colony** if the owner consents to shelter the retreating units. Implicit in any shelter is the idea that the colony will (attempt to) protect the units from pursuit.
 - Retreating to a colony may trigger the follow-through 'free' combat initiation against colonies (*ut supra*) because the retreated units are *not in system space*. Units that have retreated to the colony may join any subsequent defense of the colony (if able) and/or may retreat again.

- If you are wondering about surrender options, well ... that's a whole different issue. See 5 Combat generally, *infra*. But there is a very good argument that ships which cannot safely retreat may fight to the end against *alien forces*. (*Ship Zipped, 3 Combat, p. 982*)
- Attacking units retreating from a *Colony Combat* must retreat either to system space or to a colony in the same system (*ut supra*). Ground Units involved in a Ground Combat may only retreat if they can be lifted from the planet surface to available transports (see Ground Combat Resolution, 4 Combat, pp. 993-994, *infra*). The Concierge may determine that stranded Ground Units have surrendered, attempted to surrender, or scattered (see Win, Place or Show, 5 Combat, p. 1010, *infra*). (*Combat Reformation, 3 Combat, p. 983*)

Ground Units:

- Ground Units are regular, equipped and trained armed units that do not normally function as police forces. No Patents or special technology is required to build Ground Units, any position or Minor Race can build Ground Units from the beginning of the game. (*GROPOS, 4 Combat, p. 986*)
 - Ground Unit size is measured in population and RPs. Ground Units are built (or added to) by activation of the Construction Power for the purpose of Colony Enhancement, using one half population factor for each 1 RP added; Ground Unit size for combat is measured in RPs. All colonies on a Balkanized Colony Planet may have their own Ground Units and may peacefully (or not) coexist. Population Factors in Ground Units on *any* colony count toward the colony planet's Maximum Habitability, do not produce RPs during Taxation, but will grow normally during Census (eating and breeding!) if on a colony of their Native Population Type.
 - Surface colonies on a Balkanized planet may initiate Ground Combat against each other.
- Ground Units can be distinguished mechanically from Fighter Complements in the following ways: Ground Units are not an Enhancement Technology (there are no Patents required to build Ground Units), and they can exist independently as a unit away from a colony or ship as long as they are supplied by Log Ships. Compare with Fighters, see On The Flight Deck, 1 Carriers & Fighters, p. 1047, *infra*. This makes Ground Units a limited unit in the game, not quite like ships or colonies (see View From a Height, 1 Construction, p. 660, *supra*), but not always and only an enhancement to a ship or colony, as are Fighters. (*Ground Units, 4 Combat, p. 986*)
 - *Minor Races*: The armaments of Ground Units from Minor Races probably makes them inferior.
- Since Ground Units may be created from Naturalized Colonies, Native Population Type will be a factor. Ground Units garrisoning colonies that are not of their Native Population Type are possible trouble. The Native Population Type of a Ground Unit is also a factor in the Habitability Class of the planet on which they land (*ut infra*). (*Sepoys in Space, 4 Combat, p. 987*)
- Ground Units stored in Orbital Cities may not participate in Ground Combat or any other surface activity without being landed. They may be loaded and transported on special transport ships, whose capacity is measured in population of Ground Units that can be transported. Thus, it is possible through technology to increase the RP cost/value of Ground Units per half-population factor. Ground Units may be split between ships for transportation purposes. Ground Units may be left behind while others are lifted or evacuated. A position may build Ground Units for security without the ability to transport or land them. (*Lift & Separate, 4 Combat, p. 987*)
- Troop Transport ships do not have an Existential Patent, the technology will need to be invented and will probably be a modification of the Colony Transport Existential Patent (if landing troop transports) or the 1st Era Carrier Existential Patent (if using expendable drop ships). Lifting Ground Units should be similar to transferring Fighters between colonies and ships and not like Loading Population to Colony Ships. A large part of what is called *military efficiency* is the ability to move large numbers of persons and specialized equipment quickly and *in an orderly manner over distances and keep them in fighting condition*. Moving military units is not like transporting civilian population; military units are specialized and not self-supporting. And going is not voluntary. (*Troop Transport Technologies, 4 Combat, p. 987*)

- GGDM does not comment on or make any assumptions as to whether ground combat units are or are not “mecha” units in the classic science-fiction/anime sense. (*Pac Mecha Fever, 4 Combat, p. 988*)
- Troop Transports, loaded or not, will have the same OFL and OSL as any other starship of its position. Ground Units not located at a sovereign native colony require two Supplies per Regular Turn to avoid Supply Rolls, whether on a ship or the ground. This is a baseline rule, regardless of unit size, environment and combat activities, but can be adjusted, modified, based on judgment and abilities. (*Beans, Bullets & Bandages, 4 Combat, p. 988*)
 - Ground Units located at a non-Friendly or Naturalized sovereign colony of their native population type (where they have hot chocolate and fresh donuts) require one Supply per Regular Turn to avoid Supply Rolls (see *The Cold Equations, 3 Movement, p. 864, supra*). Ground Units on an empty planet may attack any **alien colony** that is Landed there by a Combat Activation. Ground Units *probably* should never be able to be converted into a colony.
 - For *game convenience*, Colony Ships’ (whether loaded or not) OFL/ OSL is the same as for other ships and the same should be true of Troop Transports whether loaded or not. Log Ships, however, cannot carry enough to Supply Colony Ships (see *Empty Cans, 3 Movement, p. 861, supra*), but can supply Ground Units on the surface or in ships (*ut infra*) **because it is necessary for the game**.
- Landing craft are not existential technologies; positions must develop their own Landing Craft technologies. Landing craft technologies may be different for each Habitability Class. They may also become quite advanced and elaborate; the bottom line measurement of Landing Craft will always be how many RPs of Ground Units can they land? Possibly, Landing Craft, like Colony Ships, will be consumed in the landings. But then how do you evacuate? (*Landing Craft, 4 Combat, p. 989*)²⁰
- Colonies that have Ground Units *might* not surrender after losing a Colony Combat (however, see occupation, *ut infra*). Colony surrender, which is a dramatic issue, is discussed in the next section, 5 Combat. Conquered or Converted Colonies will not automatically revert when no enemy warships are present, if they are occupied by sufficient Ground Units. The Concierge will determine whether or not a colony reverts in these situations, which implies a revolt and that the extant occupying Ground Units were either destroyed, or marginalized to areas where they cannot control the colony. (*Resist et Mords, 4 Combat, p. 989*)

“The price of a mile.” (Ground Combat):

- Ground Combat is fought between sovereign standing armies on the surface of a planet. Ground Combat may be initiated by any activation of the Combat Power that initiates combat, as appropriate to the circumstances and if the attacker has Ground Units at the location. During a Colony Combat, the attacker may initiate Ground Combat on the second Combat Round or later as a follow-on Combat requiring no Power Activation to land troops, 1) if the attacker has Ground Units present on ships and 2) they join the Colony Combat on the previous Combat Round (planetary approach time). If the ships carrying the Ground Units join the Colony Combat, they may be targeted by the colony defenders (the defenders have many critical tactical decisions to make at this point) and may be Combat Screened while in space. (*Ground Combat, 4 Combat, p. 990*)
- It is possible to initiate Ground Combat at the end of a Combat Movement if, upon arrival in the destination system the attackers have Ground Troops on ships, there is an enemy colony, and there are no other warships or colony defenses to impede the landing of Ground Units. Just like any Earth alien invasion movie. (*Chain Guns, 4 Combat, p. 990*)
 - It is possible to chain three combats together in a follow through, ships victorious in a Ship Combat may immediately follow through with an attack on a colony (see *Panic Bells, It’s Red Alert, 2 Combat, p. 960, supra*, no additional Combat Power Activation necessary), and on the second

²⁰ “Courage is getting out of the boat when the man in front of you just got shot.” – Stuart Stevens on The Lead with Jake Tapper, CNN, October 19, 2020.

Combat Round, the attacker may land Ground Units to initiate a follow-through Ground Combat (if they joined in the first round).

- Ground Units may only initiate combat against other Ground Units, Ground Bases or undefended colonies and may fire Close-in Defense against Fighters that attack them during Ground Combat. Ground Units are not (normally) able to attack orbiting warships and Orbital Defense Bases even if they fire at the Ground Units (via Orbital Bombardment). But such an ability could be developed via new technologies... Fighters that are present on a colony with no friendly Ground Units or Ground Bases will be eliminated at the end of the first Combat Round if enemy Ground Units initiate Ground Combat against the colony, unless they can retreat somewhere else. (*Fire at Will, 4 Combat, p. 990*)
- During a Ground Combat, the status of the Epistemological Constructural Element of the defending colony is used to determine whether or not the colony's Defense Bases, Ground Units and Fighter Complement can benefit from the application of Enlightenment (see Skool Tyme, 2 Constructural Elements, p. 190, *supra*) or NSF acting as Faculties (see The First is Last, 3 Colleges, p. 493, *supra*) during the combat. If the Colony Combat lasts to the next Regular Turn, the owner of the Colony may attempt to reactivate an inactive Epistemological Constructural Element at the colony by Cohering (see 5 Culture, p. 421, *supra*). (*Unenlightened Activity, 4 Combat, p. 991*)
 - The attacker's Ground Units will use the Constructural Elements status of either their Transport Ship (as of the beginning of the combat) or the colony on the same planet from which they launched their attack, for the purposes of Enlightenment.
- Attacking Ground Units landing to initiate Ground Combat may not fire at the Defenders during the first Combat Round – the landing is their only action for that Round. Enemy Ground Units landing on a Colony may be attacked once during the landing round by any Ground Bases (as if acting as Ground Units, *ut infra*) or Fighters based on the Colony. Landing Ground Units *may not fire* Close-in Defense at defending Fighters during landing, but any escorting fighters from ships in orbit may engage the Colony's Fighters in a Dogfight Combat. The only way to prevent an enemy Ground Unit from landing is to destroy it; all surviving Ground Units (or parts of) will land on the colony planet. Warships may not Combat Screen Ground Units during landing operations; only Fighters can escort them to the surface. See 3 Carriers & Fighters, p. 1067, *infra*, regarding Combat Screening. (*Dropping In, 4 Combat, p. 991*)
 - These rules also apply to all subsequent landings. The combination of population, and attacking and defending Ground Units may temporarily exceed the Maximum Habitability of the colony planet until one side prevails – not to mention the damage they will do to the planet during the combat which may reduce Habitability Class.
 - If the landing is being conducted against a Minor Race, the Concierge will need to decide whether the Minor Race has any ability to resist the landing on the first Combat Round.
 - Having the ability to 'drop' units on a hostile enemy colony planet via control of orbital space following Colony Combat – does not automatically allow the attacker to learn the size of the Ground Unit on the colony. There is, therefore, always a risk involved in invading an **alien colony**. Surveillance and Information Operations (Special Operations spying) may be used to learn generally the size of the opposing Ground Unit; Probing actions probably will not be effective for this task. See Taking It All Down and Information Operations, 2 Information, pp. 1343, 1349, *infra*.
 - Though the Ground Combat landing rules are phrased in terms of a single attacker landing, Ground Combats on surfaces can be fluid and protracted situations where both sides land forces.
- Ground Units unloaded on their owner's colony do not automatically initiate, and may not, during transfer, initiate combat against other positions' Ground Units on a Balkanized Planet. It is possible to unload Ground Units on your own colony, then later initiate Ground Combat against another colony. However, if the owner of the Ground Units is currently involved in a Colony Combat against any other colony on the planet, the transports must join the Colony Combat even to land troops on their own colony – as it is most certain that the defenders will see the approach of troop transports as an intent to land

Ground Units on their colony. However, as no Ground Combat is being initiated by the landing, the defenders cannot fire at the Ground Units during landing on their own colony. (*Soft Landing, 4 Combat, p. 992*)

- Generally speaking, the Orbital Bombardment discussed In This Dust That Was a City, 2 Combat, p. 961, *supra*, is a mostly indiscriminate bombardment of urban areas, installations and government facilities with the intent of maximum destruction of population and causing the collapse of civilization, with little regard to damage to the planet. It can be described as being like a full thermonuclear war in 1983, either with nukes, beam weapons, or rocks thrown down from orbit. (*Razor Rain, 4 Combat, p. 992*)
 - As such, it is not suited generally to strategic or tactical support of Ground Units engaged in combats. If the intent was to Orbital Bombard the planet in this way, why were Ground Units inserted on the surface? However:
 - Should the situation arise where an Orbital Bombardment of a planet is ordered where there are Ground Units, either friendly or enemy, all units will suffer damage proportional to the loss of population. It is of course, possible to just Orbital Bombard a colony that has defending Ground Units without initiating a Ground Combat or before initiating a Ground Combat (see Something Here from..., 2 Combat, p. 960, *supra*).
 - It is possible for positions to develop technologies (Patents) and doctrines that will allow for 'close' Orbital Bombardment by orbiting warships and Orbital Defense Bases that tactically and strategically supports Ground Units in combat on the surface, which may or may not mean orbital launched MIRVs with tactical nukes (perhaps similar to 155mm nuclear artillery shells) or conventional explosives, or damage to the planet.

Fix Bayonets, We Will Refuse the Line! (Ground Combat Resolution):

- Each Combat Round, each Ground Unit on both sides must be designated to either attack or defend. This is independent of their side's overall status as the strategic attacker or defender in the Ground Combat. (*Ground Combat Resolution, 4 Combat, p. 993*)
 - Ground Units initiating Ground Combat by landing on the planet may fire in the second Combat Round. Attackers already based on the planet may fire in the first round.
 - Ground Units either attack or defend in a Combat Round as their action.
 - Attacking Ground Units must be given a single enemy Ground Unit as the target; Ground Units designated to defend in the Combat Round do not have targets assigned and do not attack. A side may designate all of its Ground Units to defend in a round.
 - Ground Units may be Combat Screened by other Ground Units, Combat Screened Units and those providing the Combat Screen may not be designated to attack in the Combat Round. Ground Units may not be Combat Screened by Fighters against other Ground Units, but can be Combat Screened against enemy Fighters.
 - Ground Units may be attacked by more than one enemy Ground Unit each round.
- Each attack is resolved *individually*, one attacker vs. one target unit. One ten sided die is rolled for each 10 RPs of the attacking Ground Unit's size and the results are added. If the die roll result or total falls within the *absolute value* range of the attacker's total RPs minus the defender's RP size, the attack has been successful. (*Ground Combat Resolution, 4 Combat, p. 993*)
 - For example, a 10 RP Ground Unit attacks a 3 RP Ground Unit (the target), the difference is 7, any result less than or equal to 7 on a ten sided die will mean the attack was a success. One die is rolled, the attack roll result was 5.
 - Flip the script. The 3 RP unit attacks the 10 RP unit. Because absolute value is used here, 3 minus 10 is negative 7, but the die roll result for a successful attack is still less than or equal to 7.
 - A successful attack is not like a hit in Ship or Colony Combat; the defending unit is not instantly destroyed. Instead, Ground Units are reduced by RPs damage. For each RP lost, the *one half population factor is also lost (ut supra)*.

- If the attack was a success, take the result of the attack roll and subtract the target unit's size in RPs from the die roll, and if positive the difference is the damage in RPs that is inflicted on the target. If the result is a negative number, that damage is done to the attacker instead *if the target unit was designated to defend in that turn*.
- Continuing the example above, the target unit's size of 3 RPs is subtracted from the die roll result of 5, a difference of 2; the target unit takes 2 RPs damage and survived the round with 1 RP left.
- If the attack roll had been a 1, the result would still have been a successful attack (result \leq ²¹ 7), however, if the target unit (above) had been designated to defend in the Combat Round, the attacking unit would have taken 2 RPs damage instead ($1 - 3 = -2$), despite the successful attack roll.
 - Flip the script, Part 2. If the 3 RP unit attacks a 10 RP unit, there is no successful attack die roll that will inflict damage on the larger defender because the defending unit is larger than 7 RPs. That is unfortunate, but historically, forces that were outnumbered more than 3 to 1 were usually defending, with very rare and historically notable exceptions. If the 10 RP unit had been designated to defend, the attacking 3 RP unit could be wiped out. It is obviously best in this case for the 3 RP unit to defend and hope the 10 RP unit attacks and has bad luck.
- A Ground Unit designated to defend in a round may do damage to multiple enemy Ground Units if attacked multiple times and has good luck.
- Ground Units which lose their last RP are eliminated. Ground Units at a friendly colony could be reinforced during Regular Turns by adding RPs and population from the colony. Ground Units that have landed on an enemy planet can generally only be reinforced by landing more units but not added to until they reach a friendly colony. (*Ground Combat Resolution, 4 Combat, p. 993*)
 - A Ground Combat will end if all of the attacking Ground Units are either eliminated or retreat from the planet (they must be lifted, if they can't they are stuck, do or die).
 - At the end of a Ground Combat won by the defender, the defending colony has a chance of some active Constructural Elements becoming inactive (as in panic in the streets). See The B-Team, 3 Disruption, p. 281, *supra*.
 - A Ground Combat will also end if the colony is 100% occupied by the attackers and all Ground Bases are destroyed (*ut infra*); think of Germany in May 1945. The defenders can never retreat from a Ground Combat, so the only way to win is 100% victory, but defending Ground Units may remain for a short time.
- Ground Units may not initiate combat on a planet that is Unpleasant, Hostile, or Uninhabitable to their Native Population Type unless they have Controlled Environment Technology. Ground Units designated to attack on a planet that is Unpleasant to their Native Population Type add 2 to their attack die roll result and 4 if the planet is Hostile or Uninhabitable to their Native Population Type. If the planet is Unpleasant to the target unit, subtract 2 from the attack die roll result, and if it is Hostile or Uninhabitable to the target unit's Native Population Type, subtract 4 from the attack die roll result. Adjustments can cancel out. (*Vac-Suits, 4 Combat, p. 994*)
- Additionally, the colony's population and the planet's Maximum Habitability are both damaged by one population factor for each result of 7 or higher rolled by either side during a Ground Combat. Loss of population in this way may trigger Disruption effects (see Rousing the Rabble, 2 Disruption, pp. 271-272, *supra*). (*Collateral Damage, 4 Combat, p. 995*)
- Fighter Complements from orbiting warships and fighters from the defending colony may attack opposing Ground Units; this combat action is resolved as if they were attacking other fighters ('dogfighting') so that the damage result is expressed in RPs of damage to the Ground Unit. Fighter Complements from the defending colony may also attack enemy ships in orbit and those ships may be Combat Screened by

²¹ The wrong symbol was used in the original rules text. I always mess up greater-than or less-than symbols.

other ships and complements. See Combat Screening, 3 Carriers & Fighters, p. 1067 *et seq.*, *infra.* (*Air Attacks in Ground Combat*, 4 Combat, p. 996)

- Fighter Complements of either side may Combat Screen Ground Units against other fighters only. All interception attempts by Complements attacking or screening Ground Units are automatically successful and result in a Dogfight. Complements that breakthrough the Dogfight may then attack opposing Ground Units with whatever they have left using Raid Combat procedure.
- Ground Units may not Combat Screen other Ground Units against Fighters.
- Ground Units attacked by Fighters while on a planet may fire Close-in Defense.
- Fighter Complements on the surface of the planet may not be attacked 'on the ground' (i.e. at their airbase) by Ground Units unless there are no friendly Ground Units or Ground Bases remaining. If a Fighter Complement is attacked by a Ground Unit it is eliminated (e.g., 11 MiGs were destroyed on the ground in [the] Entebbe Raid).
- It is assumed in GGDM that ship-based Fighters attacking a colony are being launched from safe orbital distances; *however*, should a circumstance occur where it is deemed that a ship has launched Fighters from a low point over the colony (*a la* the Adama Maneuver), any remaining Ground Bases (even if involved in a Ground Combat) may fire – in Ground Combat – at the ships launching the Fighters, attacking as Ground Bases. Effectively, by lowering themselves close to the surface to launch Fighters, the ships have temporarily become part of the Ground Combat.

Fortifications:

- When Ground Combat is initiated, any Ground Bases of the defending colony become Ground Units in the defense, and may not attack further in any Colony Combat, but still may be targeted as Ground Bases from orbit and are destroyed if hit. (*Fortress North America*, 4 Combat, p. 996)
 - Ground Bases can still fire Close-in-Defense at attacking Fighters when acting as Ground Units, and attack with a +2 modifier to the die roll (not good at attacking) in Ground Combat. Ground Bases acting as Ground Units take damage as any normal Ground Unit, except that there is no loss of population with loss of RPs. Ground Bases are eliminated when they have lost their last RP.
 - Ground Combat can be initiated between colonies on the same planet or during the second round of any Colony Combat (*ut supra*), so there could be many Ground Bases involved.
- First Era Ground Defense Bases become 10 RP Ground Units during Ground Combat, while 2nd Era Ground Bases become 17 RP Ground Units, and 3rd Era Ground Bases become 30 RP Ground Units. Ground Bases damaged as Ground Units, do not revert to being Ground Bases after Ground Combat until all RP damage is repaired (via activation of the Construction Power for the purpose of Colony Enhancement). Repairing RPs on damaged Ground Bases does not require expenditure of population factors (*Verdun*, 4 Combat, p. 997)
- Ground Combat is the most likely opportunity in GGDM for the use of tactical nuclear weapons, biological weapons and chemical weapons. It is, of course, possible to use these weapons strategically during Orbital Bombardment and Raid Combat, but that's a different issue. (*NBC – Nuclear, Biological and Chemical Warfare*)
 - GGDM makes no assumption as to whether or not Ground Combatants are using tactical nuclear, biological or chemical weapons.
 - However, the Collateral Damage rule (p. 995, *ut supra*) suggests that some really nasty weapons are being used in Ground Combats; the threshold damage die roll can be adjusted up or down depending on arms conventions and how the participants envision air-ground warfare in the game.
 - It is probably possible for a side to determine/declare that they are not using weapons in a Ground Combat that will damage the planet. This the defenders might do if they are concerned about the long term damage to their colony world. Presumably however, the side that restricts

their use of weapons is at a grave disadvantage against a side that ruthlessly uses every weapon they have available. The Concierge may impose combat penalties on the side trying to avoid Verdun- or Hiroshima-like results. A side may also develop weapons that are less damaging through technology and doctrine that are just as effective as less environment-friendly weapons.

Occupation (“I’m your ice cream man, stop me when I’m pass’n by!”):

- Ground Units occupying and/or defending a colony 100% occupy and control the colony for military purposes. On the Regular Turn in which Ground Combat is initiated, the invading or attacking Ground Units gain 15% control of the colony by virtue of being there. At the end of each Combat Round, control of the colony may change:
 - If the attackers did more damage than the defenders in the round, the attackers gain control percentage equal to the total RPs of their Ground Units divided by the *total RPs of all* Ground Units involved in the Ground Combat.
 - If the defenders did more damage in the Combat Round, they gain control percentage equal to the total RPs of their Ground Units divided by the total RPs of all Ground Units involved in the Ground Combat.
 - For example, in a combat where the invaders have 30 RPs of Ground Units and the defenders have 8 RPs of Ground Units at the end of the Combat Round. If the attackers did more damage during the round, they gain 79% control of the colony. If the defenders did more damage in the Combat Round, they gain 21% control of the colony.
 - The attackers can never have less than zero percent control. If the attackers ever gain 100% control of a colony **and** eliminate all Ground Bases, they have captured the colony (see Surrender discussion, 5 Combat generally, *infra*). This does not mean the Ground Combat has ended, however.
 - Ground Units are there to defend their colony and all of its outlying resources, territory, and infrastructure, not to defend their planet. Colony and planet may or may not be congruent. (*Occupation, 4 Combat, p. 1000*)
- Whenever either side has lost control of the colony (have 0% control), the Ground Units may continue fighting as long as they can remain supplied. Thus, the Ground Combat can continue until the units run out of supply and fail Supply Rolls. (*Rebel Lines, 4 Combat, p. 1000*)
- If Ground Combat is initiated against a colony that has no Ground Units or Ground Bases, the colony is 100% occupied at the end of the first Combat Round, even if it has a Fighter Complement. The Fighter Complement may do their damage for one Round. (*Fait Accompli, 4 Combat, p. 1000*)
- When a colony is being defended in a Ground Combat, the owner receives the proportional benefit of whatever part of the colony they control during any Power Activation. For example, if the defenders retain 43% control of the colony, then during Taxation, the colony will produce 43% of what it would normally have produced, during Construction activation (probably to reinforce defending Ground Units), the colony has 43% of its GDP available, and during Census, population growth is 43% of what would be normal. (*Combat Construction, 4 Combat, p. 1000*)

Morale & Surrender:

- There are two situations in GGDM where “morale” is out of the hands of the Concierge: First, positions may choose to retreat from combat (or in the opposite, no retreat option exists for System Boats and Defense Bases), and second, the larger issues of when positions decide to stop fighting, concede territory and/or submit to demands of other positions, all are story arc events. (*Morale in GGDM Combat, 5 Combat, p. 1006*)
 - The Concierge should be aware of and weigh each position’s Fundamental Realities, Enlightenment, Writs, Meanings, and any other factors relevant to morale ‘on the ground.’

- Ground Units on the surface of an enemy planet have nowhere to retreat if they cannot be extracted from the surface to transports and there is no friendly colony on the planet (as may occur on Balkanized Planets). Without transports, Ground Units are usually stranded and must win, die or surrender, even if they can be supplied by Log Ships. (*Win, Place, or Show, 5 Combat, p. 1010*)
 - As detailed below, the Concierge, taking the view of the *local commanders* and not the interstellar governments represented by the players, will determine realistically if and when stranded Ground Units surrender or scatter, after formal surrender demands are made.
- A colony that surrenders to the attacker becomes a Conquered Colony and is transferred from its previous owner's Public Space to the new sovereign's Public Space (see Conquered Colony, 2 Order, p. 539, *supra*). Determination of if or when a colony surrenders is at the discretion of the Concierge.²² The most relevant factors will be whether the colony has any remaining defenses:
 - If the colony has lost the Colony Combat and has no Ground Units, it will probably surrender under threat of occupation by Ground Units or Orbital Bombardment.
 - If the colony has lost the Colony Combat, but has Ground Units, they may conclude that there is nothing they can do if the enemy wants to Orbital Bombard the colony, but if the enemy wants to rule them, they will need to send down troops and fight.
 - Or the threat of Orbital Bombardment may cause the defending Ground Units to surrender to avoid massive civilian casualties.
 - In an Orbital Bombardment, possibly no one will be left in charge to surrender.
 - A colony most likely will surrender if 1) the attackers are not an existential threat, 2) the colony's defenses have been significantly reduced, and 3) the attackers have occupied most of the colony (e.g., Germany, May 1945). If any Ground Units remain and they are disbanded by the new sovereigns, the population in those units is released and the RPs lost or transferred.
 - A colony which is 100% occupied by enemy Ground Troops (see Ground Combat Resolution, 4 Combat, p. 993, *supra*) has no choice but the surrender (or alternatively, their surrender is irrelevant at that point).
 - Other factors may include the Native Population Types of the attackers and defenders, Habitability Classes, fear of the unknown, fear of death, the reputation of the attackers for cruelty or kindness, the apparent intent of the attackers, the loyalties and responsibilities of the defending colonial government, self-interests and cultural issues, and the possibility/expectation of rescue or relief or being held responsible later by the population or the interstellar government. (*Over My Dead Body, 5 Combat, p. 1011*)
- At any time during a siege, Colony Combat, or Ground Combat, the attackers may transmit to the defenders (the position that currently owns the colony) and to the Concierge, a surrender demand.... The Concierge may not, except in extreme circumstances, consider whether or not the colony will surrender until a demand is received; that is, the Concierge will not spontaneously decide the colony surrenders when no demand has been made by the attackers (or offer by the Defend[ers]). (*Flag of Truce, 5 Combat, p. 1013*)
 - Conversely, if no surrender demand is made, the attackers may not accept any surrender attempt. The position that owns the colony may or may not choose to respond to a surrender demand, and the Concierge may take that into consideration, along with the demand, in the whole context of the situation.

²² To say that surrender determination is made by the Concierge is a procedural rule, it is the same as if a rule says, in x situation, a die is rolled and if the die roll is this, this happens, if not, then this happens. Stating that the Concierge shall determine surrender is the same in a procedural sense as the die roll rule example. In GGDM, the Concierge is part of the procedural rule, not outside of it; this is consistent entirely with the GGDM approach that the Concierge is another 'position' in the game, who has actions called Interventions, and participates in the story and is not just an 'administrator' or 'bookkeeper' and is not beyond the fourth wall.

- The attacker and defender both represent the wishes and will of their position's *interstellar government* and to a larger extent, their civilizations. As such, in many games, the attacker and defender would act unrealistically in the view of the people on the ground, especially in certain old games where population is just numbers to produce warships. The Concierge in this situation must think about and represent the people on the ground, the *local view* of the situation, their own capabilities, what they believe to be true or likely, and to a larger extent, consider the story arc of the game. (*Battles Without, Battles Within, 5 Combat, p. 1013*)
- One or both sides can call an armistice during any ongoing combat situation by submitting Combat Orders to do nothing on their side. Orders to not attack in a combat are risky, because the other side could still fire and do other actions in the Combat Round. The Concierge will not enforce any supposed armistice by refusing to process firing orders or other actions; the armistice – whether unilateral or agreed – is the problem of the players. Units which are not given orders will still defend themselves against Fighters and Missiles and are not automatically hit by enemy attacks (they can still dodge and maneuver). Ground Units may be considered to be still defending. (*Armistice, 5 Combat, p. 1013*)
 - Orders to do nothing are still orders, therefore, this would prevent the defender from activating the Combat Power to Seize the Initiative (see 3 Combat, p. 971, *supra*). The Concierge may need to adjudicate if this is being abused or doesn't make game sense. Units ordered to do nothing still need supplies and that could be a factor.
- For game purposes, colony surrenders are assumed to be unconditional and will be treated that way by the Concierge. If the parties made some agreement limiting the conditions of the surrender, it is up to them to do or not do, to enforce or try to cajole or threaten each other to obtain compliance with the terms of the surrender. This is consistent generally with the way diplomacy is handled in GGDM, see Greys Diplomacy, 1 Diplomacy, p. 1097, *infra*. (*Unconditional Surrender, 5 Combat, p. 1014*)
 - Surrender of colonies in GGDM should be and *must be considered unconditional* for game purposes.
- The Concierge cannot – and will not attempt to – make a position surrender or become a vassal to, or be annexed by another position. These are larger game story arc issues for the position players; positions may sue for peace or continue fighting until extinction, none of which requires any communication with, involvement, or Intervention by the Concierge. Positional morale is the state of the players. (*Kalderan Surrender, 5 Combat, p. 1014*)
 - Admittedly however, there is a point in game circumstances at which the two possibilities could merge: That is, if the last world owned by a position were under attack, and the decision by the Concierge as to whether the colony surrenders is also a decision as to whether the position becomes politically extinct (see Countdown to Extinction, 1 Resolution, p. 1462, *infra*) in the game. Theoretically, positional extinction should have no bearing on the Concierge's appreciation of the plight of the colony.

Pacification Combat (aka 'hearts and minds' and dead civilians):

- As mentioned in Converted Colony, 2 Order, pp. 539-540, *supra*, there are three processes for converting a Conquered Colony: Conversion via activation of the Order Power for that purpose, and Pacification Combat or Orbital Bombardment, or a combination of both. Pacification Combat requires:
 - 1) Ground Units on,
 - 2) A Conquered Colony, and
 - 3) Activation of the Combat Power for the purpose of Initiate Combat at that location.
 - In order to be a Conquered Colony, the colony must have surrendered and been 100% occupied ... we've already discussed that.
 - Ships and Ground Units that participate in Pacification Combat or Orbital Bombardment have a chance of *apostasy*, see Alieneys Apostasy, 3 Disruption, p. 283, *supra*. (*Making War for Peace is Like..., 6 Combat, p. 1020*)

- Due to the time periods represented by GGDM Regular Turns, Pacification Combat can only be initiated on the Regular Turn *immediately following the surrender of the colony*. The decision must be made, troops present. Each colony may only be subject to one Pacification Combat each time it is conquered. The Order Power may not be activated at the colony for the *purpose of Conversion* on the same turn as the Pacification Combat. The Pacification Combat lasts one round, is one sided, and no Combat Orders are required. (*Peace in Our Time, 6 Combat, p. 1021*)
- There are three steps to resolving a Pacification Combat. The first step is to determine the Suppression Value. Suppression Value is the total RP value of the conqueror's Ground Units that are occupying the colony, plus half the value of all supporting Fighter Complements on Carriers in the system, plus 1 for each 1st Era Warship, 4 for each 2nd Era Warship and 9 for each 3rd Era warship of the conqueror in the system, *not* counting Carriers as warships in this case. (*Resistance is Futile, 6 Combat, p. 1022*)
 - For example, the conqueror has 15 RPs of Ground Troops, 30 RPs of Fighters, two 2nd Era Warships and a 1st Era Warship. The Suppression Value is 39.
- After determining the Suppression Value, the Concierge must assign a Resistance Value. The Resistance Value is the total population remaining, divided by 10, plus one half for each defending Ground Unit that remained at the time of surrender or occupation, and total number of remaining Fighters at the time of conquest divided by 10. To this, the Concierge will add a number between 1 and 10 based on judgment, where 1 represents little will to resist, and 10 represents fanatical resistance. Factors include cultural and political considerations of the two cultures, attitudes, possibility of later liberation, and events of the recent combat, such as urban destruction, Orbital Bombardment, how long the Ground Combat lasted, etc. Again, the Concierge is in the position of *representing generally, the people on the ground*. (*You Will Be Assimilated, 6 Combat, p. 1022*)
 - Continuing the previous example, the colony has 90 population factors after a massive battle; there were more before the battle. $90 \div 10 = 9$. There were also two defending Ground Units remaining, which adds 1, and 10 RPs of Fighters remaining, which adds 1 for a total of 11.
 - Population released from disbanding defending Ground Units counts for both the total population and for the extra resistance value from defense veterans.
 - Fractions are rounded up.
 - The Concierge then determines that 4 is a good number here, so the Resistance Value is 15 ($11 + 4 = 15$).
- There are three possible outcomes to a Pacification Combat, determined by the final number. (*Fabrication of Order, 6 Combat, p. 1022*)
 - If the final suppression number is less than (but not equal to) *one third* of the population, an ***insurgency*** has developed on the colony.
 - If the final suppression number is greater than or equal to *two thirds* of the population, the colony has been successfully converted and becomes a *Converted Colony*.
 - Any result between these two is a suppression result. Put another way, if more than two thirds of the population are against the conquerors, there is an insurgency, if two thirds of the population accept the conquerors, the colony is Converted, any other result is a suppression.
- An insurgency result has no immediate effect, but the colony is tagged with an insurgency and the Resistance Level assigned by the Concierge (e.g., Insurgency-8). The insurgency level will decrease by one per Turn Cycle under normal circumstances but may gain levels by Interventions or subsequent player actions; the insurgency is a story element which provides opportunity for Concierge Interventions, and possibly affects subsequent Special Operations Black-ops and Counter-Operations at the colony (e.g., Irish Republican Army-Abwehr collaboration 1937-1943). (*Fabrication of Order, 6 Combat, p. 1022*)
 - A suppression result means that armed resistance has been militarily crushed, aiding later Conversion attempts (see Conversion, 3 Order, p. 554, *supra*).

- The Suppression and the Resistance Values are converted directly into population factors that have taken, passively accept or are sympathetic to each side. It is irrelevant if the two numbers add up to more than the total population of the colony. (*Occupation of Haiti, 6 Combat, p. 1023*)
 - Continuing the previous example, the Suppression Value of 39 means that 39 of the 90 population factors have been suppressed at this point; while the Resistance Value of 15 means that 15 population actively resist or are sympathetic to the resistance.
 - This means that 36 of the population have not sided ($90-39-15 = 36$) or at least, have not been actively suppressed (e.g., passive-aggressive resistance).
 - Thereafter, random numbers are separately determined (i.e. dice are rolled), the first between 1 and the Suppression Value – which is added to the suppressed population, and the second between 1 and the Resistance Value – which is added to the Resistance Value – the total of which is then subtracted from the total suppressed population.
 - Continuing, a random number between 1 and 39 is generated for the conqueror, the result is 26, which is added to the Suppression Value of 39, meaning that 65 population have been suppressed.
 - A random number between 1 and 15 is generated for the resistance, the result is 9, which is added to the 15 Resistance Value ($15+9 = 24$) and the total is subtracted from the total suppressed population of 65, leaving 41 population suppressed.
 - The Final Number, representing the amount of population that has been pacified, is then compared to the population of the colony to determine if the Pacification Combat results in a Conversion, suppression or insurgency (*ut supra*).
 - In the example, 41 population out of 90 have been suppressed, thus less than two thirds, but more than one third, of the colony's 90 population factors have been suppressed, the final result of the Pacification Combat is a Suppression.
 - If the resistance had rolled a 15 and the conquerors had rolled a 1 ($1 + 39 = 40$), the conquerors would have lost suppression on 30 population, reducing their share to 10 population, an insurgency result. If the conquerors rolled a 30 and the resistance rolled a 1, the conquerors would have gained 29 population to 94 population suppressed (the entire colony), an automatic Conversion.²³
- If the majority of the units present used to calculate the conqueror's Suppression Value have their Epistemological Constructural Element currently inactive, Enlightenment may not be used in the Pacification Combat. The Conquered Colony never receives the benefit of Enlightenment in the Pacification Combat (i.e. the former owner cannot supply Enlightenment). (*See-Through Fabric, 6 Combat, p. 1024*)
- It is an open question in GGDM whether Pacification Combats can convert a colony where Conversion Attempts would be blocked by the Concierge due to *acute alterity* (see Incurable Acute Alterity, 3 Order, p. 556, *supra*). In terms of timing, Pacification Combats occur before regular Conversion Attempts, and thus a ruling may not have been made by the Concierge; however, rulings may have been made previously and precedent may dictate that the target colony may not be Converted. In order to initiate a Pacification Combat, however, the colony must have either surrendered or been 100% occupied; if the former is the case, it may indicate some level of understanding and less acute alterity. If the colony has simply been 100% occupied – for example, humans storming a giant beehive (to loot the honey!), then it may be determined that Pacification Combat is also blocked from either suppressing or Converting the colony. (*Genocide, 6 Combat, p. 1024*)
 - Acute alterity simply brings the matter to the point of discussion in GGDM. Thus, any Pacification Combat could intentionally or unintentionally, partially or in the whole, turn into a genocide or massacre. This is territory for Concierge Interventions. If a normal Pacification Combat attempt is underway, any population factors killed in the genocide or massacre should both reduce

²³ [*clap, clap, clap, take a bow!*] I don't know what it was about this section, but I seem to recall that I screwed up the math several times and finally after several botched and bungled attempts, like Hume's (Philo's) "stupid mechanic," got it right.

the entire population of the colony and still count for the resistance. (*Speciesism, 6 Combat, p. 1025*)

Suicide Attacks and Last Stands (*Resist et Mords*):

- GGDM *does not prohibit suicide attacks* either by regular forces or by insurgents/resistance forces, as long as the attacks are legitimately based on the culture of the Native Population Type in the game and circumstances, and not merely on the desires of the position players at the moment. This will be a determination for the Concierge to make *as representative of the local commanders* in the story. This determination can be made in any combat situation or in Special Operations Black-ops or Counter-Operations. If positions wish to employ suicide attacks in GGDM, they must build a political-ideological culture that supports it, as the Meiji regimes did, with all the consequence that entails. (*Go Tell the Spartans, 6 Combat, p. 1027*)
 - Of necessity, this discussion only applies to suicide attacks, and not desperation defenses or the choice to die rather than surrender or flee. The distinction easily becomes fuzzy, but rarely are *suicide defenses* discussed in the same manner as suicide attacks, rather, they are praised as *heroic last stands*...
 - Of necessity, this discussion applies only to sapient opponents; that is to those who can consciously choose to be solely famous for dying.
- It is also possible within the technology milieu of GGDM for civilizations to develop planet self-destruct... (*Osterhagan & Corbomite, 6 Combat, p. 1030*)
 - Whether and when either occurs in the game is at the discretion of the Concierge (but must be initiated by the position players), taking into account the story, plus relevant political and cultural factors of the position; it should never be an easy decision.
- GGDM makes no assumption ... on the age (or relative species maturity level) of warriors or soldiers being led or sent into combat. To do so would require that GGDM assume that the ‘aliens’ are all human or human-like (including childhood, maturation, age of majority), and that all have modern (Western) ‘sensibilities.’ Like many aspects of GGDM, it is there when the participants look. Some groups of participants may prefer games without moral or ethical dilemmas. But as an adult discussion of civilization, GGDM is a pragmatic exercise and must address these issues without averted gaze. See discussion of Pragmatic Ethics, 3 Order, p. 551, *supra*. (*Pragmatic GGDM, 6 Combat, p. 1032*)

Ramming and Boarding Combats:

- GGDM makes no provision for and does not envision ramming combat, but it might be ... whether as a suicide attack or eject-and-pick-up.... If it occurs in the game, the participants will need to ‘wing it’ on the rules and the Concierge should only allow it to occur if it fits the story and the position’s civilization (e.g., Kamikazes). It cannot occur out of the blue... (*For the Babylon Bobs, 6 Combat, p. 1028*)
 - GGDM makes no provision for ship boarding combat either. Of course, *à la* Star Trek, Babylon 5, Andromeda, Star Wars, etc., technology and abilities may develop that would potentially allow ship-boarding combats. If a boarding situation arises in the game, I suggest it be handled as a Black-op (see 2 Special Operations, p. 1297, *infra*) within the ongoing Combat where the SOMs and operational expenditure represents special boarding teams and equipment. In short, GGDM often has better provisions for a special or unusual action in Special Operations.

Ambushes in Space:

- The main tactical ability that T-Ships and warships equipped with “cloaking devices” have in a three-dimensional, open space combat is the ability to physically ambush, and to do so continuously even in the midst of a huge fleet battle. (*Ambush Combat, 7 Combat & 4 Temporal Technology, p. 1036*)
 - The ambush and surprise ability of T-Ships and “cloaked warships” is a physical ability to appear out of nowhere (or seemingly) in the middle of nowhere, and fire at very close range, and then to disappear again for a time, and do it again elsewhere.

- The essence of the Temporal Ship is an ambush in open space. Consider, with the detection capabilities inherent in GGDM (see *Riding the T*, 3 Temporal Technology, p. 828, *supra*, and *One-Way Mirror*, et. seq., 2 Information, p. 1340, *infra*), how difficult it is to ambush in open space? (*In Open Space*, 7 Combat & 4 Temporal Technology, p. 1036)
- T-Ships and cloaked warships are assumed to be in Ambush Mode in combat unless they have either voluntarily revealed themselves (like an exhibitionist in a store window), or have been prevented from returning to Ambush Mode. Ambush Mode is when the ship is operating invisible to regular ships (and to the naked eye), and are maneuvering and ready to reveal and fire at the opportune moment (i.e. Ambush). (*Ambush Mode*, 7 Combat & 4 Temporal Technology, p. 1038)
- T-Ships and ‘cloak-equipped’ regular warships may not ambush in a Combat Round if they have revealed for any reason. Of necessity, any ‘cloaking technology’ introduced into the game for regular warships must be able to be turned off (i.e. reveal), to allow the ship to resupply. T-ships and warships with cloaking devices turned on (i.e. in Ambush Mode, not revealed) may not maintain a siege or guard a Conquered Colony by *themselves* as visible presence is necessary for both tasks (but could remain in Ambush Mode if other friendly regular warships are present). (*Ambush or Ambush Not*, 7 Combat & 4 Temporal Technology, p. 1038)
- T-Ships attacking from Ambush Mode receive three Offensive Shifts (see *Combat Shifts*, 3 Combat, p. 978, *supra*) against targets that do not have Temporal Sensor technology (see *Temporal Sensors*, 2 Temporal Technology, p. 820, *supra*) or are not in the same system with friendly ships, colonies, or bases that have a Temporal Sensor Array. The presence of a Temporal Sensor Array or ability reduces the ambushing attacker to receiving one Offensive Shift when ambushing. Cloaked warships attacking in Ambush Mode receive one Offensive Shift. Temporal Sensors are probably ineffective against cloaked warships, but there may be other technologies that can detect cloaking (always an arms race!). Ship Missiles fired by T-Ships and cloaked regular warships in Ambush Mode, do not receive any ambush benefits (unless they are cloaked/T-shifted too!). T-Ships and cloaked warships in Ambush Mode **may not be Intercepted** by any units Combat Screening the target (see *Normal Interception and Second Interception*, 3 Carriers & Fighters, pp. 1069-1070, *infra*), including Fighter Complements, unless they have a Temporal Sensor. (*Ambushwhacked*, 7 Combat & 4 Temporal Technology, p. 1038)
 - It may be possible to create Ambush Mode for one Combat Round for regular ships by use of Doctrinal Templates (see *Combat Formations*, 4 Colleges, p. 503, *supra*) developed for that purpose. This would represent the regular sort of ambush based on terrain or ideas (like faking damage and debris, à la Star Trek OS), *ut supra*. The ambush should not be automatic in a Doctrinal Template, but if successful, Ambush Mode is enabled for one Combat Round, and these rules provide general procedures for ambush by Doctrinal Template, though there may be some small necessary differences. There are other possible tactics that act like ambushes, for example, meeting engagements that quickly become envelopments (e.g., Braddock’s defeat near Pittsburgh in 1755, or the Battle of Ia Drang in Vietnam, 1965) may seem like ambushes.
- Like *Combat Screening for Fighters and Carriers*, *Protective Fire* and Switch Fire naturally developed as a defense against ships in Ambush Mode. The idea is to ‘ambush the ambushers’ by having a specific ship assigned and waiting for the ambushers to appear:
 - A unit assigned to Switch or Protective Fire for the Combat Round must be assigned a unit which it is protecting, the unit can be itself or another ship or base.
 - Ship Missiles and Fighters may not participate in or be used in Switch Fire or Protective Fire assignments. Ship Missiles cannot be fired while in Protective Fire mode.
 - A unit assigned to Switch or Protective Fire may not be also assigned to Combat Screen any unit, including the same unit. Those are two different tasks.
 - Units given Switch Fire Combat Orders must also list one normal opposing unit as the target for the Combat Round (in addition to the unit it is protecting).
 - A unit assigned to Protective Fire will do nothing else for the Combat Round.

- Whenever an opposing unit in Ambush Mode attacks the protected unit, the unit with Switch Fire or Protective Fire Combat Orders must respond by firing at the ambusher before it can disappear again and change speeds or vector.
- Firing at, hitting, or destroying the attacking T-Ship or cloak-equipped unit will not prevent that unit from executing its attack this Combat Round. Protective and Switch Fire is opportunistic instant retaliation. Sort of like my mother's famous backhand.
- T-Ships and cloaked warships in Ambush Mode may not be attacked by opposing ships and bases except by units with Protective Fire or Switch Fire Combat Orders.
- T-Ships and cloak-equipped units may not be assigned to Switch Fire, they may only be assigned to Protective Fire, as they are primarily ambushers.
- T-Ships and cloak-equipped regular units in Ambush Mode may not target opposing T-Ships and cloak-equipped regular units currently in Ambush Mode, *except by* Switch Fire or Protective Fire. (*Asymmetric Warfare, 7 Combat & 4 Temporal Technology, p. 1039*)
- Any unit assigned to Protective Fire has a 50% chance of being able to fire at the first attacking ambusher if the protected target is attacked. The chance is increased by 25% if the ambusher attacks a unit assigned to Protective Fire. Units assigned to Protective Fire will only be able to fire at one ambush attack in the Combat Round unless that unit is capable of multiple attacks per Combat Round and will attempt to fire at ambushers as long as it has unused attacks. A unit in Protective Fire cannot fire Ship Missiles. If the unit with Protective Fire Combat assignment is Engaged by enemy Fighters or Ship Missiles, the chance of executing the Protective Fire is reduced by 15%, 30% or 45% depending on the Era of the attacking Fighters (see *Encounter With Bright Lights, 2 Carriers & Fighters, p. 1057, infra*). (*Aegis, 7 Combat & 4 Temporal Technology, p. 1040*)
- Any unit assigned to Switch Fire follows the same rules as Protective Fire above, but may fire Ship Missiles and the basic chance of being able to fire at an ambusher is 30%. All available attacks of the Switch Fire unit will be used on ambushers until exhausted. If, during Ship Missile resolution, the Switch Fire protection has not been activated, the unit in Switch Fire will fire at the assigned regular enemy target instead, but that target receives two Defensive Shifts as a result of the divided attention of the attacker. (*A Twitch 'n for a Switch 'n, 7 Combat & 4 Temporal Technology, p. 1040*)
 - If an attacking ambusher is not destroyed by Switch or Protective Fires, the ambusher returns to Ambush Mode at the end of the Combat Round.
- Ships that began the round in Ambush Mode may automatically retreat from any Ship Combat at the end of any round in which *they do not attack unless* they were forced to reveal to defend a colony to cancel a Colony Combat. If the only ships remaining on one side are all in Ambush Mode and they all retreat, the combat is over; the other side will be notified. (*Slip-sliding Away, 7 Combat & 4 Temporal Technology, p. 1041*)

Fighter Area Patrol (A FAP in the Night):

- Another tactic is to use Fighter Complements in the Fighter Area Patrol (FAP) 'combat reconnaissance' assignment. Fighter Complements may be assigned to FAP to attempt to curb the effectiveness of enemy ambushers and/or provide intelligence and pressure on enemy dispositions. A FAP assignment uses *both sorties* of a Fighter Complement for the Combat Round (see *Blacksheep, 2 Carriers & Fighters, p. 1054, infra*) and a Fighter Complement flying FAP may not be targeted by enemy units and may not target enemy units. The essence of the FAP is that nothing covers an area of space better than a circus swarm of fast little Fighters spread thinly sweeping the area with their sensors continuously, providing intelligence on elusive targets (e.g., the Battle of Midway, June 1943). They also provide a skirmish line, pickets, and sufficient threat to channel enemy ships away from flanking areas. (*A FAP in the Night, 7 Combat & 4 Temporal Technology, p. 1041*)
 - A Fighter Complement flying FAP may either provide one Defensive Shift or Offensive Shift to a friendly unit, or increase the chance of a successful Protective Fire Attempt by 10% per 15 RPs of Fighters (*of any Era*) used during each Combat Round (this number can be adjusted if too

easy). This latter is not a combat shift, but instead, applies to the *chance* of using the Protective Fire when a target appears.

- Any unit may only receive one Defensive or Offensive Shift from FAP in any round, and Combat Shifts from FAP must be allocated with the targeting and Combat Screening assignments before the Combat Round.
- Similarly, a unit assigned to Protective Fire may only receive one bonus from FAP per round. This is not available to Switch Fire assignments.
- FAP may also be used in non-Ambush Mode situations, as it provides one shift to regular units. Thus, this is available in all combats where a side has some fighters available. For simplicity purposes, the RP value of the Fighter Complement performing FAP is irrelevant, but both sorties must be used. No modification of RP value is received for using both sorties. (*A FAP in the Night, 7 Combat & 4 Temporal Technology, p. 1041*)

Carriers & Fighters (Combat Power)

- Fighters are the classic very small, agile, fast, and maneuverable combat spacecraft used for attack, raid, bombing, and reconnaissance. In human terms, they usually have one or two crew members – pilot and/or pilot and co-pilot. (*Fighters, 1 Carriers & Fighters, p. 1046*)²⁴
 - All Fighters in GGDM are assumed to be space *and* atmospheric capable, no distinction is made on this point. Fighters have limited life support and little armor, their best protection is small size, agility, acceleration, and speed (like a common housefly). It must be assumed that Fighters possess significant operational range in-system, for combat and patrol purposes, but lack interstellar flight capability. It must also be assumed that Fighters possess sufficiently powerful weapons to destroy other Fighters, and to pose a threat to the starships when attacking in mass.
- Fighters may be constructed at any Friendly, Converted, or Naturalized Colony by activation of the Construction Power for the purpose of Colony Enhancement, after obtaining the 1st Era Fighters Existential Patent. Construction of Fighters includes training pilots and ground crews, along with support and maintenance equipment. (*On the Flight Deck, 1 Carriers & Fighters, p. 1047*)
 - Fighters are an Enhancement Technology, therefore, they cannot exist by themselves as a ‘game unit’; Fighters must always either be part of a colony’s defenses or on a Carrier, where they can operate, or stored onboard a Logistical Ship where they can be transported and transferred to a colony or Carrier, but cannot operate. A position is not required to have Carriers to own Fighters, and vice versa. Fighter Complements on colonies *may initiate and join combats* in their system, *making their colony equal to an armed system boat in that sense*.
 - A newly constructed Fighter RP is ‘ready to fight.’ Within GGDM, Fighters are assumed never to be without pilots and ground crew, as they must either be attached to a colony or Carrier starship.
- *All Fighters of an Era* attached to a unit or colony location form a single Complement, a single location can have multiple Era complements. A Fighter Complement is a unit in combat, even though it is a colony or ship enhancement, see Colony Defense Bases, 2 Combat, p. 954, *supra*. Fighters are combat units capable of initiating combat (unlike Defense Bases). (*On the Flight Deck, 1 Carriers & Fighters, p. 1047*)
- Existing Fighters cannot be ‘upgraded’ upon passing to the next Era; 1st Era Fighters will always be 1st Era Fighters. Positions are free to design and produce variations and different types of Fighters via Patents, and to add Enhancements if possible, and Fighters can benefit from some Continuous Operational Technologies as well. However, to obtain the benefit of the 2nd and 3rd Eras, each position will need to develop a new, next generation Patent for 2nd and 3rd Era Fighters each. (*Next Generation Fighters, 1 Carriers & Fighters, p. 1048*)

²⁴ Carriers are useless – would not develop – without fighters, any discussion of Carriers & Fighters must start with Fighters.

Carriers:

- A Carrier is a highly specialized type of warship (see definition of warship in GGDM, Warships, 1 Combat, p. 941, *supra*) designed to transport and support the operation of large numbers of Fighters: The Fighters become the main weapon of the Carrier; a Carrier without Fighters is a very poor warship indeed. (*Carriers, 1 Carriers & Fighters, p. 1049*)
 - First Era Carriers may be built **to a maximum size of 100 RPs** at any eligible colony with an Orbital Shipyard after obtaining the 1st Era Carrier Existential Patent.
 - The development of Carriers and Warships is parallel, upon passing to the 2nd Era, positions will need to develop a 2nd Era Carrier PIT Patent just as they would or might develop the 2nd Era Warship PIT Patent.
 - A position is not required to have the 1st Era Warship Existential Patent to obtain the 1st Era Carrier Existential Patent; a position is not required to have any Warship Patent before having any Carrier Patent. But you still need a stardrive and ship systems.
 - First Era Warships cannot carry Fighter Complements, however, it is possible perhaps, that an Enhancement Patent could be made to allow Warships to carry Fighter Complements, or that at some point, Carriers and Warship designs might merge for some positions, or cross over, but Fighter Complements will always be an afterthought on an Era Warship and will not be supported or operate as well as they would on a true Carrier.
- Fighters do not exist separately (have no OSL), Fighter Complements are measured in RPs, for example, a colony or Carrier might have 30 RPs worth of Fighters. A colony may have a maximum of 1 Fighter RP for each population. The size and capacity of Carriers is also measured in RPs. Thus, when the Construction Power is activated for the purpose of Laying Keel for a Carrier, the Actions *must specify the size of the Carrier in RPs*, half of which will be due ‘up front.’ In the 1st Era, a Carrier may carry a Fighter Complement whose value is half the size/value of the Carrier; for example, a 60 RP Carrier could carry 30 RPs of Fighters (later Eras may improve this ratio). The Fighter Complement of the Carrier is *not* included in the construction cost of the Carrier, they must be constructed separately and transferred to the Carrier (see 3 Construction, p. 675, *supra*). (*How Big is Your Flight Stick?, 1 Carriers & Fighters, p. 1050*)
 - Fighter Complements are not ‘units’ in GGDM, they are enhancements, the GGDM units are ships (and System Boats), colonies and in many senses, Ground Units and sometimes Technological Devices. This, there is never a check to see if Fighter Complements obey a Power Activation, instead, Fighter Complements are part of their Carrier or Colony and checks are made as to either the Carrier or Colony. Similarly, whether Fighter Complements can benefit from Enlightenment in Combat is based on the status of the Epistemological Constructural Element of their Carrier or Colony (see Skool Tyme, 2 Constructural Elements, p. 190, *supra*). Fighter Complements are never considered to have their own Constructural Elements.
- Upon arrival in a starsystem, the Carrier’s Fighters are ready to launch if necessary, thus there is no delay in deploying the Fighters into combat if the Carrier initiates combat or is attacked. Getting the Fighters back onto the Carrier and out of combat though – while being chased and shot at – is more problematical. (*Carrier Operations, 1 Carriers & Fighters, p. 1050*)
 - Carriers may retreat with or without their Fighter Complement. If a Carrier chooses to retreat while the Fighters are still attacking or Combat Screening another ship, the Fighters are left behind. However, if the Fighters are Combat Screening their Carrier on the Combat Round that it successfully retreats, the Fighters land on the Carrier and retreat with the Carrier.
 - This same rule may not apply to Tender starships retreating with System Boats (whether armed or not) but it depends on what is envisioned and what is involved in securing System Boats to the Tender for interstellar FTL jump. Securing System Boats may require a Combat Round and then the Tender may retreat the next Combat Round. Or the Tender might just retreat and leave the

armed System Boats behind, especially if there is a supporting colony in the system. It's a grey area at the judgment of the Concierge and participants.

- If a Carrier is destroyed in Combat, its Fighter Complement is not automatically destroyed as the Fighters were already deployed, or could escape. Fighters without a Carrier, for any reason, may continue to fight one more Combat Round. Some or all of the orphaned Fighter Complement may be transferred to another Carrier or Colony if they have the capacity to receive them. Any Carrier-based Fighter Complement or any part of a Carrier-based Fighter Complement that cannot be transferred after one Combat Round, are lost. (*Space Debris, 1 Carriers & Fighters, p. 1051*)
- Carriers do have the ability – albeit poor – to fire directly at other ships, colony Defense Bases or civilian targets. A Carrier that is firing directly cannot be Combat Screened on the round that it is firing (and thus is vulnerable to return fire), and the target receives two Defensive Shifts (that is, the Carrier's chance to hit is reduced by 20%). Carriers cannot be attacked by Defense Bases in a Colony Combat unless they direct fire in the same Combat Round; they may be targeted by the defenders, however, just in case they do. Carriers may always be attacked by Fighters and Ship Missiles in a Colony Combat. (*Carrier Direct Fire, 1 Carriers & Fighters, p. 1051*)

Blacksheep (Fighter Combat Resolution):

- Fighter attacks are always *resolved first* in the Combat Round. *Each Era Fighter Complement* has two attacks (hereafter “Sorties”) per round, either the same enemy unit is targeted twice or two enemy units are targeted once each. When an Era Fighter Complement targets two different enemy units and/or colony defense enhancements, the Complement must be split and therefore, the entire force of the Complement will not be used on each target (i.e. no ‘double duty’). Unless informed otherwise, the Concierge will assume that the Complement is being split in half and resolve each attack that way. When a Fighter Complement places both of its sorties on one target in a round, each sortie attacks at three quarters (75%) of the full strength of the Complement due to concentration and coordination; this is called a Concentrated Attack. The **‘cardinal rule’** of Fighter attacks throughout these rules, is that they are resolved individually by *sortie*. (*Blacksheep, 2 Carriers & Fighters, p. 1054*)
 - For example, a Fighter Complement of 40 RPs from a single Carrier (this would be a large 1st Era Carrier, 80 RPs cost) attacks two targets (one sortie each), so each target would be attacked by 20 RPs of Fighters, but if both sorties were sent to attack one target (the sky would darken if space wasn't already dark), each sortie would attack with enhanced value, as 30 RPs of Fighters.
 - When Fighter and Ship Missile attacks are resolved, they will be resolved in the order provided. See Combat Resolution, 3 Combat, p. 976, *supra*.
 - As noted in Army of Light, 2 Colleges, pp. 479-480, *supra*, positions may decide *each Combat Round* not to use Enlightenment during Fighter attacks and Enlightenment cannot be used for Ship Missiles.
- As Fighter Complements are measured in RPs, so is Fighter Combat resolved based on the RP size of the attacking Complement. For each Fighter *sortie*, a ten sided die is rolled, and the result divided by ten. The Effectiveness Roll result is multiplied by the size (in RPs) of the attacking Fighter Complement, and the result is converted directly into a percentage chance to hit. (*Fighter Combat, 2 Carriers & Fighters, p. 1054*)
 - Finally, an Era multiplier of 1.5 for 1st Era Fighters, 2.5 for 2nd Era Fighters, and 3.5 for 3rd Era Fighters is applied to arrive at the final attack chances. This Era multiplier must be part of the Effects section of the Era Fighter Patents. Final result fractions are truncated.
 - For example, 50 RPs of 1st Era Fighters are sent to make a *concentrated attack* on a 1st Era Orbital Defense Base. The Effectiveness Roll of the first sortie is 7, which is .7 when divided by ten. The .7 is multiplied by the 37.5 RPs (75%), and converted to a percentage chance to hit, giving the Fighters a basic 26.25% chance of success. When the 1.5 First Era multiplier is applied, the final attack chance is [a] 39% [chance] of success.

- If the position has elected to not use Enlightenment in Fighter attacks, the Effectiveness Roll cannot be rerolled as a “failed die roll” (see *Army of Light and Harsh Mistress*, 2 Colleges, p. 479, *supra*). It is most likely that most Enlightenment used in Fighter attacks will be used in Effectiveness Roll rerolls rather than attack rerolls. This, again, is an area where technology and Doctrinal Templates may be usefully applied. It’s also a judgment call.
- Fighters are subject to all of the applicable Era differential Shifts as well (see *Combat Shifts*, 3 Combat, p. 978, *supra*) at +/- 10% per Era. It is possible that a combination of high Effectiveness Roll, a large Fighter sortie, and Era Multipliers might put the odds over 100% (but still resolved at 99%) or less than 1% (but still resolved at 1%).
- Continuing the previous example: If the 1st Era Fighters were attacking a 2nd Era Orbital Defense Base, the chance of success is 29% and against a 3rd Era Orbital Defense Base, the chances for the 1st Era Fighters drop to 19% due to defensive shifts.
 - If 3rd Era Fighters were attacking a 1st Era Orbital Defense Base, they would receive +20% in Era differential shifts, plus their 3.5 Era multiplier, probably resulting in a nearly automatic success.
- The first successful attack on a target by Fighters “Engages” the target. Engaged means that 15% times the Era of the attacking Fighters is subtracted from the chance of success of whatever the target was instructed to do for the turn (i.e. attack, retreat) to a maximum of 45%. Era differential shifts are not applied, so 1st Era Fighters have the same effect against any Era target. So, any target attempting to retreat from combat, which is Engaged by 1st Era Fighters, has only a 35% chance of successfully escaping. (*Engaged*, 2 Carriers & Fighters, p. 1055)
 - Engaged is not a “hit” (see *A Hit*, 3 Combat, p. 979, *supra*), the target is not destroyed. But it does serve as a sort of partial ‘target disruption,’ p. 1057, *ut infra*.
 - Engaged results from Fighters do not carryover to the next Combat Round.
 - If a Fighter Complement is sent to attack two targets in the same round, the best result that can be hoped for would be that both targets would be Engaged and the chance of either result is lessened significantly by the division of forces. However, Engaging enemy units can be a valuable tactical ability reducing their ability to do anything in a Combat Round and forcing them to potentially use Enlightenment rerolls during the round (see *Harsh Mistress* and *Army of Light*, 2 Colleges, pp. 478-479, *supra*).
 - An Engaged ship may still retreat if it makes a successful roll. Retreats occur after Fighters and Missiles.
- A target cannot be Engaged twice in the same Combat Round. A second successful attack on the target by any Fighter Complements [*or Ship Missiles*] in the same Combat Round results in a hit and the target is destroyed (see *A Hit*, 3 Combat, p. 979, *supra*). However, as combat is considered simultaneous (*Id.*), all units get to fire – or try to do whatever they were assigned – regardless of whether or not they are destroyed; therefore, a unit that is hit by Fighters was Engaged first, and the Engaged result applies to the unit’s last fire before being removed. (*A Hurt*, 2 Carriers & Fighters, p. 1056)²⁵
- Note that a unit may be Engaged by Fighters and Ship Missiles (see *Fire-and-Forget*, 4 Carriers & Fighters, p. 1080, *infra*) an infinite number of times, as long as Fighters or Ship Missiles do not score a second success against it in a Combat Round while it is Engaged (the LOB and RISP stats in baseball) and it is not destroyed by any other means. (*A Home Run*, 2 Carriers & Fighters, p. 1056)
- Positions may choose to not use Enlightenment in their Fighter Attacks. The game mechanical reason is because two successes are required for a Fighter Attack to score a hit on a non-Fighter target (i.e. ship or

²⁵ A situation not specifically addressed in the rules: If an ‘engaged’ unit is hit and destroyed by another regular (non-Fighter) in Combat, it is simply destroyed. That it was engaged previously is irrelevant to hits and destruction by other non-Fighter, non-Ship Missile attacks; however, the ‘engaged’ result will still affect that unit’s orders for the turn it was destroyed, including possibly firing at the unit that destroyed it!

base) as opposed to attacks by other units in a Ship or Colony Combat that require only one success to score a hit. (*Encounter with Bright Lights, 2 Carriers & Fighters, p. 1057*)

- However, see Web of Night, 2 Colleges, pp. 477-478, *supra*, for discussion of application of Faculties to drone fighters.

Close-in Defense ('down in flames'):

- Close-in Defense Weaponry are systems originally designed to repel asteroids and space debris that have been adapted and refined to ward off Fighter attacks (alert, flimsy premise). There is no Patent for Close-in Defense Weaponry, ships, bases, and boats automatically have Close-in Defense Weaponry installed when they are constructed. (*Close-in Defense Weaponry, 2 Carriers & Fighters, p. 1058*)
 - Of course, Close-in Defense Weaponry on a ship is very much like Defense Bases on a colony, it cannot go out and attack the Fighters, the system can only fire in defense when the ship is attacked. Positions may develop Patents to improve the operation of Close-in Defense Weaponry systems.
 - Having Close-in Defense weapons does not make any ship a warship; they are defensive weapons only and do not grant the ability to initiate combat. Close-in Defense Weapons do not create a credible threat to anything but attacking Fighters. [*and Ship Missiles*]
- Whenever *any* ship or base is attacked by Fighters it will automatically return fire with Close-in Defense systems, regardless of the result of the Fighters' attack. Close-in Defense will automatically fire whenever the unit is attacked by Fighters or Ship Missiles, and however many times are necessary in a Combat Round, regardless of whether the ship owner has submitted Combat Orders or whether the ship is involved in the combat. Each ship or base attacked gets one Close-in Defense Fire at all of the attacking Fighters, divided into *attempts*. Close-in Defense Fire does not prevent or substitute for the unit's regular attack or activity, if it is still capable of making one. A ship or base attacked by Fighters gets one attempt to hit every unadjusted 10 RPs of attacking Fighters (rounded up) at *half* of the ship or base's normal chance to hit based on Era (see Combat Shifts, 3 Combat, p. 978, *supra*), and the sum of all attempts to hit is the Close-in Defense Fire of the unit in that instance. Engaged results on the target unit do not affect Close-in Defense rolls and Era differential shifts are applied *before* halving. (*Tail of the Gunner, 2 Carriers & Fighters, p. 1059*)
 - For example, a 3rd Era Warship (base chance 70%) would have a 35% chance to hit every 10 RPs of 3rd Era Fighters.
 - All Shifts are applicable to Close-in Defense fire at Fighters (see 3 Combat, *Id.*), *before halving*, for example, a 3rd Era Warship firing at attacking 1st Era Fighters would have a 45% chance to hit every 10 RPs of 1st Era Fighters.
- Based on the 'origin' of Close-in Defense Weaponry (*ut supra*) the game assumes – strictly for convenience – that all ships have it, including non-warships (e.g., Cargo Ships, Log Ships, Colony Ships). There is probably no reason for Orbital Platforms, other than Defense Bases, to have it and certainly unfinished ships will not have Close-in Defense Weaponry. However, as non-Warships cannot initiate combat, it is suggested that non-Warships defend in Close-in Fire as *Era Warships*, but the Fighters receive one Defensive Shift. (*Tail of the Gunner, 2 Carriers & Fighters, p. 1059*)
- For purposes of Close-in Defense Fire, only actual RPs of attacking Fighters is used, not enhanced RPs from Concentrated Attacks. This makes a big difference:
 - For example, a Carrier with 40 RPs of Fighters sends both sorties to attack one Defense Base. Each sortie is 20 RPs, but because it is a Concentrated Attack, each sortie attacks at 30 RPs (three quarters of the total value of the Fighter Complement). However, Close-in Defense Fire only gets four attempts to hit (40 RPs divided by 10) and not six attempts to hit (60 RPs divided by 10) because only the actual RP value of the attacking fighters (not the enhanced value) counts. (*Counting Whale Tails, 2 Carriers & Fighters, p. 1059*)
- For each Close-in Defense success, one ten-sided die (1d10) is rolled, and the result is the number of RPs of Fighters lost to the Close-in Defense Fire. The die roll range is from 1-10, minimum damage is 1

RP. If the Fighter attack is a Combined Fighter Attack, the damage will be applied proportionally based on the contribution of each Fighter Complement to the total attack value. (*Down in Flames, 2 Carriers & Fighters, p. 1059*)

- For example, 60 RPs (actual, *ut supra*) of 1st Era Fighters attack a 3rd Era Warship. Regardless of the results of the Fighter attack, the target will get six Close-in Defense fire rolls, with a 45% chance to hit each time. With average luck, the target will hit three times, each time, destroying from 1-10 RPs of fighters. With the most extraordinary luck – six hits – the attacking Fighters could be nearly wiped out.
- ...*Enlightenment should not apply to Close-in Defense fire.*
- Carriers have a special love-hate relationship with Fighters; Carriers have superior Close-in Defense Weapons to ward off counter attacks by enemy Fighters. As such, the Carrier's base chance to hit in Close in Defense Fire is the same as a **regular warship** of the same Era – applying Era shifts and *not halved* – and when the damage die is rolled for a successful Close-in Defense Fire hit by a Carrier, one is added to the die roll if the Carrier is 1st Era, two is added to the die roll for a 2nd Era Carrier, and three is added to the die roll for a 3rd Era Carrier. However, the total damage from any single Close-in Defense damage die roll can never be greater than 10 RPs. (*Battle at Planet Midway, 2 Carriers & Fighters, p. 1060*)
 - Continuing the example, if the target were a 3rd Era Carrier, the Carrier would have the same chances to hit as the 3rd Era Warship against a normal target, but would receive +3 on the damage die roll for each hit, with a max result of 10. Thus the minimum damage for each roll is 4 RPs. Likely, the 1st Era Fighters will be decimated.
- Fighter Complements cannot be hit if they don't attack or intercept in the Combat Round, unlike regular units and colony defense enhancements that can be hit in any Combat Round by virtue of being in the Combat. (*Areal Phenomenon, 2 Carriers & Fighters, p. 1062*)
 - Thus, Fighter Complements assigned to FAP cannot be hit, see A FAP in the Night, 7 Combat, p. 1041, *supra*. FAP is an *alternative use* for Fighter Complements.
 - Fighter Complements cannot be directly targeted by enemy units in any Combat (including normal Orbital Bombardment, but can take proportional losses), instead, they may only be fired upon by Close-in Defense Fire when they attack or are Intercepted by warships, or by other Fighters via Interception and Dogfighting (see 3 Carriers & Fighters, pp. 1069-1070, 1072, *infra*). Any ships transporting the Fighters may be targeted normally in any appropriate Combat.

Combined Fighter Attacks (it's a real gangbang!):

- Two or more Fighter Complements may combine for one or two sorties on any single target. When Fighter Complements combine, the largest Fighter Complement will automatically be designated the Primary (*unless* the Concierge is otherwise instructed) and all others will be considered Supporting. In calculating the attack, the Primary Complement is taken at full value, while each of the Supporting Complements is added at half value. (*En-Masse, 2 Carriers & Fighters, p. 1064*)
 - For example, two Fighter *sorties*, one 50 RPs and the other 30 RPs are combined to attack a 1st Era Warship as one *combined sortie*. The 50 RP sortie will be the Primary, and the 30 RP sortie will be added to the attack at half value, for a total attack equaling 65 RPs of Fighters for one *sortie*.
- If the Combined Attack is also a Concentrated Attack (i.e. both sorties are placed on one target), only the Primary receives the Concentrated Attack bonus. Each sortie is calculated individually. To receive the Concentrated Attack bonus, the Primary must have dedicated both of its sorties to one target, but the supporting Fighter Complements may be split and may participate in either or both sorties on the target (*sans* bonus). (*The Other Shoe Just Dropped, 2 Carriers & Fighters, p. 1064*)
 - Thus, if the Fighter Complement making a Concentrated Attack during the Combined Attack is not the largest Complement, the position should specially designate it the Primary (*ut supra*). Failure to do so nullifies the Concentrated Attack bonus.

- In the above example, assuming the Primary Complement dedicated both of its attacks to the target (i.e. a Concentrated Attack), but the Supporting Complement only contributed its second sortie, the first sortie would attack (alone) with 75 RPs at three-quarters of the value of the full 100 RP complement and the second Combined-Concentrated Attack, would be at a value of 90 RPs (75 RPs plus 15 RPs from the supporting Complement which did something else with its first sortie).
- c.f., if the Complements didn't combine, they could have had two attacks at 50 RPs and two attacks at 30 RPs on any targets, uncombined.
- A combined Complement acts as one Complement for Close-in Defense Fire purposes, noting that losses from Close-in Defense Fire will be proportioned. Only one Effectiveness Roll will be made for each Combined Attack *sortie*. (*Daffy Duck Shoot, 2 Carriers & Fighters, p. 1064*)
 - Continuing the above example, the actual value of the attacking fighters is 130 RPs on that target (that is, 100 RPs from the Concentrated Attack of the Primary Complement and 30 RPs of the Supporting Complement on the second sortie), so the target will get 13 (130 divided by 10) attempts at Close-in Defense Fire against the Concentrated and Combined Attack.
 - The Concierge will not combine Fighter Complements attacking the same target unless instructed in the position's Combat Orders.

Combat Screening:

- Combat Screening is a formation where one or more ships, Fighter Complements, System Defense Boats, or System or Orbital Defense Bases are assigned to protect another unit by intercepting any attempt to attack the protected unit, or at least placing themselves between the attacker and the target. (*Combat Screening, 3 Carriers & Fighters, p. 1067*)
 - Orbital Defense Bases may only Combat Screen Orbital Cities, Orbital Defense Bases, Orbital Shipyards, keels (i.e. unfinished ships) and ships that have taken shelter at the colony.
 - Fighters may Combat Screen anything.
 - Warships may only Combat Screen other ships, including Cargo Ships and Colony Ships attempting to reach a Besieged Colony.
 - Cargo Ships, Colony Ships, Log Ships, Scout Ships and unarmed System Boats, or any ship or unit with no attack ability (i.e. *ability to initiate combat*), may never Combat Screen another ship or Defense Base because they pose no credible threat to the attacker.
 - Combat Screening of or by Ground Units and Fighters in Ground Combat was discussed previously in Dropping In, Ground Combat Resolution, and Air Attacks in Ground Combat, 4 Combat, pp. 991, 993, 996, respectively, *supra*. Obviously, the unit screening another unit must have the *ability to initiate combat in the theater of operation* (see Keep Your Friends Close, Your Enemies Closer, 3 Combat, p. 972, *supra*), thus Ground Units cannot Combat Screen units in non-Ground Combat situations.
 - Prior to resolving the first Fighter Attacks, the Concierge (or computer assistant) will need to look at the orders issued by each position and determine which units are being Combat Screened and by whom on each side. Thus, the order in which Combat Screening actions are listed should not matter in the round, but it would probably be best practice to group them near or at the top of the position's Combat Orders.
- All Combat Screening assignments must be included in the Combat Orders sent to the Concierge each round; Combat Screening assignments do not carryover from round to round, therefore, the Concierge must be informed of Combat Screening assignments each Combat Round. (*Bugs on the Screen Door, 3 Carriers & Fighters, p. 1068*)
 - A ship, Defense Base or Fighter Complement assigned to Combat Screening cannot do anything else for the Combat Round; they cannot attack (except with Ship Missiles, see First Fire, 4 Carriers & Fighters, p. 1080, *infra*), or attempt a retreat (exception, Fighters Combat Screening their retreating Carrier, see Carrier Operations, 1 Carriers & Fighters, p. 1050, *supra*): their assigned

target for the round is the unit they are protecting. All Combat Screening actions must include the specific unit (*not group, type or class, not "I am screening all Log Ships"*) that is being protected, generally, specific Carriers, Tenders, Troop Transports (especially those joining a Colony Combat), Cargo Ships, Colony Ships, and Log Ships, orbital platforms, boats, and keels will be protected by Combat Screening. A unit assigned to Combat Screen *cannot be itself Combat Screened by other units!*

- Fighter Complements may either Combat Screen one target and Intercept two attackers per Combat Round, or may divide to Combat Screen two targets and each part will only have one Intercept for the Combat Round. Fighter Complements cannot target other Fighter Complements normally, but Fighter Complements intercepting attacking Fighter Complements results in a Dogfight (p. 1072, *ut infra*) between Fighter Complements (resolved one *sortie* at a time). As in Fighter Combat (see Blacksheep, 2 Carriers & Fighters, p. 1054, *supra*), Fighter Complements executing Combat Screens are resolved separately by sorties, however, the combat action of the Fighter Complement for the round is to Combat Screen, i.e. a Fighter Complement cannot divide its two sorties, with one Combat Screening and one attacking normally, it is doing one or the other. (*Fighter Screens, 3 Carriers & Fighters, p. 1069*)
- Carriers are not prevented from launching their Fighters to attack targets by being Combat Screened by others. One form of Carrier fleet tactics might be a 'buddy system' where one Carrier's Fighter Complement Combat Screens another Carrier whose Fighter Complements attack the enemy or screens other units. Regular ships also might protect the Carrier from non-Fighter attacks while its Fighters attack the enemy. (*Buddy-Buddy, 3 Carriers & Fighters, p. 1068*)
 - When a target is being Combat Screened by both Fighter Complements and non-Fighter units, the Concierge (or game program) will do his best to assign the best protector to each attacker as they come in order. For example, if a Fighter Complement and one other warship is protecting a Carrier, the warship would not be sent to intercept an opposing Fighter Complement trying to attack the Carrier. If only Fighter Complements attack the Carrier, the warship may never have an intercept opportunity. There are some decisions, such as Interceptions, that may be made by the Concierge (or game program) during processing, without consulting the position players.
- A colony may be Combat Screened as one unit by Fighter Complements only against Raids or Strike Combats. All attacking Fighters will be automatically intercepted by the Fighter screen and the interception will be resolved as one Dogfight (p. 1072, *ut infra*). Half of the attacking Fighters that survive the Dogfight may immediately execute the Raid or Strike on the colony. (*Colony Screens, 3 Carriers & Fighters, p. 1069*)
 - Defense Bases may not Combat Screen a colony, but may Combat Screen things in orbit at the colony. Ground Bases may not Combat Screen but may be Combat Screened by Fighters only in Colony Combat. Orbital Bases may only Combat Screen other orbital platforms and ships and boats at the colony planet (p. 1067, *ut supra*). System Bases may only Combat Screen ships and boats at the colony. Defense Bases cannot intercept Fighters.

Interception (without a pick six!):

- A ship, Defense Base or Fighter Complement assigned to Combat Screen a target will move to Intercept the first unit *that it is capable of seeing and hitting* that attempts to attack the target. T-Ships in Ambush Mode *may not be Intercepted*, see Ambushwhacked, 7 Combat, p. 1038, *supra*, unless the Interceptor has a Temporal Sensor. (*Normal Interception, 3 Carriers & Fighters, p. 1069*)
 - In an Interception situation, the Interceptor will fire first, regardless of status as the attacker or defender in the combat.
 - If the Interceptor successfully attacks the attacking unit (in ship or base vs. ship, a "hit"; in Fighter Complement vs. ship, an "Engaged" result), the attacker is stopped and may only fire at the Interceptor (the attacker's Combat Orders will automatically be changed to fire at the Interceptor), which may be sacraf... expendab... uh, destroyed. If the Interceptor does not successfully attack the attacker, the attacker has broken through the Combat Screen and may fire at the

target. However, the target receives one Defensive Shift due to the efforts of the Interceptor. All attacks on the target are resolved together after all Interception attempts.

- Attackers Intercepted by an Orbital Defense Base receive one Defensive Shift against the attack of the Orbital Defense Base (due to mobility disparity).
- There is *no die roll* for Interception, it happens automatically; the only criteria is whether the Interceptor could credibly threaten the attacker with destruction. Thus, Enlightenment will never be used to cause or avoid an Interception, nor will Interceptions be prevented by pre-Interception Engaged results on the attacker from Fighter attacks, but of course, a second Engaged result from Intercepting Fighters will not only stop the attack, but destroy the attacker. Enlightenment re-rolls may play a critical role in successful Interception by increasing the Interceptor's chance to hit the attacker and protect the target (if Fighters were allowed to use Enlightenment that round), while pre-Interception Engaged results against the Interceptors will lessen their chances of hitting. There are many combined arms dynamics at work.
- Because both sides issue Combat Orders independently before the Combat Round is resolved, regular warships assigned to Combat Screen other ships may be attacked before or after (depending on the order of processing) moving to Intercept other attacking regular warships (but it's all simultaneous, so it doesn't matter anyway). Regular warships assigned to Combat Screen other ships may also be attacked by Fighters and Engaged during the Fighter portion of the Combat Round, which reduces their chance of a successful Interception of regular ships. But they will get a Close-in Defense Fire at the Fighters in any case. This whole process can be very dynamic.
- A ship or base that fails to Intercept the first attacker may attempt to Intercept a second attacker against its target unit, *if the target unit of the screening has not been destroyed*. A Fighter Complement that is not divided between Combat Screening two separate targets, may always attempt to Intercept additional attackers until it successfully Intercepts a second attacker. A Fighter Complement that is assigned to Combat Screening may never use both of its sorties on the first Interception. Therefore, the only possible result of a successful Interception by a Fighter Complement is an Engaged result stopping the attacker. (*Second Interceptions, 3 Carriers & Fighters, p. 1070*)
 - This is the point to remember that Combat Orders are processed in the order listed. The Interceptors act automatically, taking the first comer and the second comer if they are able. They may be drawn off by smaller ships before the big ship punches through to attack the target. There is, of course, a cost to this and tactical circumstances where that option will not be available. And a tactical counter – an entire fleet can be set to protect one or two ships if they think the attacker is going after them.
- Regular ships (incl. Carriers) and bases assigned to Combat Screen a target may not intercept attacking Fighter Complements. The fast, agile, numerous Fighters just spread out and go around the lumbering interceptor (like you trying to intercept a swarm of bees). Only Fighter Complements may intercept attacking Fighter Complements. (*Nolo Contendre, 3 Carriers & Fighters, p. 1070*)

Dog Fighting (getting in your licks!):

- Dogfighting is just “close in defense” combat between Fighter Complements. Opposing Fighter Complements only meet head-on during Combat Screening when one Fighter Complement intercepts the other (that is, when they are pinned down to attacking and defending a specific point in space). (*Dog Fighting, 3 Carriers & Fighters, p. 1072*)
 - A Fighter Complement assigned to Combat Screen automatically Intercepts an attacking Fighter Complement, and since Fighter attacks are resolved first, this may soak off the Fighter screen for other attacks on the target later in the Combat Round.
 - Combat Screening Fighter Complements may intercept up to two attacking Fighter Complements (i.e. *sorties*), and each will be separately resolved as a Dogfight, but the Screening Fighter Complement will be divided in half.

- Upon assigning a Fighter Complement to Combat Screen, the owner of the Fighter Complement may instruct that, in the case of a Dogfight, the Combat Screening Fighter Complement only engages in one Dogfight at full strength, thus giving up the “second intercept” ability for that Fighter Complement in the current Combat Round.
- Dogfights are resolved in sorties; the RP value of the incoming Fighter Complement’s sortie vs. the Intercepting Fighter Complement’s sortie. Thus, a single sortie of intercepting Fighters cannot Dogfight both sorties of a Concentrated Attack from a single or combined Fighter Complement. However, it is possible that both sorties of a Concentrated Attack might be met – individually – by intercepting Fighters in Dogfights. (*Two Eyes, 3 Carriers & Fighters, p. 1073*)
- Fighter Complements engaged in a Dogfight automatically hit each other, it’s just a question of damages. Each side rolls one ten sided die for every 10 RPs worth of Fighters *on their side* (i.e. not the value of opposing Fighter RPs like in Close-in Defense Fire) at the beginning of the Dogfight. The sum of the die roll results is the amount of RP damage done to the opposing Fighter Complement. Obviously, the larger Fighter Complement is usually going to get more die rolls and will probably do more damage (i.e. get in more licks). One RP of damage is added to each die roll by the higher Era fighters for every Era difference between the Fighter Complements engaged in the Dogfight and damage can exceed 10 RPs per roll (note, this is different than regular Close-in Defense Fire). (*Four Fangs, 3 Carriers & Fighters, p. 1073*) [**remember 4th gen F-16 vs 2nd gen Zeros dogfight scene in Countdown (1982)?**]
 - For example, an attacking *sortie* of 50 RPs of 1st Era Fighters is met by a Combat Screening sortie of 30 RPs of 2nd Era Fighters. The Fighters automatically intercept, no roll is made to see if they hit (i.e. they automatically hit). Because of the automatic hit by both sides, the attacking Fighter Complement’s attack on the target is *stopped* and diverted to the Dogfight. The attackers will get 5 die rolls for damage and the interceptors will get 3 die rolls for damage but add one to each die roll; each attacker die roll will do a minimum of 1 RP damage to the interceptors, each interceptor die roll will do a minimum of 2 RPs damage to the attackers.

Torpedoes at Trafalgar (Ship Missiles):

- Ship Missiles are an Enhancement Technology that may be added to warships and Orbital or System Defense Bases (but not Ground Bases) after obtaining the Ship Missile Existential Patent. Ship Missiles are a one-shot, expendable Enhancement, which may be replaced by manufacturing and transferring missiles from a colony using activations of the Construction Power for Colony Enhancement (to build) and Ship Supply (to transfer). Log Ships may also carry replacement missiles which can be resupplied in combat (see Combat Resupply, 4 Movement, p. 868, *supra*). Ship Missiles do not gain from Era progression, like Fighters, new generations of missiles will be required for the 2nd and 3rd Eras via new Patents. (*Torpedoes at Trafalgar, 4 Carriers & Fighters, p. 1079*)
 - Ship Missiles are measured in RPs, like Fighter Complements. Unlike Fighter Complements, a unit may fire less than its full Ship Missile attack in any Combat Round, until all are expended. A normal warship can carry Ship Missiles with an RP value equal to half of its basic construction cost (not total cost, see Laying Keel, 3 Construction, p. 675, *supra*) and Carriers can carry Ship Missiles equal to one third of their basic construction cost. System Bases have extra capacity, they may carry 30 RPs of Ship Missiles (equal to 2/3 of their basic construction cost).
 - A 1st Era Log Ship can carry enough Ship Missiles to reload a 1st Era Warship.
 - As discussed in ABBA Arrival, 2 Information, p. 1340, *infra*, Ship Missiles will not automatically be detected by anyone seeing the ship, but may be detected if the other position engages in Surveillance at that location. Knowledge of the presence of Ship Missiles, even if not used in the Combat, may significantly affect the choices made.
- Ship Missiles can be put on *any warship or base*, but are *one shot*. The combination of Ship Missiles and Fighters can be a deadly, expensive, tactic. (*Fighters vs. Ship Missiles, 4 Carriers & Fighters, p. 1079*)

- A ship or Orbital or System Defense Base armed with Ship Missiles may fire some or all of its missiles at one or more targets in any Combat Round in addition to its regular attack or action (except Combat Resupply). Thus, a unit that is Combat Screening another unit or retreating, may fire Ship Missiles. Ship Missiles, however, do not execute their attack until the *end* of the Combat Round, *before retreats*. The unit firing the Ship Missiles does not need to survive the Combat Round for the missiles to attack (i.e. 'fire and forget'). (*First Fire, 4 Carriers & Fighters, p. 1079*)
- Ship Missile attacks are resolved like Fighter attacks, including Effectiveness Rolls, except that Close-in Defense fires first, *unless* the target has already been Engaged earlier in the current Combat Round by Fighters or prior Ship Missiles. (*Fire-and-Forget, 4 Carriers & Fighters, p. 1080*)
 - Ship Missile attacks from each source against one target are *resolved separately*, as if they were a Fighter *sortie* (e.g., the 1979 movie Meteor), in the order listed in the Combat Orders; it will take missiles from two enemy units to instantly destroy an unengaged target. Ship Missile sorties may not make concentrated or combined attacks.
 - Missile RPs destroyed by Close-in Defense fire are removed *prior* to resolving the Ship Missile attack, but any remaining missiles will attack the target.
 - Successful attack results from Ship Missiles are cumulative with other successful Fighter/Ship Missile attacks; a previously engaged target can be destroyed.
 - A Ship Missile attack may Engage the target or destroy a previously-Engaged target, and, unlike Fighters, Engaged results from Ship Missile attacks *carry over to the next* Combat Round *to the end of the Fighter attacks resolution* (i.e. not to the end of the Combat Round, not to the next Ship Missiles resolution or retreat attempts).
 - As Ship Missiles destroy themselves in the attack, there is no Close-in Defense fire after the attack; units that were Engaged before the attack will not get any Close-in Defense Fire against Ship Missiles.
 - *Ship Missiles may never use Enlightenment!* (duh!) But that's negotiable, of course.
 - *Ship Missiles may never be used against Ship Missiles or Fighters.* But that can be fixed, of course. It is possible to develop variant Ship Missile technologies.
- The owner of the unit engaged by Ship Missiles at the end of the Combat Round will know on the beginning of the next Combat Round that the unit begins Engaged already. This likely will affect what that unit does in the next Combat Round, as first, its chances to hit are reduced by being Engaged, and second, any successful attack by Fighters in the Combat Round will destroy the unit that began Engaged. Combat Screening the unit may not be an option, but then again, neither might charging after a Carrier or other unit that [is] likely to be screened an option, unless there is no choice. (*Already Engaged, Don't Ask, 4 Carriers & Fighters, p. 1080*)
 - Because Ship Missiles attack at the end of the Combat Round, there are two situations in which they should be used: 1) if the firer thinks that the enemy ships will likely survive the round and try to retreat, and the firer doesn't want them to get away, and 2) if the firer thinks the combat will last more than one round or will continue into the next round. Ship Missiles are less effective if the Combat ends in one round or ends on the round they are fired, with all units of a side destroyed. Judgment calls. Risks. *[you may also want to shoot before your ship is destroyed!]*
- Ship Missiles may not be fired at Fighter Complements. But Fighter Complements assigned to Combat Screen the target, may, at the option of their owner, be preassigned to intercept incoming missiles during the round. This intercept is resolved at the end of the round, instead; Fighters not preassigned to intercept Ship Missiles may not attempt to do so. Fighters will automatically intercept missiles, and will damage missiles as if they were in a Dog Fight. The missiles will do no return damage to the Fighters. However, unlike a Dog Fight, *any missiles not destroyed by the Fighter interceptors will go on to attack the target* at the end of the Combat Round. (*Flying Telephone Poles, 4 Carriers & Fighters, p. 1081*)
 - For example, a 1st Era Fighter Complement with a 20 RP sortie is assigned to Combat Screen a ship against Ship Missiles. A sortie of 20 RPs of 1st Era Ship Missiles targets the screened ship.

The Fighters will automatically intercept the incoming missiles (i.e. automatically hit), and will receive two damage rolls against the incoming missiles, and will probably destroy about half of the missiles on an average result. The missiles will do no damage to the Fighters in return, but the remaining missiles will continue on to attack their target (as a Fighter attack).

- Since Ship Missiles are fired by **ships** (and other units) after all Fighter actions are resolved in the Combat Round, the Fighters assigned to Combat Screen a target against Ship Missiles may not simply switch to normal Combat Screening if no missiles are fired at their protection target. A game of rat and dragon is at hand!
- It is possible to build ships whose main and superior function is to launch massive missile volleys. It is possible to build a tactical system around heavy use of Ship Missiles; such ships would need to fire all in the first round and would be viciously targeted by the enemy. Gunnery is obsolete, most of the modern naval dirty work is done by missiles. (*Missile Ships, 4 Carriers & Fighters, p. 1081*)

World in Flames (Raid/Strike Combat):

- Raid and Strike combats are Fighter attacks, from a Carrier or colony, against civilian ground and orbital population and facilities without the need for Orbital Bombardment. *Only Fighters* may execute Raid or Strike Combat. Raid or Strike Combats, including against Conquered or Converted Colonies, requires a separate activation of the Combat Power to initiate combat and the units performing the Raid or Strike cannot be involved in another ongoing Combat, even against the target colony. All Raids or Strikes last one Combat Round and are thus completed at the end of the first Combat Round, freeing the attackers from commitment. Raid and Strike are very similar actions and thus are grouped here. The attacker must specify in their Combat Orders whether the attack is a Raid or Strike. (*World in Flames, 4 Carriers & Fighters, p. 1083*)
 - Raid Combat targets *civilian population and civilian facilities* on/under the surface.
 - “Raid,” as used in GGDM, is in the 20th Century sense of an air raid, not a raid of pillage, e.g., Looting, see 3 Commerce, p. 1210, *infra*.
 - Strike Combat targets *civilian orbital platforms* at the colony.
 - Thus civilian targeting distinguishes Raid/Strike Combat from normal Fighter attacks on Defense Bases in Colony Combat. Those are not treated as Raid/Strike Combats.
 - Colony-based Fighter Complements can raid/strike colonies sharing a Balkanized planet or possibly carry out interplanetary raid/strike. The effectiveness of the latter is dependent on technology and assumptions; whether the fighters have to spend months or a year flying to the target or whether in-system speed is such that the trip can be made in a few hours (like WWII) or even minutes (it takes light 3 minutes to reach Mars from Earth, whereas radio lag is 6 to 24 minutes).
 - As in Orbital Bombardment, the Native Population Type of the colony targeted by the Raid or Strike is irrelevant; however, there may be other consequences regarding legitimacy. See The Bomb, 2 Combat, p. 962, *supra*. Also, on a Balkanized planet surface, Raids may hit (accidentally, I am sure) other colonies, *Id.* p. 963. Doesn’t make the victims feel better, though.
 - Units involved in a combat cannot do anything else until one side is either completely destroyed or retreated (ending the combat), or the unit has successfully retreated from combat. Thus, attacking units in a Raid or Strike Combat cannot be involved in another combat even if there is an ongoing Ship or Colony Combat. The defenders however, of existential necessity, may and must defend against the Raid or Strike even if currently engaged in a Colony or Ground Combat at the target colony.
- Civilian installations can include Technological Devices, Colleges, Institutes, and Corporate or Mega-Corporate Headquarters hosted on the colony surface, as well as, the usual Industry. Industry and Technological Devices might be destroyed. However, because of what is represented by Colleges, Institutes and Corporate/MegaCorporate Headquarters in GGDM, these should never be allowed to be destroyed by anything that doesn’t also eliminate the entire host colony, probably hits on those installations should result in a one Regular Turn suspension of the associated College, Institute, or Corporation. (*Collateral*

Issues, 4 Carriers & Fighters, p. 1084) [see also discussion of collateral damage to Ground Bases/Ground Units in Raid Combat]

- Upon initiation of the Raid/Strike Combat, the owner of the target colony will be informed. There is very little for the defender to do, no Combat Orders to issue (Combat Screening is automatic, next page, *ut infra*) so the only decision to be made and timely communicated to the Concierge is whether or not the Defender is using Enlightenment in defense. No Power activation is required to use Enlightenment in defense. Enlightenment cannot cause the enemy to reroll successes (see Army of Light, 2 Colleges, p. 479, *supra*) but can contribute to reducing incoming Fighters, mitigating damages, or causing greater damage to the attackers. The defender will not be informed if the attack is a Raid or Strike. (*Do-Little, 4 Carriers & Fighters, p. 1084*)
 - Timing is key within the Regular Turn Cycle. The Defender should not be allowed to delay responding regarding Enlightenment commitment so that they can take their next Regular Turn before the Raid/Strike is resolved, but should have 24 hours to respond if possible depending on the timing of the attack whereas the attacker should also carefully consider the timing of the Raid/Strike combat initiation. Attackers may want to attack either before or immediately after the target's Regular Turn, and may use Combat Alert, see DefCon 1, 1 Combat, p. 946, *supra*, to Initiate Combat.
- Any colony that is the target of a Raid/Strike Combat will automatically be Combat Screened by the Fighter Complement based on the colony, unless the Fighter Complement is currently issued other Combat Orders. If the Fighter Complement was assigned to Combat Screen anything in orbit at the Colony, it will automatically Combat Screen the colony instead. However, if the colony-based Fighter Complement is participating in a Ship Combat or attacking targets in a Colony or Ground Combat, it will not automatically Combat Screen the base colony. If friendly Carriers with Fighter Complements are currently in the system and are not involved in Combat, Fighter Complements from the ships may be assigned to Screen the colony, even if it has its own Fighter Complement. (*Hammerheads Rising, 4 Carriers & Fighters, p. 1085*)
 - The potential strategic threat of a Raid/Strike by units not involved in an ongoing Ship or Colony Combat may prevent colony-based Fighter Complements from joining or initiating Ship Combat in friendly systems.
- Colony-based Fighter Complements may Intercept and Dogfight (see 3 Carriers & Fighters, pp. 1069-1070, 1072, *infra*) incoming attackers before Close-in Defense Fire. The Dogfight is resolved as normal, except that any surviving attackers will continue the Raid/Strike attack after the Dog Fight, penetrating to the colony to deliver their deadly cargo. (*Areal Knights, 4 Carriers & Fighters, p. 1085*)
- After all Interceptions and Dogfights are resolved, each Orbital Defense Base has a 40% chance of firing at the attacking Fighters, and if able to fire, may execute *one* Close-in Defense Fire. This is different from normal Close-in Defense fire – one attempt is not made for every 10 RPs of attacking fighters, instead, each firing Orbital Defense Base gets one attempt regardless of how many Fighters are attacking. Era shifts apply. On a success, 1d10 RPs of attacking Fighters are removed before they can execute the Raid or Strike. (*Under Your Desk, 4 Carriers & Fighters, p. 1085*)
 - Example, a target colony has ten 1st Era Orbital Defense Bases. On average, 4 of the Orbital Bases will be able to fire once each at the attacking 1st Era Fighters in a Raid or Strike. Each will destroy 1 to 10 RPs of attacking Fighters before they execute their Raid or Strike mission. On average about 20 RPs of Fighters will be destroyed.
 - If a Raid originates from the surface of the same planet, as on a Balkanized world, the Concierge may determine that Orbital Bases are unable to fire at the attackers.
 - System Defense Bases are considered too far out to affect Fighters executing a Raid/Strike; System Defense Bases are mainly intended to defend against enemy warships and Fighters (an areal phenomena) can go around them. Ground Bases are too close to the target to be effective, though they do play a role in this process later.

- After Orbital Defense Base Close-in Defense, the attackers proceed to their target. (*Fire Fall, 4 Carriers & Fighters, p. 1086*)
 - If the attack is a Strike, the attacking Fighters must have had assigned in the Combat Orders specific civilian orbital platforms (i.e. Orbital Cities, Orbital Shipyards or Keels) as their target and the Fighter Attacks are resolved normally against those targets. After the Fighter attacks are completed, the Fighters return to their origin (or to a safe landing place) and the Strike Combat is over (automatic retreat). Era Shifts are applied using the current Era of the Colony Defenses and *civilian target shifts* also apply (see Colony Defense Era Upgrade, 2 Combat, p. 954, and Combat Shifts and Civilian Targets, 3 Combat, both p. 978, *supra*).
 - Engaged results matter little in Strike Combats, therefore, it is probable that the Fighters will use Concentrated Attacks against civilian orbital targets to achieve destruction of the targets. Failure to destroy the targets could be a result of any combination of losses from enemy fire and fighters, area denial around the target, Era shifts, or poor effectiveness.
 - If the attack is a Raid, each 5 RP of Fighters remaining destroys 1-3 population or 1-3 *civilian* installations on the target colony. The chance of destroying either population or installations is even, a roll is made to see what is hit (50% chance of either) and then to see how much is destroyed. If installations are hit, the destroyed civilian installations are determined randomly, unless the attacker has developed some ability to target specific installations.... Without developing special ability to do so **and** advanced intelligence on the target (and/or someone on the ground to paint the target with a laser, e.g., Battle: Los Angeles (2011)), the attacker may not specify which installations are being attacked.
 - When there is a 50% chance of either hitting population or industry, there is no 'failed roll' condition that will trigger an Enlightenment reroll if any is available. If positions, however, develop technology or doctrinal abilities that will allow greater percentages favoring targeting either one, then Enlightenment rerolls might be possible. On the second roll option, if Enlightenment is available, any result of less than 3 would trigger a reroll (see Harsh Mistress, 2 Colleges, p. 478, *supra*).
- After the damage from the Raid has been determined, there is a 25% chance that each Ground Base at the colony will be able to fire Close-in Defense at the attackers in the same way as the Orbital Bases did previously (p. 1087, *ut supra*). Era shifts apply based on the current Defense Era of the colony. For every 5 RPs of attacking Fighters destroyed in this way, there is also a 50% chance of negating one of the Raider's hits (chosen randomly). This does not apply to Strike combats. (*Giv'n Them Some Flak, 4 Carriers & Fighters, p. 1087*)
- It is possible to eliminate a surface colony by Raid damage and population and installations on Orbital Cities destroyed by a Strike are lost. For each *surface* population or installation lost due to Raids, there is a 50% chance of the planet losing one Maximum Habitability and a loss of one Habitability Class for every 20 population reduction in Maximum Habitability (like Orbital Bombardment, In This Dust That Was a City, 2 Combat, p. 961, *supra*). As these are not combat rolls, Enlightenment committed to defending against a Raid cannot be used to reroll. Losses from Raids/Strikes are a Disruption Event (see Mars Bombing Run, 2 Disruption, p. 274, *supra*) at the target colony, and may cause loss of government legitimacy.²⁶ (*Collateral Damage, 4 Carriers & Fighters, p. 1087*)
- Ship Missiles may be fired at colonies in lieu of or in addition to Fighters in Raid and Strike Combats. As noted on p. 1082, *ut supra*, Fighters assigned to Combat Screen automatically intercept Ship Missiles if they have been preassigned to that task. If the Raid or Strike is being carried out solely with Ship Missiles, the Combat Screen will automatically be designated against Ship Missiles, but if both Fighters and Missiles target the colony, the defender will need to designate whether each sortie of the Combat Screen is being directed to Fighters or Ship Missiles. Other than that, all other rules (*ut supra*) for Raid

²⁶ **Consider:** Rome was bombed by the allies for the first time on May 16, 1943. On July 25, 1943, Mussolini's fascist regime fell, and on September 8, 1943, Italy surrendered to the allies. The damage to Rome was never comparable to the damage German cities took.

or Strike Combat remain the same with regards to Ship Missiles (except that none of the missiles are coming back, thus they don't execute a 'retreat'). (*Vengeance Weapons, 4 Carriers & Fighters, p. 1088*)

Diplomacy (Vital Power)

- Activation of the Diplomacy Power should not be confused with actual diplomacy. Players and positions are free to make whatever agreements they like to do or not do, which does not require activation of the Diplomacy Power. The Diplomacy Power is only activated for certain specific game purposes, where position diplomacy interacts directly with the game in ways that are outside the scope of the other rules. For example, two positions may agree to trade by unloading Cargo Ships at each other's colonies, which is well within the normal rules of the game, and so does not require an activation of the Diplomacy Power to make or execute the agreement. (*Diplomacy Power, 1 Diplomacy, p. 1095*)
- The Diplomacy Power may be activated for the following purposes:
 1. Accept Treaty,
 2. Articles of Incorporation (MegaCorporation only),
 3. Break Treaty,
 4. Form Meanings,
 5. Share Meanings.
 - Activation of the Diplomacy Power to Accept a Treaty or for Articles of Incorporation, or to Break a Treaty requires one Act and one Scene. The Scene must be on the Capital Colony of the position. Activation of the Diplomacy Power to form Meanings requires one Act, and an activation to Share Meanings requires two Acts. (*Diplomacy Power, 1 Diplomacy, p. 1095*)
- Note that unlike other Power Activations, activation of the Diplomacy Power for any purpose other than Form Meanings requires separate activations of the Diplomacy Power by all parties. Compare, for example, to other interactions, such as Combat, or Landing or Unloading Population or Cargo on **alien colony** planets, which require only the actor to activate Powers. Thus Diplomacy has a cost on both sides, using effectively two or more (depending on the number of parties) Power Activations to achieve one purpose. If one position activates the Diplomacy Power to, for example, Accept Treaty, and the other does not on its next Regular Turn, to complete the process, the Concierge may deem that the Treaty has been rejected peremptorily by the non-compliant would-be partners and the process *voided*. (*Table for Two, 1 Diplomacy, p. 1096*)
- There is no check to see if the Power Activation fails when the Diplomacy Power is activated to Accept or Break Treaty, inactive Constructural Elements cannot cause failure to obey the activation. Activation of the Diplomacy Power to Form Meanings or Share Meanings is checked against the current Constructural Elements of the Capital Colony since it is the people in charge whose meanings really *matter* in the moment. MegaCorporations are discussed later in 2 Corporations generally, *infra*. (*Stood Up, 1 Diplomacy, p. 1096*)
- A position whose Capital Colony *status* is suspended/disrupted due to an inactive Symbolic Constructural Element on the Capital Colony (see Waving the Flag, 2 Constructural Elements, pp. 190-191, *supra*) may not activate the Diplomacy Power *for any purpose* other than Form Meanings, in addition to being cut off from the Diplomatic Spaces (see Severed Dreams, 2 Diplomacy, p. 1121, *infra*). (*Stepping Out, 1 Diplomacy, p. 1096*)
- ... the Concierge will not enforce informal agreements within the game, so informal diplomacy in GGDM is wild and free. (*Greys Diplomacy, 1 Diplomacy, p. 1097*)

First Contact (a bump in the night):

- First Contact occurs when major races 'bump' into each other in the night for the first time in a game. Even though the starting locations and Homeworlds of positions may be known from the game setup process, this is not "First Contact." Positions are not in contact initially, unless otherwise specified. (*Bump in the Night, 1 Diplomacy, p. 1099*)

- There can only be one First Contact per game between any two positions, First Contact rules only apply to First Contacts between positions, therefore, the number of First Contact situations is limited to the number of other positions in the game, plus perhaps, any Special Positions controlled by the Concierge.
- ***See original GGDM text for discussion of the three possible situations that could occur during First Contact.***
- Although First Contact could theoretically occur by interstellar communications (or player communications), GGDM only contemplates in-game physical First Contact situations. (*Feeling Around in the Dark, 1 Diplomacy, p. 1100*)
- In order to have a First Contact, someone had to be moving. First Contact never requires activation of the Diplomacy Power by either position; it just happens as a matter of course. A First Contact situation lasts from the Regular Turn of the moving position that causes First Contact until the next Regular Turn of the moving position that caused First Contact. That way, both the non-moving position and the moving position have one opportunity, in the normal course of the game, to shape the First Contact by their actions. (*Close Encounters, 1 Diplomacy, p. 1100*)
 - The Diplomacy Power can never be activated to initiate interstellar movement, thus the Diplomacy Power can never be activated to initiate movement for the purpose of causing a First Contact. First Contact will likely be initiated, either intentionally or accidentally, by activation of the Expansion (Scouting, Transport Population, Landing) or Combat Powers (Combat Movement), *supra*.
 - If one side had a Combat Alert in the system or was moving by Combat Movement (see Move Out! and DefCon 1, 1 Combat, pp. 942, 946 respectively, *supra*), they could initiate First Contact by initiating Combat at the First Contact location, in which case, it should be called “First Combat.” It should be noted that this behavior may be *required* by certain Fundamental Realities (and/or legitimacy requirements of Government Titles); other positions are not required to (and generally should not) formally or informally reveal their Fundamental Realities or Government Titles, but participants should be cognizant and not take it personally between players or think the other position is intentionally being an interstellar-class jag-off.
- During each First Encounter, the Concierge will make one die roll for each side involved, for ‘entropy events’ (i.e. a ‘misunderstanding,’ ‘accident’). The basic chance of an Entropy Event occurring on either side during First Contact is...50%. A First Contact situation suggests that each race will put its best foot forward (even if that foot is currently stepping on someone else’s toes), and as such, positions may use Enlightenment *that was assigned to the Power Activation that caused the First Contact*, to attempt to prevent an Entropy Event on their side only (as a ‘failed’ die roll, see Harsh Mistress, 2 Colleges, p. 478, *supra*). This might be the case, for example, if Enlightenment was assigned to Scouting to reroll Hazards. (*Of the Third Kind, 1 Diplomacy, p. 1101*)
 - A ‘failed die roll’ in this occasion would be one where the result means that a *creatively* bad thing is going to happen to the side using the Enlightenment during First Contact. A failed die roll should be reflected in a suitable Intervention related to the First Contact so as to give it real meaning (‘reality’) in the game, rather than words.
- First Contact starts the official GGDM diplomacy between two positions. While the Concierge has no control over private player communications (conceivably two positions could ‘arrange’ a First Contact), two positions which have not had First Contact cannot enter into a Treaty, or form Articles of Incorporation, or form or share Meanings, that is, activate the Diplomacy Power for any purpose in relation to a non-Contacted position. (*Starchildren, 1 Diplomacy, p. 1101*)
- There may have been informal diplomacy between positions prior to First Contact; strictly within GGDM rules and to the Concierge, informal diplomacy is irrelevant. The game purposes of First Contact procedure are three dimensional: To provide an object for activation of the Diplomacy Power, to

establish the Diplomatic Space (keep reading...) and for story purposes. (*Government and the Greys, 1 Diplomacy, p. 1101*)

Treaties:

- A Treaty is an agreement between two or more positions, *and the Concierge*, regarding the game mechanical or game procedures for an exchange between positions or some multi-position activity in the game. The Concierge is not assuming the responsibility for enforcing treaties and agreements between players or between positions, and will not do so. Put another way ... players and positions are free to make whatever agreements they like; without activation of the Diplomacy Power for that purpose. (*Trick or Treaties, 1 Diplomacy, p. 1104*)
 - However, when an agreement requires some specific game mechanic or transfer between the positions which must be controlled by the Concierge, a Treaty, and the proper activation of the Diplomacy Power for that purpose, is required. The purpose of the treaty is to provide a game mechanic for interposition commerce and cooperation, such as corporations, exchanges of technology, semi-autonomous regions, multi-race colony planets, demilitarized zones, and so forth. The Concierge will only execute and interpret as necessary, the agreed upon mechanics, not 'enforce' the treaty.
- Articles of Incorporation are a special treaty by which positions may set up a multi-position corporation, which is called a MegaCorporation. The articles, similar to a treaty, are there to detail exactly what is being contributed to the MegaCorporation by each position, in what manner, how the MegaCorporation is to operate, and any other game issues that might arise in relation to the MegaCorporation. MegaCorporations are the meeting of Commerce and Diplomacy. See 1 Corporations generally, *infra*, for the creation and operation of Corporations, and 2 Corporations generally, for MegaCorporations. (*Articles of Incorporation, 1 Diplomacy, p. 1105*)
- Any position who is party to any Treaty or Articles of Incorporation for a MegaCorporation, may 'break' the Treaty by activating the Diplomacy Power for that purpose at any time. By breaking the Treaty, the position informs the Concierge that they will no longer participate in the Treaty, and the Treaty is destroyed as a result. (*Broken Arrow, 1 Diplomacy, p. 1105*)
 - The position breaking the Treaty should not provide any reason to the Concierge, as it is irrelevant why the Treaty is being broken. However, the only Interpretation allowed to satisfy the activation of the Diplomacy Power for the purpose of breaking a Treaty is a News Event announcing that the Treaty has been broken.

Diplomatic Spaces:

- The Diplomatic Space is a 'public space' that is shared between two positions by virtue of their diplomatic relationship. The Diplomatic Space between any two positions connects to and is considered an extension of each position's *Public Space*. Diplomatic Spaces are built in blocks, with each block having one Monad which is equivalent to and functions like any Monad on the position's normal Public Space. (*First Space, 2 Diplomacy, p. 1116*)
 - Upon completing First Contact, each position receives one Diplomatic Space Monad which is designated the First Space. This permanently establishes the Diplomatic Space between the positions, regardless of subsequent events.
 - The First Space stands alone and is not initially connected to the other position's First Space until more substantive contacts exist between the positions; however, the First Space will always exist after First Contact, and serves as the only contact point between the Diplomatic Space shared by the positions and its own position's Public Space.
 - The two First Spaces are always placed opposite each other on the Diplomatic Space; initial placement must leave space for one Monad between them. Regardless of changes that must occur later, they must remain opposite each other by a direct line of Monads between them. They may move farther apart as the Diplomatic Space expands.

- The First Space will always be considered *adjacent to the position's Capital Colony*. During any time in which there is no Capital Colony or the Capital Colony status has been suspended (see *Waving the Flag, 2 Constructural Elements, pp. 190-191, supra*), the First Space is not adjacent to anything on the current Public Space. Anything on the First Space or connected through it, is then disconnected from the Public Space during that time.
 - “Disconnected” simply means that nothing traces or connects through the First Space to the Public Space; “Disconnected” does not automatically mean non-existent or unavailable. There is a grey area here where the Concierge must make rulings on the availability and use (or “actualization”) of disconnected pieces in the Diplomatic Space (*ut infra*).
- Any Pieces may be laid on the First Space as they would on any other space on the Public Spaces.
- Anything that could be put on the Public Space can be put in the Diplomatic Space except the Capital Colony, which must always (of game mechanical and cultural necessity) be on the Public Space.
- Pieces on the First Space or Diplomatic Spaces can be disrupted, like any other piece.
- Diplomatic Spaces are the fifth way to expand the Public Space during the game, the other ways are by Era progression (see *All Things Are in Motion, 1 Eras, p. 760, supra*), Reformations (see *Built Spaces and Mental Spaces, 3 Reformation, pp. 1401-1402, infra*), hegemony (see *In Spite of Ourselves, 4 Order, p. 554, supra*) and an Expose' News Event (see *Edge of Reality, 4 Writs, p. 452, supra*). As mentioned previously, the Public Space of a position can become somewhat congested and crowded during the game. Diplomatic Spaces are the easiest way to expand the space available for pieces of civilization, but there's a catch... (*Fourth Direction, 2 Diplomacy, p. 1117*)
- ‘Stacking’ on the Public Space is prohibited, see *Turnover, 1 The Sidereal Stage, p. 109, supra*, thus stacking is also prohibited on the Diplomatic Space since they follow the same rules. However, I much debated initially whether or not to allow stacking on the Public Space, and I think Diplomatic Spaces (and Reformations) were part of the solution to prohibit stacking on the Public Space (for game play visual reasons). Thus, in prohibiting stacking, there had to be ways to expand and reshape the Public Space, and Diplomatic Spaces became the ‘extradimensional space’ connecting to the Capital Colony. From Diplomatic Spaces then grew an entire concept of in-game diplomatic relations. (*Hare We Go, 2 Diplomacy, p. 1118*)
- Whenever two positions enter into a Treaty, Articles of Incorporation (i.e. a MegaCorporation, see *2 Corporations generally, infra*), or if they share a starsystem, one Diplomatic Space Monad is added to the Diplomatic Space between the positions. Sharing a starsystem means simply that both positions have colonies in the system, they do not have to be on the same planet. If two positions share a colony planet (i.e. a Balkanized planet) or share a Meaning, two Diplomatic Spaces Monads are added. Spaces are not lost if these conditions change, but... (*Shared Spaces, 2 Diplomacy, p. 1118*)
 - The term Diplomatic Space is used both to refer to the entire Diplomatic Space between two positions and to refer to individual Monads added to or lost from the Diplomatic Space, depending on the context.
 - The first Diplomatic Space added will be placed directly between the two First Spaces of the positions, connecting them. Thus, First Spaces will always be separated by [at least] one Diplomatic Space.
 - Other Diplomatic Spaces added later will build from the starting point, horizontally, diagonally. The Concierge determines the placement of new Monads when they are added, but they must always form one continuous matrix, like the Public Space.
 - Like the Public Space, the Diplomatic Space is considered to wrap from edge to edge (see *Over the Edge, 1 The Sidereal Stage, p. 108, supra*) such that Monads on each edge are considered adjacent along the same axis (e.g., a Fuzzy Group could be ‘split’ between edges). And like the Public Space, adjacency can be lost by expansion, loss or reshaping of the Diplomatic Space by events (see *Built Spaces and Mental Spaces, 3 Reformations, pp. 1401-1402, infra*). However,

the First Spaces must be inviolate, they must remain on the original edges, directly opposite each other, but otherwise can be moved farther and farther apart as Monads are inserted.

- While positions may make any agreements they like regarding the Diplomatic Space, as far as the Concierge is concerned, all positions that have access to a Diplomatic Space may lay any pieces on any available Monad on the Diplomatic Space in any way that the same piece could be legally placed on the position's Public Space.
- Pieces laid on the Diplomatic Space *are visible* to all positions connected to the Diplomatic Space, but continue to belong to their original owner. Constructural Elements, Fundamental Realities and Magna Cartas will not be visible to other positions through the Diplomatic Space. The Public Spaces will also remain secret.
- Pieces laid on the Diplomatic Space may be intermingled with pieces of the other position that shares the Diplomatic Space, and may be connected to other position's pieces in appropriate situations (such as Research Groups).
- Here's where things get a little fuzzy... it is unlikely that positions could share or form Fuzzy Groups from intermingling their pieces on the Diplomatic Space, but it is not impossible. Research Groups represent knowledge of objective, constant, universal physical laws leading to technology, but Fuzzy Groups are cultural specific and specific to the moment in the cultural-historical processes. So what would be represented by an intermingled Fuzzy Group on the Diplomatic Space? Such groups must represent a significant unity, blending, merger of different cultures into an interstellar culture on an *egalitarian basis* (factors must include significant population mingling and co-habitation, and joint enterprises, institutions, and points of reference, a 'special relationship'); rather than through the normal processes of conquest and empire where the unity, blending and merger are dictated and dominated by the conquering sovereign culture. Either process may in time, lead to pan-galactic civilization.
- Ships and Scenes may be placed on planets and stars on the Diplomatic Space. Scenes may be placed on any star or planet in the Diplomatic Space by any position that has access to the Diplomatic Space.
- Colonies and ships at Stars and Planets on the Diplomatic Space may be subject to disruption events affecting their owner.
- Colonized Planets laid on the Public Space must trace their Pathway through the First Space to the Capital Colony. Pathways in the Diplomatic Space work the same as on the Public Space, they are exclusive and inviolate.
- Government Titles might also be placed on the Diplomatic Space if it is very large....
- Diplomatic Space is like a 'meta- or para-Public Space' between interstellar civilizations.
- On each position's Regular Turn that was preceded by at least one round of Combat between positions sharing the Diplomatic Space, regardless of the results, since the position's last Regular Turn, there is a 50% chance that 1-3 random Diplomatic Spaces will be lost. Diplomatic Spaces may also be lost when a Shared Meaning is destroyed. (*Shattered Spaces, 2 Diplomacy, p. 1120*)
 - A Research or Cultural piece located on a lost Diplomatic Space is lost.
 - This may not seem especially realistic; it is simply a game mechanic necessary to actions that damage the Diplomatic Space.
 - If a colonized planet is on the Diplomatic Space that is lost, it will be removed back to its owner's Public Spaces, and if there is not room there, some pieces will be removed to make space for the returning colonized planet *and star*.
 - The Concierge solely determines what is moved or lost. The position players should not be consulted so as to avoid the appearance of or claims of favoritism later. The Concierge should do what makes sense, not what seems fair.

- Note again, that the First Space of each position may never be lost (as the positions will always be aware of each other's existence) and once established in the game, the Diplomatic Space between the positions will never disappear (as there will always be some 'diplomatic relation' between the positions, based on history) because the First Spaces remain indefinitely.
- Generally, the Public Space needs to be one continuous matrix and it is possible, but unlikely, that there may be 'holes' in the Public Space, unless the participants just want a strange game. The Diplomatic Space is like the Public Space, except that random loss of Monads from the Diplomatic Space (Monads are never lost from the Public Space, see *Monad Imperialism*, 3 Order, p. 561, *supra*) can create holes in the Diplomatic Space that may remain or may be refilled later (e.g., see *Subduction Zone*, 5 Diplomacy, p. 1168, *infra*). Continuity of the Diplomatic Space is somewhat less important than continuity of the Public Space in the game. (*Hole in Your Head*, 2 Diplomacy, p. 1120)
- It is generally anticipated in GGDM that Diplomatic Spaces will be between two positions, as are the normal state of diplomatic relations in the state system and throughout human history. A position may (and likely will eventually) have Diplomatic Spaces of varying sizes with every other position in the game, all adjacent to the Capital Colony. It is not impossible for Diplomatic Spaces to be merged and to exist between more than two positions, but such an event would be extraordinary and represent a major (group hug) event in the story arc of the game. (*Three is a Crowd*, 2 Diplomacy, p. 1121)
- As mentioned previously, a position whose Capital Colony loses its status due to an inactive Symbolic Constructural Element (see *Waving the Flag*, 2 Constructural Elements, pp. 190-191, *supra*) is 'cut off' from all Diplomatic Spaces. Cut off means that no new items of any sort can be placed on the Diplomatic Space (except colonies and ships at stars on the Diplomatic Space, a game mechanical necessity) and nothing *except* Pathways can be traced through the First Space. It is really just a minor ban on placing new things in any Diplomatic Space (with any species), which may be more or less inconvenient depending on circumstances. This *does not block* adding new Monads to the Diplomatic Spaces. (*Severed Dreams*, 2 Diplomacy, p. 1121)
- The numbers of spaces added or lost to the Diplomatic Space can be adjusted to suit the participants, but generally, accumulation of Diplomatic Space is a long arduous process and easier to destroy than build, as is trust, reputation and credibility. There may be other possible ways to add Diplomatic Spaces that creative participants will invent. Generally, the assumption is that few Diplomatic Spaces should approach even half of the size of the Public Space of the positions. When they do, the positions have moved some distance toward a pan-galactic civilization. (*Pan-Galactic Civilization*, 2 Diplomacy, p. 1121)
- All Diplomatic Spaces and Meanings are immediately lost when the position with which they are shared, directed toward, or associated with suffers Total Extinction (see *Countdown to Extinction*, 1 Resolution, p. 1462, *infra*). All Diplomatic Spaces but the one connecting the First Spaces are immediately lost when a position suffers Political Extinction and there is an immediate 50% chance for each Meaning directed to the Politically Extinct position to be lost. See the Resolution section for the conditions of extinction. (*The Meaning of Extinction (and the extinction of meaning)*, 3 Diplomacy, p. 1134)

Meaning Interpretation ('significant other'):

- A Meaning as an Interpretation, requires the position issuing the Meaning to describe an important principle or key 'aspect' of the relationship between two positions, between two species.... Two positions that are at war can still have (tragic) meaning to each other, just as they continue to share the Diplomatic Space. A Meaning (or Shared Meaning, p. 1132, *ut infra*) is not an automatic 'peace treaty' in GGDM unless positions want it to be (see *Creative Sharing*, p. 1133, *ut infra*); two [mutually hostile] positions can have a long meaningful relationship like Gandalf and Balrog. (*Between Mars & Venus*, 3 Diplomacy, p. 1126)
- A Meaning Interpretation is issued by an activation of the Diplomatic Power for the purpose of Form Meanings after the two positions involved in the Meaning have had First Contact. A Meaning Interpretation satisfies the Interpretation requirement for the Diplomatic Power Activation on the Regular Turn

it is formed, but does not serve as an Interpretation on any turn thereafter. (*What is the Meaning of This?*, 3 *Diplomacy*, p. 1127)

- Like the Writ, the Meaning Interpretation is created by the players, belongs only to the position that created it, must be submitted with the position's Actions, and is subject to approval by the Concierge; and like the Writ, the Meaning must be consistent with the position's current Social and Estate Titles, with the position's cultural identity, and may be rejected by the Concierge. Meanings are secret unless Shared (secrets are secret, unless shared...).
- Because the Meaning serves as the Interpretation for the Power Activation on the Regular Turn it is created, no News Event is required. Thus, like Patents, it remains secret, and cannot be altered by actions of other positions (see Letters Patent, 3 Patents, p. 748, *infra*).²⁷
- A Meaning Interpretation must have three parts. The Meaning must name the other Native Population Type toward which the Meaning is directed. Afterward, the Meaning must describe generally or specifically as necessary in one or two concrete sentences, the special significance of the other ('significant other'), the importance of the other race to the position issuing the Meaning. Finally, the Meaning must describe one to three Events which would be inconsistent with the Meaning. The Events which would be inconsistent with the Meaning *may be caused by either side or by another position or Concierge Intervention*, and would compel the position to pause and reevaluate the meaning of the relationship between positions. (*It's a Morning in May*, 3 *Diplomacy*, p. 1127)
 - Event is not quite the same as act – event is a neutral term – but of course they are strongly related. 'Event' was chosen so as not to be confused with Acts which are used in relation to Power Activations throughout GGDM. Events can occur without conscious acts – such as a tree falling over in a fierce rainstorm and knocking out a power line – but in the sense used in GGDM, it means mainly things that happen as a result of conscious acts (e.g., Power Activations)...
 - Meanings attach to Native Population Types in GGDM, not positions. This can be tricky, but in most cases, it will mean the position that represents that Native Population Type in the game, with room for mischief associated with [Conquered, Converted or Naturalized] populations under control of other positions. A Meaning can be attached to a Minor Race, though sharing such a meaning is unlikely, as is having a Diplomatic Space with the Minor Race. Because of the Lost Colonist Primal State, it is possible for two positions to share the same Native Population Type.
 - The rule specifies events inconsistent with the Meaning because it is easier and less proactive than naming events consistent with the meaning. Humans have a built in negativity bias, and it is usually easier for us to name what is not, than what is. See feature quote, 6 Government Titles, bottom, p. 649, and EN 1, p. 658, *supra*.
- The Events described in the Meaning as being inconsistent with the Meaning must be concrete and easily identifiable within the play of the game, and only apply toward and between the position issuing the Meaning and the position named on the Meaning. It is Events which give meaning. On any Regular Turn in which either position does anything described as inconsistent with the Meaning, there is a 50% chance that the Meaning will be 'destroyed' (and voided, removed) as it becomes untenable in the face of actions.... (*Act Like You Mean It!*, 3 *Diplomacy*, p. 1128)
 - A Meaning that is 'destroyed' through inconsistent Events can never be reissued, as history and memory will show that the Meaning was false. A destroyed Meaning generates an Intervention Potential Plus (IP+) against the position that held the Meaning. The Concierge is the interpreter of Meanings and specifically, when Events occur that are either consistent with or inconsistent

²⁷ Impliedly, this means that Meanings (and Patents) cannot be directly targeted by adverse News Events. And shouldn't be because they are secret unless someone tells. However, this is where the difference shows between Meanings and Patents – short of changing the physical laws of the universe, it is unlikely a News Event could directly affect a Patent – however, it is possible for an adverse News Event to accidentally or intentionally, indirectly, affect a Meaning Interpretation; this would not be the same as direct targeting.

with Meanings. *Optionally*, Enlightenment may be applied to Meaning rolls if the Concierge is contacted in reasonable time; once allowed, this option must open be for all.

- A Meaning in GGDM is not a formal contract, if a Meaning is violated, who or what has been harmed? A Meaning has only one party (like infatuation) and the harm is confidence in the worldview of the party that holds the meaning (and in GGDM, the loss of a Power Activation). (*Quasi-Contractual Meaning, 3 Diplomacy, p. 1129*)
- A Meaning Interpretation in GGDM mechanics is unilateral (like a Writ or Patent) and has no value or effect unless Shared (keep reading...), however, the actions of either side can destroy it. The Form Meaning activation is the first, and required, step toward a later Shared Meaning. (*One is the Loneliest Number, 3 Diplomacy, p. 1129*)
 - Meanings, whether Shared or not, are part of the position's worldview and may be considered by the Concierge in appropriate situations.
 - Writs cannot be shared in GGDM, and require Fuzzy Groups unique to that culture. Patents could potentially be shared. News Events are always shared, because of the publication requirement with Power Activations. Thus, there is a spectrum.

Shared Meanings ('wedding of Meanings'):

- Two positions which each have previously Formed a Meaning toward the other, if they are reasonably similar, may 'share' or develop a Shared Meaning Interpretation. You cannot personally, intentionally insult someone who does not share your meanings, but may unintentionally insult them without knowing or understanding. (*The Commonality, 3 Diplomacy, p. 1131*)
 - The wedding of Meanings requires that both positions activate the Diplomacy Power for that purpose in the same Turn Cycle (that is, on each position's next Regular Turn, the Diplomacy Power must be activated for the purpose of Sharing Meanings) and the Positions are required to submit a 'merged,' 'combined' or 'wedded' Meaning with their Actions. Meaning Interpretations cannot be Shared on the same Regular Turn they are Formed.
 - The Concierge will accept or reject proposed Shared Meanings based on their internal consistency and consistency with the Meanings from which they were derived; time requirements (i.e. a probationary period) may also be imposed by the Concierge for the survival of the prior Meanings which form the Shared Meaning.
 - The Concierge will not issue any pre-rulings on proposed Shared Meanings, will not indicate the parameters of what may be accepted.... The Concierge will not reject or accept the proposed Shared Meaning until the second Diplomacy Power Activation (see Table for Two, 1 Diplomacy, p. 1096, *supra*). It is thus possible to be stood up on the first date...
 - No pre-rulings by the Concierge is an important concept throughout GGDM; the positions must first make the effort and take their chances.
 - Upon acceptance of the Shared Meaning, four Monads will be added to the Diplomatic Space between the positions. Two positions at war with each other can still Share a Meaning.
- There can be only one Shared Meaning Interpretation between each two positions. Shared Meanings can be altered and manipulated by use of Special Writs, see Continental Drift, 5 Diplomacy, p. 1166, *infra*. Shared Meanings therefore are not static. (*The Commonality, 3 Diplomacy, p. 1131*)
- Meanings are secret, if you tell someone else, that's on you; as the old saying goes, the best kept secrets are between three good friends, when the other two are dead. It is possible that if another position is aware of Meanings, they can deliberately act inconsistent with the Meaning to destroy it (thus assessing an Intervention Potential Plus (IP+), p. 1129, *ut supra*). Yet it is almost necessary that Meanings be pre-shared through informal diplomacy (i.e. private player communications) beforehand so that each position can develop meanings similar enough to officially Share a Meaning (and gain Diplomatic Space). (*Whispered Secrets, 3 Diplomacy, p. 1132*)
 - The Events in a Shared Meaning are, of course, known by both parties to it, but now there is a secret between two positions. How long it remains a secret is up to them (like King Edward IV

and Elizabeth Woodville). The Shared Meaning serves as the Interpretation for the *second* Diplomacy Power Activation that creates the Shared Meaning. Each Power Activation to form the Shared Meaning must be accompanied by a reasonably-related News Event, the second is needed just in case the Shared Meaning is rejected by the Concierge (*ut supra*).

- Like Diplomatic Spaces, Shared Meanings in GGDM are anticipated to be between two positions (see *Three is a Crowd*, 2 Diplomacy, p. 1120, *supra*). *Ménage à trois* is possible, but Shared Meanings can never be solo (that's called infatuation) and neither can Diplomatic Space. In multi-party Shared Meanings, the parties will need to adapt the rules on the fly.
- A Shared Meaning must name two to four Events which are inconsistent with the Shared Meaning. As with a regular Meaning, an Event by either position that is inconsistent with the Shared Meaning has a 50% chance of destroying the Shared Meaning, but additionally, when a Shared Meaning is destroyed, there is a 50% chance that 1-4 randomly determined Diplomatic Spaces created by the Shared Meaning will be destroyed. Generally, the loss of a Shared Meaning or at least the loss of Diplomatic Spaces would be considered a failure that could trigger Enlightenment rerolls, but if a position wishes to use Enlightenment, they should inform the Concierge quickly (this is optional), before resolution; it's possible they may not care. Spaces not destroyed are otherwise unaffected. (*A Two-Way Street*, 3 Diplomacy, p. 1133)
- Shared Meanings can be used creatively for many purposes, most of which I cannot imagine yet. Shared Meanings can be used as a form of peace treaty – the inconsistent Events would be violations of boundaries or initiating combat – and I do not think this is inappropriate because it is not the same as the Treaty activation of the Diplomatic Power (i.e. there is no game mechanical process requiring Concierge actions) and because acceptance of the valid right to existence and claims of another is the most basic shared meaning. (*Creative Sharing*, 3 Diplomacy, p. 1134)
- A position having a Shared Meaning with another may create and activate a one-time Special Writ based on that Shared Meaning. The Special Writ, when approved and activated by actualization of a Fuzzy Group, may operate to affect *either* 1) the Events in the Shared Meaning, or 2) the party position's own civilization in reasonable relation to the Shared Meaning and the relationship overall of the two positions. Regular Meanings cannot be the basis of a Special Writ and cannot be affected by the Special Writ. The Writ must be based on the Diplomacy Power and follow a general form of the Writ (see Form of the Writ, 2 Writs, p. 438, *supra*), describing background and a reasonably-related effect. (*Continental Drift*, 5 Diplomacy, p. 1166)
 - The Concierge should give liberal interpretation (but not give into speciousness), bearing in mind the cost associated with forming the Fuzzy Group and activating the Special Writ. As discussed in *The Commonality*, 3 Diplomacy, p. 1131, *supra*, the Concierge will not provide pre-rulings or hypothetically discuss a Special Writ.
 - Each Special Writ must be unique, but there is no limit to the number of Special Writs that can be activated in relation to a Shared Meaning over the course of the game. The requirement of a Special Writ imposes a cost to modification.
 - A Special Writ that affects the Shared Meaning (#1 above) may *unilaterally* add, subtract or alter the wording of Events in the Shared Meaning. A Shared Meaning must always have at least one Event, there cannot be any empty Shared Meanings. Because the changes are unilateral, this can result in a bit of a tug-o-war back and forth – a bit of a *lover's tussle* told in monologue narration like Katherine Ann Porter's short story, "Rope" (1928) – but that would cost considerable Special Writ activations by the sides, distracting them from other priorities. Also because it is *unilateral*, there is no concurrent requirement to activate the Diplomacy Power by the other party, unlike forming the original Shared Meaning. (*Earthquake Events*, 5 Diplomacy, p. 1166)
 - Without the use of Special Writs, Shared Meanings would be static, unchanging as they are formed, beneficial only in the formation, a burden afterward, and can only be destroyed by Event violations. This may not be a problem for some players. The use of

Special Writs however adds dynamics to the Shared Meanings and rewards positions with opportunities for keeping it.

- It is possible to form a Shared Meaning where one of the Events bars changes or any use of Special Writs, or even bars unilateral changes. It is up to the judgment of the Concierge whether or not to accept such a Shared Meaning – there may be some unimaginable situation where it is appropriate (just as one should be very careful about declaring anything absolutely impossible) – but generally, it probably should not be accepted by the Concierge.
- The contents of the Special Writ are not shared with anyone when used to add, subtract, or change Events of a Shared Meaning; the other position should notice the changes without needing to read the Writ. *However*, when a Special Writ based on a Shared Meaning is used to alter a position's civilization (i.e. #2 above), the partner to the Shared Meaning will – in the vein of the Expose' News Event (see 4 Writs generally, *supra*) – receive a copy of the Special Writ. It will not be published as a News Event, but it's not exactly secret either. The Special Writ is unilateral, so does not require the other's approval, but the issuing position cannot control the information once it gets out. The effect of the Special Writ used in this way can be powerful, something just short of an actual Expose' News Event, but must still be based on the Shared Meaning and the relationship between the two positions and must, of course, be in proper form and the reasoning and intent must be intelligible. (*Fault Lines, 5 Diplomacy, p. 1167*)
- Whenever a Special Writ is used in relation to the Shared Meaning for either purpose, one Monad is added to the Diplomatic Space between the two positions. It can be added randomly, or can be manually placed by the Concierge if the two positions can agree on placement; this is a good way to fill 'holes' in the Diplomatic Space. In either case, it is possible due to the wrap around nature of Diplomatic Spaces (like Public Spaces, see discussions *Over the Edge, 1 The Sidereal Stage, p. 108*, and *Shared Spaces, 2 Diplomacy, p. 1118, supra*, and *Built Spaces and Mental Spaces, 3 Reformation, pp. 1401-1402, infra*) for the insertion of a Monad to push adjacent things apart, or to push things from one edge to another. However, the First Spaces must be inviolate, they must remain on the original edges, directly opposite each other with space for at least one Monad between them, but otherwise can be moved farther and farther apart as Monads are inserted (see *First Space, 2 Diplomacy, p. 1116, supra*) or the Monads can be added around the sides to expand the space laterally. (*Subduction Zone, 5 Diplomacy, p. 1167*)
- All Diplomatic Spaces and Meanings are immediately lost when the position with which they are shared, directed toward, or associated with suffers Total Extinction (see *Countdown to Extinction, 1 Resolution, p. 1462, infra*). All Diplomatic Spaces but the one connecting the First Spaces are immediately lost when a position suffers Political Extinction and there is an immediate 50% chance for each Meaning directed to the Politically Extinct position to be lost. See the Resolution section for the conditions of extinction. (*The Meaning of Extinction (and the extinction of meaning), 3 Diplomacy, p. 1134*)

Minor Races (inviting pre-1st Era Civilizations to lunch):

- Minor Races are those races in the Galactic Space, which positions may encounter from time to time, who have not attained Stardrive, that is, have not passed fully into the 1st Era of interstellar technology. Most will actually be non-technological or very primitive even by our current standards (otherwise, they may have been 'noticed' sooner due to the electromagnetic energy indiscriminately emitted into space by early technological cultures). This is not to suggest that given sufficient time, a Minor Race would not have discovered Stardrive technology on their own; rather, it is just bad cosmic luck that other alien species did so first and found them before they learned to stand and run on their own (in the same way that Europeans invaded everyone else's timeline, see *Invading Timelines, 4 Order, p. 576, supra*). (*Mathó Thípila, 4 Diplomacy, p. 1140*)
 - ***See main GGDM text section above for list and discussion of possible relationships between a Major and Minor races in GGDM and science fiction generally.***

- All Minor Races are controlled by the Concierge. Minor Races are mostly in the game for story purposes; it is irrelevant to the Concierge what positions do when they discover Minor Races. It is not irrelevant to the Minor Races, however, and the Concierge will react accordingly, from the viewpoint of the Minor Races, to whatever the positions decide to do. The story arc or story of the game and positions is not a consideration from the point of view of the Minor Race. (*Parens patriae, 4 Diplomacy, p. 1141*)
 - It is not impossible within the GGDM rules for a position to have First Contact and share a Diplomatic Space and form Treaties with a Minor Race. It is, however a lopsided relationship, and the Concierge will need to represent the interests of the Minor Race, without engaging in excessive private diplomatic communications with the position players, in addition to still being the Concierge. There is a careful balance in this, because other positions may feel that someone in the game is getting free Diplomatic Spaces and goodies, so there must be some level of responsibility and cost to the relationship. The Minor Race may also act, through the Concierge, to break Treaties and damage the Diplomatic Space shared with the Major Race. However, there is also great promise in such relationships in regards to the story of the game (e.g., uplift), and mature interstellar culture.
- Generally, a Minor Race has little or no chance against an interstellar civilization in a conflict, regardless of what Hollywood shows in the movies. It comes down to a contest not only of technology, but also of resources and time. Even a Minor Race that has colonized system space, is at a major disadvantage against starships and an interstellar civilization. (*War of the Worlds, 4 Diplomacy, p. 1144*)
 - The only means for a Minor Race to survive this conflict scenario would be if another Major Race intervenes on their behalf, or if the attacking power simply loses will or interest and/or is disorganized, or has an attack of moral conscience....

Commerce (Vital Power)

- The Commerce Power may be activated for any of the following six purposes:
 1. Trade Mission (interstellar movement of Cargo Ships to known **alien colony**),
 2. Load resources to a Cargo Ship,
 3. Unload resources from a Cargo Ship,
 4. Marketing,
 5. Issue Articles of Incorporation (Corporations only, see 1 Corporations, *infra*),
 6. Trucking Transactions (local in-system or Balkanized planet trade with aliens),
 7. Carting (local RP transfer between sovereign colonies).
 - Commerce Power activations in GGDM, with the exception of Marketing, are always location-specific activities – thus subject to Power Activation failures – with the eventual goal of inflating a target colony’s GDP for a turn (see Gross Domestic Product, 1 Construction, p. 662, *supra*). A colony which does not need to build does not need to Unload RPs or receive RPs by Trucking or Carting, a position may eventually become insular.
 - Commerce never *directly adds* to the Treasury, only taxation can do that.
 - Loading RPs on a Cargo Ship immediately reduces their broader utility but does prevent ‘aging-out,’ see Aging Resources, 2 Taxation & Census, p. 304, *supra*. (*The Power of Commerce, 1 Commerce, p. 1184*)²⁸
- Activations of the Commerce Power for the purpose of Loading or Unloading resources (hereafter, “Load” and “Unload”) require one Act and one Scene. If the Commerce Power is activated at a colony for the purposes of both Loading and Unloading in the same Regular Turn, *only one Scene is required*. (*Load & Unload Activations, 1 Commerce, p. 1185*)

²⁸ Like some other parts of GGDM’s rules, this is a game-mechanical quirk created by the rules; it is not especially realistic in simulation terms. One must always bear in mind that any rules system creates exploitable mechanical quirks, e.g., the ‘heroic short movement’ rule in GGDM. This is how laws, definitions, procedures and systems in the real world come to be exploited by unscrupulous clever people (*defendants in my cases*) who are not interested in the prosperity, well-being or generativity of civilization as a whole.

- Load and Unload of Cargo Ships should not be confused with Loading and Unloading Population to Colony Ships (see 3 Expansion, generally, *supra*).
- Regardless of the ownership of the colony, one Scene must be placed on the colony's planet, not star, prior to the activation and are removed with the Commerce Power activation. Since the owner of the Cargo Ships cannot place a Scene on an alien colonized planet, unless the colony planet is Balkanized with a loyal sovereign colony, see Lebensraum, 3 Taxation and Census, p. 321, *supra*, the alien trading partner will have to supply the Scene to have other position's Cargo Ships Load or Unload at their colony.
- Activation costs for the Trade Mission and Marketing purposes of the Commerce Power are discussed below (Trade Mission, p. 1189) and in 2 Commerce, p. 1193, *infra* (Marketing). Trucking Transaction, 4 Commerce, p. 1225, *infra*, activations cost one Act, additionally, the first position in the transaction must also supply one Scene on their colony. Carting, *Id.* p. 1229, requires only one Scene on the star or on one of the participating sovereign colony planets. (*The Store of Worlds, 1 Commerce, p. 1186*)

Cargo Ships:

- Cargo Ships are starships designed specifically for transporting resources, in any form (except populations), between interstellar colonies. This means they are a little short on life support and are generally not suitable for moving populations. (*Cargo Ships, 1 Commerce, p. 1186*)
 - Prior to building Cargo Ships, a position must hold the Cargo Ship Existential Patent which is available during the setup process. Cargo Ships are built like other ships, at Friendly, Naturalized, or Converted Colonies that have an Orbital Shipyard, by activations of the Construction Power at a cost of 8 RPs each.
 - Cargo Ships may not carry anything but RPs, they may not carry anything that is to be specifically transported by Log Ships or Colony Ships. Cargo ships are the only ships that can carry RPs, though others have capacity expressed in RPs; Cargo Ships can carry 15 RPs of cargo.
- Cargo Ships are completely unsuited for combat, and have no combat capabilities; they may not initiate combat or attack enemy units, but do have Close-in Defense Weaponry against Fighters (see Close-in Defense Weaponry, 2 Carriers & Fighters, p. 1058, *supra*). They are easy targets for even the most primitive warships, being non-warship targets. (*Cargo Ships in Combat, 1 Commerce, p. 1187*)
 - Any RPs or 'cargo' on a Cargo Ship when it is destroyed are lost.
 - Additionally, as Cargo Ships may only travel to destinations *where there are known colonies*, Cargo Ships may not be used for exploration. 'Known' is defined as your position has seen it, physically.
- All of the rules that apply to Cargo Ships for Unloading, Loading, Marketing, also apply equally to Cargo System Boats whether with a Tender Starship or operating in a system between colony planets. Since Cargo System Boats cannot travel outside their system without assistance, only Unloading, Loading, and possibly Marketing purposes would apply to them, and since in-system travel is instantaneous, they can Load or Unload from any colony in their system (as appropriate) on any Regular Turn, with proper Commerce Power activations on both colonies. Where Cargo System Boats are on a Tender Starship, the Tender Starship should be able to act as a Cargo Ship for movement purposes (i.e. Trade Mission Commerce Activation, next page, *ut infra*). (*Space Bridge, 1 Commerce, p. 1187*)
- A Cargo Ship or Cargo System Boat can both Load from and Unload to different colonies in the same system in the same Regular Turn with appropriate Power Activations, without moving (effectively, a 'space bridge' between colonies). A loaded Cargo Ship is not required to move to another starsystem to Unload, a loaded Cargo Ship could simultaneously Unload to two eligible colonies in the same system on the same Regular Turn with two activations of the Commerce Power for the purpose of Unloading. (*Move Without Moving, 1 Commerce, p. 1188*)

Trade Mission:

- Activation of the Commerce Power for the purposes of Trade Mission requires one Act and one Scene placed on the *star* where the Cargo Ships are currently located. One Activation of the Commerce Power for the purpose of Trade Mission:
 1. Allows any number of Cargo Ships (whether loaded or empty),
 2. To depart one starsystem for any number of other starsystems where there is a known colony owned by another position (Native Population Type is irrelevant) or a planet known to be occupied by a free Minor Race.
 - In other words, a Cargo Ship may move from one **alien colony** system to another, as long as it can remain supplied (e.g., ‘tramp freighter’). Cargo Ships may never depart for any destination starsystem where there is not currently a *known colony* (not the same as a Supporting Colony), or that is beyond their Operational Flight Limitation (see 3 Movement, 855, *supra*). *Only Cargo Ships* may use the Commerce Power activation to initiate interstellar movement.
 - If Cargo Ships are departing for the purpose of Loading or Unloading RPs at their own colony in the destination system, they should use the Movement Power instead to initiate interstellar movement. However, activation of the Commerce Power for the purpose of Trade Mission costs the same as activation of the Movement Power to initiate interstellar movement and, thus, if there are both friendly and **alien colonies** in the destination system the conditions precedent of either activation is satisfied (i.e. Movement Power activation does not require there be no **alien colonies** in the destination system), and so either could be used. This might be important for some reason, such as Conflict Checks for Government Titles requiring regular Commerce Power Activations.
 - Because of the *normal* processing sequence of Power Activations, it is not possible to Load RPs and have the same Cargo Ship move via Trade Mission in the same Regular Turn. (*Green Goods, 1 Commerce, p. 1188*)
- Activation of the Commerce Power for the purpose of Trade Mission does not allow the Cargo Ships to automatically Unload or Load at the destination system. That is, it is not like Combat Movement or Scouting (see Move Out!, 1 Combat, p. 942 and Then Never Comes, 3 Expansion, p. 907, *supra*), they are separate activations. (*Green Goods, 1 Commerce, p. 1188*)
 - Activation of the Commerce Power for the purpose of Trade Mission is not required to be able to Load or Unload Cargo Ships at **alien colonies** at the destination (*ut supra*). It is irrelevant how the Cargo Ships arrived before Loading or Unloading – they might even be fleeing a combat in their origin system.
- Like other activations initiating interstellar movement, each ship designated to leave on the Trade Mission must check to see if it obeys the Power Activation. If the ship fails to obey the Power Activation due to inactive Constructural Elements (see Power Off, 2 Constructural Elements, p. 193, *supra*), a second check is made if there are Supporting Colonies in the system, as described previously in Engines Offline, 1 Movement, p. 839, *supra*. (*Before You Go, 1 Commerce, p. 1189*)
 - Ships that fail both checks ignore the Commerce Power activation for the purpose of Trade Mission and remain in-system. If the ship or colony’s Epistemological Constructural Element is active, Enlightenment may be applied to Trade Mission activations.
- When moving to a destination system containing only an **alien colony**, the owner of the Cargo Ships must have successfully explored the system ... prior to moving Cargo Ships to the system. Trade Missions to systems containing **alien colonies** do not require the pre-approval of the **alien colony**’s owner prior to starting movement – if the aliens do not approve of the arrival of Cargo Ships in their system, there will probably be some warships present to let their displeasure be known! (*Icebergs in Space, 1 Commerce, p. 1189*)

- Upon arrival of the Cargo Ships in the alien starsystem, a star and planets must necessarily be placed on the Cargo Ship owner's Public Space. If there is no room, some pieces will need to be moved by the Concierge to make room. Upon departure of the Cargo Ships from the alien starsystem, the Scene required for the necessary Commerce Power activation must be on the *star* prior to the Commerce Power activation for the purpose of Trade Mission. This may result in Scene Snitching, 3 The Sidereal Stage, p. 124, *supra*. (*Return from the Abyss, 1 Commerce, p. 1189*)
- Cargo Ships arriving at an **alien colony** system where the owner of the Cargo Ships does not have a colony, are not automatically resupplied as they would be if they arrived at any friendly colony. *If the alien (i.e. non-sovereign) colony either Loads resources to the Cargo Ships or allows resources to be Unloaded from the Cargo Ships, then the Cargo Ships are considered to be automatically resupplied, and their Operational Flight Limitations (OFL) and Operational Supply Limitations (OSL) are reset.* (*Cold Lunch, 1 Commerce, p. 1189*)
 - Absent loading or unloading at the **alien colony**, the **alien colony's** owner may also simply grant permission to resupply the Cargo Ships (reset OFL/OSL), which costs nothing to the **alien colony's** owner (and generates goodwill). Without permission or Loading and Unloading, the Cargo Ships have a 50% chance of obtaining resupply elsewhere in the system each Regular Turn that they remain *before* Supply Rolls.
 - It is *optional* whether the Concierge allows application of Enlightenment to these rolls, representing Robinson Crusoe-like survival ingenuity. Duct tape please?
 - As long as Cargo Ships can remain supplied, they can move from one **alien colony** to another; if they cannot be resupplied, they need to return home quickly before their Operational Supply Limitation (OSL) expires or they must make Supply Rolls.
 - Resupply in this case is not that which is mentioned in Alieneity Apostasy, 3 Disruption, p. 283, *supra*. But it is a bit of a grey area, noting that the Cargo Ships *will be* exposed to possible **apostasy** each time they Load or Unload at the **alien colony**.
 - While there are legitimate questions about whether an **alien colony** would have the proper foodstuffs (e.g., 'tastes like chicken'), parts, and fuel to resupply Cargo Ships, the game assumes that suitable supplies may be found/manufactured with help. [*and it all tastes like chicken!* ☺]
 - A Cargo Ship that moves from **alien colony** to **alien colony** may eventually develop a bad case of **apostasy**, see Alieneity Apostasy, 3 Disruption, p. 283, *supra*.

Enhanced Value (baseballs signed by Babe Ruth post-mortem):

- The "intrinsic value" of a resource or thing is the inherent value of the object in a particular economic location. ... In interstellar economics, it can be assumed that every colony planet will eventually have or develop an excess of a resource, or have or develop a resource that is of little or no value to that colony planet except that it has value for trade elsewhere. Cargo Ships pick up resources from places where there is an excess, and where the resource has a relatively low 'intrinsic value' and by virtue of transporting them to places where they are needed and in demand, increase the value of those resources upon safe arrival at the destination. (*Intrinsic Value, 2 Commerce, p. 1192*)²⁹
- Enhanced value – a key concept in GGDM commerce – is obtained by comparing the ownership of the Cargo Ship and the colony where it is being Loaded or Unloaded, *if they are different*, the cargo has *enhanced* RP value to the recipient. Enhanced value simply represents *boundary control function* and boundary crossing, even if the origin of the RPs Unloaded is the same population type as the colony receiving them. (*Enhanced Value, 2 Commerce, p. 1192*)
 - Enhanced Value accrues only to the **alien** recipient of the RPs at the time of receipt in any qualifying situation. 'Double enhancement' is possible if RPs Loaded from an **alien colony** are subsequently received by (Unloaded to) another **alien colony**.

²⁹ It is said that Babe Ruth signed more baseballs after he was dead than he did while alive! ☺

- The true value of receiving alien RPs is not having to subtract RPs from the Treasury, plus inflated local GDP when downloaded, and building diplomatic contacts.
- This system is deliberately vague and simplistic; the game does not track origin of RPs or the origin, movement and activity history of ships, and players should resist the urge to exploit ‘loopholes’ in the system. It is up to the participants to look or not look, to use in the game if necessary and suitable to the story, and to be honest and play the game rules in good faith.³⁰ (*Enhanced Value, 2 Commerce, p. 1192*)

Marketing:

- Activation of the Commerce Power for the purposes of Marketing requires one Act, and allows a position to obtain *with certainty* advance knowledge of the enhanced value by percentage in the value of the cargo if Loaded from or Unloaded at non-sovereign colonies within the Operational Flight Limitation (i.e. ‘the range’) of the Cargo Ship (excluding those located in the same system as the Cargo Ship is currently). Thus, the activation must specify a target Cargo Ship or ships that are currently located at a colony (ownership is irrelevant).³¹ There is no Power Activation check for Marketing, this is the only purpose of Commerce Power that is not possible to fail. (*Marketing, 2 Commerce, p. 1193*)
 - Activation of the Commerce Power for the purpose of Marketing is a commitment to activation of the Commerce Power on the following Regular Turn for purpose of Trade Mission (*ut infra*).
 - In the Actions submitted to the Concierge by the position, the position may list one known non-sovereign colony within range of the Cargo Ship(s) for each currently undisrupted Government Title held by the position.
 - In return, the Concierge will provide the *enhanced value* expressed in a percentage both if cargo is loaded from or delivered to any of those locations (i.e. one activation).
 - The values provided by the Concierge are only valid if the target Cargo Ship departs for any of those locations in the next Regular Turn. If not, the Marketing is wasted.
- Marketing is never required, Cargo Ships may always depart for any legal destination within their range, with or without cargo, and may travel blindly to whatever market is at the destination. Note that, in some instances, the Concierge may manually adjust the market values (by Intervention) if a location has received too many unloads or loaded too many ships recently, or for other circumstances; but in most cases, market value will be determined by a die roll. (*Marketing, 2 Commerce, p. 1193*)
 - Marketing cannot be used or applied to Trucking Transactions as they are of a different structure than standard interstellar trade. See Flea Market, 4 Commerce, p. 1225, *infra*.
 - Marketing cannot be used or applied to Looting, see Black Market, 3 Commerce, p. 1211, *infra*, but they do still receive enhanced value when Unloaded.
- The Marketing Activation must function as a ‘price lock’ (even if not realistic) otherwise, it is pointless in the game. As with some other GGDM rules, this is a concession to game necessity. The economic fallacy of the Marketing Activation in GGDM is that it implies perfect knowledge and perfect competition – the very same features alleged as advantages to centralized managed economies, like the Soviet Union which failed miserably. (*Price Loch Ness, 2 Commerce, p. 1194*)
 - Marketing is simply a ‘marketing’ tool – obtaining advanced knowledge of the enhanced value of the RPs if loaded or unloaded at target non-sovereign colony(s) – whereby a position can use Marketing to negotiate trade at an **alien colony** for enhanced value. Marketing takes no account of the origin of the RPs (which could theoretically be the same as the colony to which they were unloaded); the game information does not track the origin of RPs or the activities of ships.
 - Loading RPs at an **alien colony** then Unloading them to the same colony for enhanced value both ways is called ‘**porting**’ in GGDM and *violates the spirit of the system*. The cost of this,

³⁰ The entire 2 Commerce section was devilishly difficult for me to work out and write, I went over and over it and rewrote it several times because I did not have an intuitive understanding and had to work the system out in tiny bits. I am Hume’s ‘stupid mechanic’ who botched and bungled through the Commerce section through multiple trials, mistakes, ere this system was struck out. And I am sure that economists would still scoff at my rudimentary economics. But I think it works for game purposes and that’s what *matters*.

³¹ Implicitly, this means that the Marketing activation cannot be applied to ships in FTL transit to an alien colony system.

constant use of Scenes and Power Activations, and *apostasy* risk, might be deemed by some to be worth the double enhanced value at the colony, but the RPs can only be used at that colony limiting their ‘unjust’ enrichment potential slightly. The Concierge may also notice and probably should forbid it unless some convincing rational and extra-rational reason (as in very imaginative) can be supplied.

Hand Off:

- Direct transfer of cargo between Cargo Ships of *two different positions*, when located at the same planet, is done by activations of the Commerce Power appropriately by each position on their Regular Turns for the purpose of Load and Unload; Unload has to go first, of course. If either activation fails, the process is aborted, must start over. (*Change for a Trillion, 1 Commerce, p. 1185*)
 - Probably one Scene should be able to be used for both, as if they were occurring in the same turn, as long as the Load occurs on the recipient *alien colony* owner’s next Regular Turn, within one Turn Cycle. However, this is a matter of judgment for the Concierge.
 - The cargo transfer may transfer more than RPs ... there is a chance of *apostasy* in the ships engaged in the Loading and/or Unloading depending on whose colony(s) are on the planet, see *Alieney Apostasy, 3 Disruption, p. 283, supra*.
 - It is deemed game-mechanically unnecessary to transfer RPs directly between two Cargo Ships *owned by a position*, even if at an *alien colony*, and no rules are provided. If such a rare situation arises, the Concierge will need to handle it.
- Commerce Power Activations for Loading or Unloading Cargo Ships require that both the *colony and the ship(s) that are the target of the activation*, check to see if they obey the Power Activation. (*Use Two Hands Please, 2 Commerce, p. 1198*)
 - The colony should be checked first because if the workers are on strike (i.e. fail to obey the Power Activation) then there is no need to check the target ships and the activation will fail. If the colony obeys the Power Activation, then each ship involved must also check to see if it obeys the Power Activation, and if so, Unloading or Loading will proceed. If a ship fails to obey, it will not perform as ordered, but other ships might if multiple ships were targeted. An active Epistemological Constructural Element at the colony or on a ship, allows Enlightenment to be applied to their rolls if it was designated for that Power Activation.
 - If the Loading or Unloading is occurring at a non-sovereign colony, the colony is first checked to see if it ‘obeys’ the Power Activation (i.e. accepts alien goods) as if the colony owner had activated the Load or Unload Resources at that colony. If the colony fails, the alien goods are not Loaded from or Unloaded to the Colony, regardless of the willingness of the Cargo Ships involved. Enlightenment can be used to reroll failed die rolls if the ships have active Epistemological Constructural Elements (see *Skool Tyme, 2 Constructural Elements, p. 190, supra*), *but cannot be applied to the alien colony’s roll* because there is no Power Activation. If the *alien colony* fails first, rolls for the ships are not necessary and Enlightenment will not be used.

Uploading (Load RPs to Cargo Ship):

- Cargo Ships *that begin the turn* in a system with an eligible colony may Load RPs from that colony by activating the Commerce Power for the purposes of Loading. (*Uploading, 2 Commerce, p. 1199*)
 - Eligible colony is defined as either a sovereign colony or a non-sovereign colony where permission has been given by the owning position to Load RPs from the colony. Colony political status is irrelevant to eligibility to Load RPs.
 - A colony may not load more RPs to the Cargo Ship in a turn than the colony would have produced if it had been taxed at the beginning of the turn (i.e. the GDP limit, see *Gross Domestic Product, 1 Construction, p. 662, supra*), with the exception of Looting (see *3 Commerce, p. 1210, infra*). As discussed in *1 Construction, supra*, a colony may not spend more in a turn on activities at that colony than the colony would have produced if taxed at the beginning of that turn (see *Gross Domestic Product*), and this applies to Loading RPs to Cargo Ships as well as

Construction Activities. The RPs loaded to Cargo Ships (similar to RPs spent on Construction activities) are subtracted from the position's Treasury. RPs loaded to alien Cargo Ships between Regular Turns, count toward the colony's GDP on its owning position's next Regular Turn.

- Ships which execute a short movement arrive at the end of the same Regular Turn thus, a Cargo Ship that completed a short movement would be at the colony at the beginning of the next Regular Turn for the purposes of Loading RPs. See *Space Hop, 2 Movement, p. 850, supra*.
- Loading is also used by the receiving Cargo Ship to transfer RPs between Cargo Ships owned by different positions if they both begin the Regular Turn in the same colony system (permission is obtained by the previous Unload action issued by the owning position to the alien Cargo Ships involved), see *Change for a Trillion, 1 Commerce, p. 1185, supra*.
- Cargo Ships each have a limit on RPs that can be Loaded onto the ship, which is governed by the Cargo Ship's Patent and any improvements or enhancements that may have been made to the Cargo Ship Patent; a Cargo Ship may never Load more RPs than its capacity. Upon activation of the Commerce Power for the purpose of Loading, the position must include in the Actions the exact number of RPs to be Loaded to each Cargo Ship at that location. (*Front End Loading, 2 Commerce, p. 1199*)
 - If information is missing from the Actions, the Concierge will not hold up the game or inquire, rather, the Actions are executed as received.
 - If a position fails to inform the Concierge of what is to be Loaded, it is a wasted Power activation.
 - If there are not sufficient RPs in the Treasury to pay for the Loading, the Cargo Ship will Load what is available.
 - If the activities at the colony on that turn exceed the local GDP, Construction activations will take precedence over all others.
 - Note that Loading from a *Conquered Colony* is automatically Looting (see 3 Commerce, p. 1210, *infra*) and will trigger the mechanics related to Looting.
- Cargo Ships may Load RPs from eligible **alien colonies** (i.e. colonies owned by any other position, regardless of Native Population Type) at *enhanced value* (*ut supra*, p. 1193). If the **alien colony** is on a Balkanized planet with a friendly colony, the owner of the Cargo Ships may provide the required Scene. Otherwise, the Scene may be 'snitched' from the **alien colony** if one is available (see Scene Snitching, 3 The Sidereal Stage, p. 124, *supra*). If there is no Scene on the **alien colony** to be used for the Commerce Power activation, the Load actions will fail, and the Power activation will be wasted. (*Back End Loading, 2 Commerce, p. 1200*)
 - The owner of the **alien colony** is never required to activate the Commerce Power to Load RPs to another position's Cargo Ships, only the owner of the Cargo Ships needs to activate the Commerce Power. But the sovereign must still grant permission.
 - *Actual RPs* (not enhanced RPs) loaded from the **alien colony** will be immediately subtracted from the alien position's Treasury *and count against the alien colony's GDP limit on its owner's next Regular Turn*. The Load RPs will fail either partially or completely, if there are not sufficient RPs in the aliens' Treasury at the time of the loading to support the loading.
- RPs from non-sovereign colonies are Loaded at the *enhanced value* to the Cargo Ship. The amount subtracted from the owner's Treasury and that counts against the colony's GDP for the next turn is the unenhanced value of the RPs loaded. (*Packing It In, 2 Commerce, p. 1200*)
 - For example, if 15 RPs of *enhanced value* were Loaded to another position's Cargo Ship by a colony, the actual (unenhanced) value at the colony might be 10 RPs (with 50% enhancement) which is the amount subtracted from the Treasury and that counts against the colony's next Regular Turn GDP.
 - Except for Looting, a colony cannot upload more in actual value than would be its GDP if taxed at that moment, see Gross Domestic Product, 1 Construction, p. 662. A Load RPs can fail partially or fully if the colony doesn't have sufficient GDP at the moment of Loading (or RPs in the Treasury).

- If the Commerce Power was activated for the purpose of Marketing for Load RPs at the location of the Cargo Ship prior to movement to the non-sovereign colony, that value will be used. If not, then the parties will need to take their chances on randomly determined enhanced value while Loading RPs from one position's colony to another's Cargo Ship. This may result in partially complete Loading and uncertainty as to the amount in the Treasury and the amount of GDP available at the colony on the next Regular Turn.

Downloading (the 'dump' in the 'pump 'n dump'):

- RPs may be transferred from a Cargo Ship to any colony by activation of the Commerce Power for the purpose of Unload RPs targeting the colony and Cargo Ship. The ship is not required to *begin* the turn in the system, it may arrive at the beginning of the Regular Turn. Both the Cargo Ship and colony will be checked, as previously explained, to see if they obey the Power Activation to Unload RPs; Enlightenment (a club) might be applied (*ut supra*, p. 1202). (*Downloading, 2 Commerce, p. 1202*)
 - Thus, a Cargo Ship can 'drop and dump and run'; the Unload RPs activation will be processed with any Construction Power activation at the colony (see Material Handling, 1 Construction, p. 664, *supra*) and Movement Power activations process after Construction Power activations in the normal order of processing Power Activations. This may be extremely useful in Blockade Running, see 4 Commerce, p. 1233, *infra*.
 - RPs will only be Unloaded from *friendly* (i.e. sovereign) Cargo Ship(s) at a sovereign colony in a Regular Turn that would be sufficient to satisfy the colony's needs for that turn, up to the limit specified in the Unload action. This may mean that some, all, or few of the RPs onboard a Cargo Ship will be Unloaded as a result of the Commerce Power activation for the purpose of Unloading RPs at that colony. RPs received from Unloading Cargo Ships will be spent first for the colony's Regular Turn activities and any remainder will be subtracted from the position's Treasury.
 - These rules prevent wastage of RPs *within* the position's system, because unused RPs at a colony are lost at the end of the Regular Turn. Thus, friendly Cargo Ships at a sovereign colony will only download what is necessary, up to the limit set in the action; the remaining RPs will remain onboard the Cargo Ship and are not lost.
 - Unloading RPs is also used by the sending Cargo Ship to transfer RPs between alien Cargo Ships if they both begin the Regular Turn in the same colony system, see Change for a Trillion, 1 Commerce, p. 1185, *supra*. As this is not an Unload RPs action to a colony, no *enhanced value* is received regardless of the ownership of the respective Cargo Ships involved. But you can give someone RPs by meeting them halfway.
 - Unloading RPs at a Conquered Colony does not trigger a Disruption Event and in fact, is useful in bribing ... uh, attempting to convert (uh, subvert) the Conquered Colony, see Conversion, 3 Order, pp. 554-555, *supra*.
- The RPs received by a colony from Unloading RPs by an alien (i.e. non-sovereign) Cargo Ship will be based on the *enhanced value* of the cargo at that colony, not the intrinsic value of the cargo as it was Loaded from the source colony. Generally, the value of cargo ('resources') will substantially increase merely by the act of transporting the resources to where they are needed. (*Intrinsically Profitable, 2 Commerce, p. 1202*)
 - The RPs available to the target colony on its owner's next Regular Turn is the enhanced value of whatever was Unloaded by the Cargo Ship owner on their previous Regular Turn. Unlike Unloading RPs from a friendly Cargo Ship at the colony, all RPs ordered to be Unloaded by the Cargo Ship owner will be 'dumped' onto the target colony and it is the responsibility of the colony owner to use them or lose them on their next Regular Turn.
 - This is necessary because two positions are each taking their respective Regular Turns separately, as opposed to one position taking a Regular Turn and being able to coordinate the amount of RPs Unloaded to their colony to prevent wastage.

- Notably absent from this process is the permission requirement; the Concierge does not require the colony owner's permission to receive Unloaded RPs from an alien Cargo Ship. In the rare instance that this is an issue, it can be dealt with through other means in the game. If the colony owner really does not want the RPs from aliens, combat is an option (like preventing Colony Ships from Landing).
- Communication between the positions involved – grey diplomacy (see 1 Diplomacy, p. 1097, *supra*) – is extremely important, with minimum Concierge involvement.
- Resource Arbitrage does not apply to RPs Unloaded from friendly Cargo Ships to sovereign colonies for use at that colony. This is a **boundary control function** in the GGDM rules; RPs Loaded, transported, and Unloaded between colonies owned by a position *occur within the system* and theoretically pass through the imaginary pool called the Treasury. The cost of building anything in the system is the entire assumption of cost by the system. (*Arbitrage, 2 Commerce, p. 1203*)
- The *enhanced value* received from cargo unloaded to the colony by non-sovereign Cargo Ships is the number of RPs unloaded plus the percentage increase in value determined for that colony. For example, 10 RPs unloaded for a 50% increase in value, would equal 15 RPs value to the colony that would go toward the colony's activities for the next Regular Turn. (*Cha-Ching!, 2 Commerce, p. 1203*)
 - If *enhanced value* was established through Marketing prior to the departure of the Cargo Ships that value will be used when Unloading RPs to the **alien colony**. This is important information both to the owner of the **alien colony** (so as to be able to plan their next Regular Turn activities) and to the owner of the Cargo Ship so as to negotiate with the owner of the **alien colony**.
 - If no value was established prior to the departure of the Cargo Ships from their last location, the Concierge will have to determine the value at the time of the Unloading. The Concierge will not inform the **alien colony** or the Cargo Ship owner in advance (no pre-rulings) of the *enhanced value* of the Unloaded RPs at the **alien colony** and this may cause shortfalls and planning difficulties on the next Regular Turn activities.
 - If the amount was established in advance by Marketing, and the Cargo Ship owner certified that the Unload RPs occurred (i.e. no Power Activation failure by the colony or ship), then the colony owner will know how many RPs are waiting to be used; however, if the RPs were Unloaded without previously established *enhanced value*, then the colony owner will have to guess and take chances on how much enhanced value is actually available which may lead to wastage.
 - It is therefore, much better operationally, if the value of the cargo is established through Marketing prior to departure (i.e. information), because Actions will fail if there is not enough RPs in the Treasury to cover the cost of the activities at the colony **or** if the amount taken from the Treasury to cover the colony's activities would exceed the Gross Domestic Product limitations of the colony (see 1 Construction, p. 662, *supra*).
 - Because the game does not look to or specify what exactly is represented by the RPs on a Cargo Ship, the value must be random each time. Participants may find ways to be more specific about cargo if there is a long-established interstellar trade.
- There is no direct mechanic in GGDM for transferring anything to or from colonies to Log Ships owned by a different position; only that Cargo Ships can resupply from **alien colonies** (see Cold Lunch, 1 Commerce, p. 1189, *supra*). There are always questions of technological and ergonomic compatibility for starters; any such cases will need to be handled manually through the Concierge. (*No Tribble at All, 2 Commerce, p. 1205*)
- Cargo Ships could Unload RPs to a planet occupied by a Minor Race if they can legally move to the system and if the Concierge agrees (on behalf of the Minor Race). (*Black Market, 3 Commerce, p. 1211*)

Looting (always loot before you pillage and burn! ☺):

- Looting is triggered by activation of the Commerce Power for the purpose of Load RPs (not Unload RPs) or allowing alien Cargo Ships to Load RPs at a Conquered Colony. This is a special exception of sorts, in this case, the Conquered Colony is not considered a sovereign colony for the purpose of RPs

Loaded to Cargo Ships. It is thus that some positions may make a business of Looting colonies to obtain the *'enhanced value'* when the 'alien' RPs are Loaded. (*Looting, 3 Commerce, p. 1210*)

- Looting is a Disruption Event at a Conquered Colony, regardless of the amount taken. The Disruption Check (see Hagar's Faucet, 2 Disruption, p. 278, *supra*) is triggered by a Commerce Power Load RPs activation at the Conquered Colony. This can occur multiple times if the Conquered Colony is Looted on more than one Regular Turn.
- RPs loaded from a Conquered Colony to any Cargo Ship (regardless of owner) are not subtracted from the Treasury, instead, they are subtracted from the colony. When resources are Loaded to any Cargo Ship from a Conquered Colony, Industry and other installations on the Conquered Colony are destroyed equal to the *unenanced value* of the RPs loaded to Cargo Ships.
- Looting is therefore *not* limited to the GDP of the Conquered Colony (see Uploading, 2 Commerce, p. 1199, *supra*). Whether or not RPs can be Loaded by Looting a Conquered Colony beyond the value of Industry, installations and enhancements on the target colony is a judgment on the part of the Concierge.
- It is normally assumed that there is a 1:1 correlation between RPs loaded from Looting and destruction of the colony being Looted, however, the Concierge could use an Intervention to change the correlation *for story purposes*.
 - Looting is antithetical to Reverse Engineering *alien technology* (see 3 Technology, p. 712, *supra*) at that colony or planet. This can be distinguished from a colony which has simply been abandoned (e.g., see Resources from Special Planets, 2 Taxation & Census, p. 307, *supra*). Looting or warfare destruction can be measured in the Quality of Contact assigned by the Concierge for later Reverse Engineering attempts.
- Some or all of the population of the colony that are not Loaded onto Colony Ships in the same Regular Turn, will perish as the infrastructures of their civilization are destroyed by Looting (this does imply or require loss of Maximum Habitability or Habitability Class of the colony planet). The Concierge will make a determination as to the fate and loss of populations, taking into consideration the Habitability Class of the planet. Loss of populations can trigger multiple Disruption Checks on the Conquered Colony, see Peaches for Mad Molly and Mars Bombing Run, 2 Disruption, pp. 273-274, *supra*.
- Looting on this scale will cause the collapse of a complex society. Loss of population is also an issue that bumps up against the previous discussion of slavery (see The Chain About Your Neck, 3 Order, p. 546, *supra*); are populations being lost on the colony because they are loaded as slaves or harvested for food for the conquerors
 - The loss of population from looting will likely be announced via Special Bulletin. The Conquered Colony is not checked to see if [it] obeys the Power Activation! As noted in Alienev Apostasy, 3 Disruption, p. 283, *supra*, ships engaged in Looting may also contract *apostasy*.
- Loading RPs from a Conquered Colony is always considered the same as Loading RPs from an *alien colony* (see Back End Loading and Packing It In, 2 Commerce, both p. 1200, *supra*). Marketing cannot be used for Loading Looted RPs; Loading RPs from Looting must have the *enhanced value* established by die roll at the time of the Loading. The Concierge will not prejudge. (*Black Market, 3 Commerce, p. 1211*)
 - The *enhanced value* range of the Black Market may be much wider than the *enhanced value* of normal *alien* RPs when Unloaded to a sovereign colony; the value may be wildly inflated or next to worthless, boom or bust, but more likely the former. This represents, in some sense, the value of things Looted that would not have normally been available for Loading in normal Commerce, it may also represent the vastly superior amount of 'stuff' represented by Looted RPs as opposed to normally-Loaded RPs. Or maybe the new alien subjects are a delicacy on your planets?

- Looted RPs (Loaded at *enhanced value* by the recipient Cargo Ship) may be subsequently Unloaded at *enhanced value* at another **alien colony** per the normal rules (see Cha Ching!, 2 Commerce, p. 1203, *supra*). This is another case of possible *double enhanced value*.
- There are some potentially trickish issues that will require judgment of the Concierge. For example, if Looted RPs were attempted to be later Unloaded at an **alien colony** owned by the previous owner of the Conquered Colony or had the same Native Population Type as the Looted colony?

Trucking:

- Trucking is in-system trade between **alien colonies** owned by different positions. (*Trucking, 4 Commerce, p. 1125*)
 - **Apostasy** only affects the Cargo Ship or Cargo Boats involved in the Trucking Transaction; it is not applied to the colonies (who may benefit in more than RPs, p. 1228, *ut infra*). See Aliency Apostasy, 3 Disruption, p. 283, *supra*.
- Any activation of the Commerce Power for the purpose of Trucking *must first be checked to see if the colony obeys the Power Activation*. If the colony does not, the remainder of the Trucking activation is ignored; if this happens to the first Partner in the trade, it would be courteous to inform the second Partner before their next Regular Turn. If it happens to the second Partner – it is important especially for the second Partner to insure it doesn't happen at their colony – the players will need to deal with the problem in-game. (*Shanzhai Products, 4 Commerce, p. 1125*)
 - Although Trucking using Cargo Ships or Boats arguably includes a Loading or Unloading activation, for game convenience *only the colonies are checked* to see if they comply with the Power Activation. Thus a ship that would fail to obey half the time due to inactive Constructural Elements, might be useful for Trucking activations.
 - Sending RPs via Trucking from a Conquered Colony is Looting (due to Loading)...
- The Commerce Power is activated for the purpose of Trucking for local trade between two non-sovereign colonies not requiring interstellar movement. (*Flea Market, 4 Commerce, p. 1225*)
 - The Commerce Power may not be activated for the purpose of Trucking if the originating or target colony is involved currently in any Combat (including being Besieged).
 - The activation costs one Act.
 - The first position to activate the Commerce Power for the purpose of Trucking must also supply a Scene on their planet. Both positions do not need to supply a Scene.
 - In a Trucking Transaction between partners on the same planet, it is possible for the second partner to place the Scene used by the first partner. See Scene Snitching, 3 The Side-real Stage, p. 124, *supra*.
 - It is possible to have one-sided Trucking Transactions where the first partner intentionally sends RPs to the second without expectation of reciprocation and without the second partner ever activating the Commerce Power for the purpose of Trucking Transaction. The conditions precedent (i.e. Scene and cargo unit conduit) *only need to be met on the first partner's activation* to start the transaction.
 - However, to be able to activate without costing a Scene, the second partner must *successfully activate* the Commerce Power for the purpose of Trucking using the same cargo unit conduit and targeting a colony in the same system on the Regular Turn in which RPs are received via Trucking Transaction from the first partner's colony. If for any reason this is not done (or if the Power Activation fails), then any subsequent Trucking Transaction activations will be as 'first partner' and cost a Scene.
 - The Trucking transaction is designed for *two positions* only; there is no provision for direct three and four- or more-way trading and passing RPs around a system between multiple positions by chaining Trucking Transaction activations is probably not cost effective. The Trucking Transaction necessarily applies only to local trade between two colonies owned by different positions

(even if they have the same Native Population Type); thus Trucking is not intended for two colonies owned by the same position (see Carting activation instead, *ut infra*, p. 1229). Trucking crosses sovereign boundaries and that is the reason requiring a separate activation.

- Marketing cannot be applied to Trucking Transactions (see Marketing, 2 Commerce, p. 1193, *supra*).
- If the Trucking Transaction is between planets in the same system, *one* position must supply a suitable Cargo Ship or Cargo Boat *that is currently present in the system during the first partner's Regular Turn* to serve for the transaction, and that unit must be present during the entire transaction (cannot move away, retreat, or be destroyed) – that is, at least two Regular Turns – or the entire Trucking Transaction is cancelled. The first partner may designate a Cargo Ship or Boat belonging to the second partner (i.e. is owned by the owner of the target colony to whom the RPs are being sent) at the risk that the cargo unit is suitable and won't move away; it will be *assumed* that permission has been granted by the owner if RPs are being sent to them (game processing will not stop to seek permission). (*Planet Caravan*, 4 Commerce, p. 1226)
 - The designated cargo conduit must be able to hold, in RPs, the total amount of RPs designated for the Trucking transaction. The Cargo Ship or Cargo System Boat used will automatically Load the number of RPs sent and Unload the same number of RPs to the target Colony as part of the Trucking transaction, no separate orders are required for the Load/Unload.
 - The Cargo Ship used for the Trucking Transaction may also Load or Unload RPs from its own colony(s) in the same Regular Turn but cannot leave the system before the Trucking Transaction is complete.
 - A position engaging in Trucking must specify the amount of RPs sent from their colony to the other, which will be fully deducted from the position's Treasury and *half will count against the colony's GDP for the turn*, e.g., loaded on a truck and sent away. It is not possible to trade RPs that are not currently in the Treasury, it is not required that both parties reciprocate the same amount of RPs or that the second party reciprocate at all (*ut supra*). It is possible to send double the GDP if the colony only engages in Trucking (i.e. does not use GDP for anything else that turn) and the Treasury and conduit can handle it. It is also possible for the first partner to designate zero RPs to be traded away, starting the Trucking Transaction where they expect to receive RPs from the second partner (but still must provide the Scene, *ut supra*).
 - For example, two colonies on the same planet are set to trade. The owner of the Galactic Firsters colony activates the Commerce Power for the purpose of Trucking, costing one Act and one Scene, designates the Last Laughters colony as the trade target and 15 RPs for trade. Those 15 RPs are deducted from the Galactic Firsters' Treasury and half of the RPs count also against the colony's GDP for the Regular Turn (rounded down). The owner of the Last Laughters colony on their next Regular Turn should activate the Commerce Power for the purpose of Trucking at the colony, costing just one Act, and designate how many RPs will be sent to the Galactic Firsters colony (if reciprocating).
 - If the two colonies in the preceding example were on different planets, Galactic Firsters will need to also designate a Cargo Ship or Cargo System Boat that belongs to either party that is capable of handling the RPs sent and doesn't move away.
- The actual RPs received by the target colony in the Trucking transaction is the amount sent plus 5% to 8% plus ½ RP per previous successful Trucking Transaction (rounded up) between the *same two colonies regardless of changes in ownership*, not positions (1 RP for a full round of reciprocal trade); the RPs will be available to the trading partners at the beginning of their Regular Turn *immediately after it was sent*, as if Unloaded from a Cargo Ship (that is, 'enhanced value,' see Cha-Ching, 2 Commerce, p. 1203, *supra*). Thus, they may be used in addition to the colony's GDP for colony activities during the Regular Turn, including being loaded to a Cargo Ship. If not used, they are lost. (*Fairies Wear Boots*, 4 Commerce, p. 1227)

- For example, Johnny Badhair sends RPs to Babymetal in the first part of a Trucking Transaction; the enhanced RPs received will be available on Babymetal's next Regular Turn and it will be incumbent upon them to reciprocate if that was the deal.
- The RPs sent cannot simply be stored on the Cargo Ship used as a conduit, they must first go to the target colony and may be Loaded to a Cargo Ship in the same turn by separate activation of the Commerce Power for that purpose. Generally, Trucking Transactions are not directly useful to the positions outside the local system.
- Because only *previous* Trucking Transactions between the same two colonies are counted, the current transaction doesn't count, but will count the next time (i.e., in the reciprocation or just the next time RPs are sent, whichever is first). This could be a small benefit to going first and providing the Scene in a reciprocal trade deal.
- In addition, each position receiving RPs – if the other colony was of a different Native Population Type – has a 30% chance of receiving a Cultural Traits piece adjacent to the colony involved in the transaction – either a random Proficiency or a random Aspect Piece from the position's Aspect List (a position will not receive alien Aspects) at the end of the Regular Turn if an open Monad is available. Finally, there is a 15% chance that an Intervention Potential or Intervention Potential Plus against the position *will be eliminated or generated*, 50% chance each, however, the position will not be informed if this occurs.
- Unused Enlightenment attached to the Trucking activation can be used for the first roll (Cultural Traits piece), but not for the second (Interventions) roll.

Carting:

- Carting is the Power Activation of the Commerce Power used to transfer RPs directly between two colonies in the same system or same planet that are owned by the same position (the opposite of Trucking Transactions, *ut supra*). Conquered Colonies sending RPs via Carting are being Looted (see 3 Commerce, p. 1210, *supra*). Carting can only be used to transfer RPs. Carting is useful for two or more colonies to cooperate in constructing a ship at one colony that has a Shipyard (see Orange Cones, 1 Construction, p. 663, *supra*). (*Carting, 4 Commerce, p. 1229*)
 - It is possible, through conquest, for a position to own more than one colony on a single Balkanized planet of different native population types. This is especially good for Carting transactions (tribute?). There may be only one colony on each planet for each Native Population Type (see Lebensraum, 3 Taxation & Census, p. 321, *supra*).
 - Due to the order in which Power Activations are processed during the Regular Turn (see Clockwork Universe, 3 The Streams of Time, p. 90, *supra*), Carting activations will process before Construction Power activations at the receiving colony.
- Activation of the Commerce Power for the purpose of Carting requires one Scene located on one of the planets participating in the Carting or on the star. Scene snitching is possible (see 3 The Sidereal Stage, p. 124, *supra*), especially on Balkanized planets. Like the Trucking Transaction activation, it is only intended for two sovereign planets in the same system, and thus there is no provision for three-way movement of RPs and it cannot be used to move RPs to a non-sovereign planet or to a colony outside the starsystem. The Carting Power may be activated any number of times in the same system on the same Regular Turn to accomplish RP movement involving three or more planets, only one Scene is required to satisfy the requirements of any number of Carting activations in the same system in the same Regular Turn for all colonies owned by one position. (*Donkey Cart, 4 Commerce, p. 1229*)
 - This is similar to the use of one Scene at a colony to satisfy Loading, Unloading and Construction Activations in the same Regular Turn at that colony. See Construction Zone and Material Handling, 1 Construction, pp. 661, 664 respectively, *supra*.
 - The Concierge may note frequent one-way Carting in a system and take the position of the people on the ground in the *creative use of Interventions.... [e.g. the War of Sicilian Vespers]*

- A Carting activation involving colonies on different planets also requires a friendly Cargo Ship (or Boat) to be in the same system at the *beginning* of the Regular Turn (i.e., not arriving at the beginning of the turn, see Long Jump, 2 Movement, p. 851, *supra*) and not depart during the Regular Turn (the rules are the same as Trucking Transactions). The Cargo Ship (the ‘hot dog cart’) designated must also have available cargo space remaining ... but can be carrying RPs from other places and may also Unload or Load normally during the same Regular Turn that it is also Carting, and it is possible for one Scene to cover all of the activations if the Unloading/Loading and Carting all involve the same colony planet on the same Regular Turn (Donkey Cart, *ut supra*). (*Hot Dog Cart, 4 Commerce, p. 1230*)
 - Only one Cargo Ship (or Boat) can be assigned to each Carting activation; the same ship may be assigned to multiple Carting activations, and each Carting activation may also use a different Cargo Ship (or Boat) if available. It’s a matter of RP capacities.
- For the Carting activation, *only the sending colony* is checked to see if it obeys the Power Activation.... If it fails to obey the Power Activation, nothing is transferred, which may cause problems on the other end if the RPs are not available to the receiving colony’s GDP on that turn for Construction actions. Enlightenment may be used to reroll failed results if the sending colony has an active Epistemological Constructural Element (see Skool Tyme, 2 Constructural Elements, p. 190, *supra*). (*Golf Cart Handicap, 4 Commerce, p. 1230*)
 - Sometimes Enlightenment ‘grows’ out of the barrel of a gun, but be careful with that, see Getting Along, 3 Commerce, p. 1209, *supra*. If the sending colony is a Conquered Colony, no Power Activation check is made for Carting, on the flip side, the colony is being destroyed slowly by Looting. Newly Converted colonies can be problematic as they may have inactive Constructural Elements.
- The Carting activation must specify the number of RPs the sending colony will attempt to transfer in-system to the receiving planet; the receiving colony must also be specified. Like Taxation, it is theoretically possible for a sending colony to send RPs equal to what it would produce if taxed at that moment, but not more, unless a Writ or some other game device is used (see Red Planet, 2 Taxation & Census, p. 307, *supra*). (*Cheesesteak Vendors in Phili, 4 Commerce, p. 1230*)
 - The number of RPs transferred from the sending colony to the receiving colony on a different planet is equal to the available RP capacity of the Cargo Ship (or Boat) used, as of the beginning of the Regular Turn (thus cannot be increased by Unloading Cargo at the same time, or decreased by Loading) times a die roll of 1-10 (i.e. 1d10). In concrete terms, the die roll represents the number of transfer revolutions accomplished during the Regular Turn – load, move to receiving colony, unload, move back to sending planet, rinse & repeat.
 - If the amount of RPs transferred is less than the number of RPs to be sent, the Carting roll would be considered a failure for the purposes of triggering Enlightenment rerolls, even if only by 1 RP. The reroll result could be worse, or better. If Enlightenment has been assigned to this Power Activation and has not been used previously, it may be applied if either the sending colony or the Cargo Ship (or Boat) has an active Epistemological Constructural Element.
 - The RPs received through Carting are added to the receiving colony’s GDP-limit for the current turn activities as if they were Unloaded from a Cargo Ship that same turn (see Gross Domestic Product, 1 Construction, p. 662, *supra*).
 - Positions should plan for variable RPs received, in some cases, insufficient RPs will be available for Construction activities on the receiving colony that is counting on the Carting; in other cases, too many RPs will be received and will be lost if not used that Regular Turn (just like Unloading RPs from a Cargo Ship).

Blockade Running (“Don’t ever tell me the odds!”):

- Blockade Running (aka blade running) in GGDM occurs when Cargo Ships attempt to Load or Unload, Log Ships attempt to transfer or receive anything, or Colony Ships attempt to Load or Unload populations at a colony planet during any Regular Turn in which the target colony is engaged in an ongoing

Colony Combat (whether Besieged or not, see 3 The Sidereal Stage, p. 124, *supra*). (*Blockade Running, 4 Commerce, p. 1233*)

- The Blockade Running situation lasts only during the Regular Turn, but the ships involved, if they cannot depart during the Regular Turn, will be ‘retreated’ to the colony planet and automatically join the Colony Combat on the next Combat Round (where they may thereafter attempt to stay or retreat, be Combat Screened, etc.).
- Unlike normal Power Activations for the purpose of Load, Unload, or Ship Supply, or Loading or Unloading Colony Ships, when a Blockade Running situation occurs, *before resolution*, each ship must be checked to see if it obeys the Power Activation (or in the famous words of Han Solo, “Look, I ain’t in this for your revolution, and I’m not in it for you, Princess. I expect to be well paid. I’m in it for the money.”). If the ships obey the Power Activation, each ship that does will then make the Blockade Running attempt. If and when they arrive, any second checks at the colony are performed to see if the colony does (and is able, considering the circumstances) to obey the Power Activation. If so, the Loading, Unloading or Transfers can proceed. If Enlightenment has been assigned to the Power Activation (one of the benefits of arriving at the end of the previous Regular Turn by Short Movement), it may be applied to the rolls to see if the ships or colony obeys the Power Activation, but may not be applied to the Blockade Running attempt, *ut infra*.
- Any order to Load, Unload, or Transfer, *regardless of ship ownership*, anything to a colony under attack in Colony Combat will invoke the Blockade Running procedures, the actions will not be resolved until and unless the ship successfully runs the blockade. Log Ships may not use Combat Resupply procedures at a colony (see 4 Movement, p. 868, *supra*). A ship that successfully runs the blockade to the target colony may still fail to execute the order to Load, Unload, or Transfer due to inactive Constructural Elements (see Power Off, 2 Constructural Elements, p. 193, *supra*). A ship that successfully runs the blockade is automatically resupplied, that is, the colony is able to act as a Supporting Colony (see 1 Movement, p. 840, *supra*) for ships that reach orbit. (*Round the World with Rubber Duck, 4 Commerce, p. 1234*)
 - Blockades only apply to the colony involved in a Colony Combat; running is not necessary to reach colonies on Balkanized planets that are not under attack.
 - Blockades cannot be ‘turned off’ voluntarily, the local commanders will enforce a security exclusion zone (like in the Falkland Islands War) to isolate the target.
- These rules do not apply to Colony Ships that are Landing on a planet where a Colony Combat is in progress against a colony already on the planet. As there can be only one colony of each Native Population Type on a planet (see Island Motes, 4 Expansion, p. 921, *supra*) any Colony Ships carrying population of a colony that already exists on a planet can only Load or Unload or move on after being resupplied. Thus any Colony Ships Landing at the site of an ongoing Colony Combat are likely not involved in the combat, unless they are the attacker’s ships. There is some grey area there for judgment, but the process in that case (the attacker would be considered extremely aggressive in doing this) could be treated like landing Ground Units (see Dropping In, 4 Combat, p. 991, *supra*). (*Cab-over Petes Don’t Float, 4 Commerce, p. 1234*)
- Blockade Running attempts are resolved separately for each ship. The resolution process is a simplified Fighter attack with two *sorties* lasting one Combat Round. The attacker(s) in the Colony Combat *does not need to activate the Combat Power* and the attacking warships will respond automatically to Blockade Running attempts. Only warships and Fighters involved in the Colony Combat will participate in the Blockade Running attempt. The defenders will know already how many warships and Fighters the attacker has present and will be able to generally know the odds of success in advance; it might be possible for the defender to improve the odds by certain attacks in the Combat Round just before the Regular Turn is processed. The Blockade Running attempt is resolved as follows:

- The base value ('total cost' per Laying Keel, 3 Construction, p. 675, *supra*) of all warships of the attackers in the Colony Combat is totaled and 25% of the value is treated as 'Fighters'; remember that Carriers are also warships. To that is added half of the value of the Fighters belonging to the attacking side in the Colony Combat.
- The total is then reduced by half the total RP value of the Fighter Complements belonging to the defenders in the Colony Combat. Further, half the value of any warships at the colony planet (having retreated there previously, see Ship Zipped, 3 Combat, p. 982, *supra*, or ran the blockade) are subtracted from the attacker's 'Fighter RPs' to arrive at the value of the Fighter Complement that will attempt to block.
- For example, the base value of three warships attacking the colony is 200 RPs total, which is reduced to 50 RPs for the Fighter Complement. The attackers have no Fighters, their Carrier was destroyed in a preceding Ship Combat in System Space. The colony has 20 RPs of Fighters remaining, and a small 20 RP warship in orbit that retreated to the colony at the end of the Ship Combat that the defenders lost. The defending Fighters subtract 10 RPs from the attacker's total and the warship is an additional 10 RPs subtracted, so that the value of the 'Fighter Complement' attempting to block each runner is 30 RPs.
- After the calculations, the 'Fighter attacks' are resolved in two sorties, each at half the value of the whole, against *each* blockade runner. The attacks are resolved as normal, with Effectiveness Rolls, but the Fighter attacks *do not* receive the bonus for being a Concentrated Attack (as they normally would, see 2 Carriers & Fighters generally, *supra*, for Fighter attack procedures) and the runners do not Close-in Defense Fire.
- Continuing the previous example, each ship attempting to reach the colony will be subjected to two Fighter attacks at 15 RPs each. The ships attempting to run the blockade will not execute any Close-in Defense Fire.
 - Thus, the attackers in a Colony Combat will never suffer losses from Blockade Running attempts. The entire risk is on the runners:
 - If a ship attempting to reach the colony is Engaged, but not destroyed, the Blockade Running attempt is aborted and the runner retreats to system space.
 - If the second attack on the runner is successful, it becomes a hit and the runner is destroyed (see A Hurt, 2 Carriers & Fighters, p. 1056, *supra*) unless the runner can take more than one hit due to technologies.
 - If no attacks against the Blockade Runner are successful, the ship reaches the target colony safely and executes (or attempts to) its Regular Turn actions as if no combats were in progress. Everything is just peachy. For Molly.
- As Enlightenment cannot be used to force an opponent to reroll a successful attack, they will be no use in Blockade Running. As the attackers in the Colony Combat are responding automatically to the attempt, the position players will not have an opportunity to decide whether or not to use Enlightenment. Thus Enlightenment will not be a factor in Blockade Running.
- All combat shifts apply to resolving Blockade Running, including Era differentials. As blockade runners are most likely civilian ships, shifts in favor of the attackers will be applied for civilian targets.
- Any ship or unit that is capable of Ambush Mode does not need to run the blockade to reach the target colony. They just slip by the attackers and are resupplied if they reveal. (*Crashed the Gate Doin' 98, 4 Commerce, p. 1234*)
- Any ship at a *planet* (not in system space) that is owned by the defenders in an ongoing Colony Combat, that initiates interstellar or interplanetary movement or movement to system space during a Regular Turn, must first successfully run the blockade pursuant to the Blockade Runner procedures above. If the result is Engaged, the unit retreats back to the planet. If no attacks on the unit are successful, it escaped and may initiate the movement.

- The rules for initiating interstellar or interplanetary movement to escape out of a Blockade are the same as the normal rules for the Power Activation that is used to initiate the movement (or in the case of interplanetary movement, the normal Movement Power activation is used). Each ship seeking to run out of the blockade must check to see if it obeys the Power Activation and the colony may act as a Supporting Colony for the second roll if the first fails. Enlightenment may be applied to the rolls if the ship or colony (as appropriate) has an active Epistemological Constructural Element, but cannot be applied to the Blockade Running attempt (*ut supra*). (*About to Put the Hammer Down, 4 Commerce, p. 1236*)

Corporations (Commerce Power)

- Corporations, in the game and in the real world, are artificial legal entities which operate under a charter from the state, which is called the Articles of Incorporation. The essence of the corporation in GGDM is to save Power Activations, Acts and Scenes by *automatically* performing regular, repetitive, Power Activation-related *location-specific functions* at sovereign colonies that provide output of goods and services for the civilization. Thus Corporations legally relieve *some scarcity* of means in GGDM's Power Activations, Acts and Scenes. (*Corporation Games, 1 Corporations, p. 1243*)
 - Corporations can still fail to perform each Regular Turn due to *inactive Constructural Elements*, p. 1248, *ut infra*, because Corporations are made of people who may be incompetent, or just not in agreement with the current view of things. Corporations can suffer and be part of the breakdown of social cohesion, they can also be the target of creative Concierge Interventions!
 - Corporations in GGDM are thus a subset of sovereignty or sub-sovereign entities. ... Inherent in a GGDM Corporation *and MegaCorporation* is the ability to activate a Power at a specific location without use of Acts and Scenes or using one of the position's precious Power Activations. Any Power could be activated by Corporation as long as 1) it is location specific (and generally repetitive), and 2) it can somehow be creatively justified by the participants within the logic of the game.
 - Corporations in GGDM should never be allowed to generate additional Power Activations for their position (a Corporation is not a genie granting wishes); their functions already 'alleviate' some pressure on Power Activations by regularizing routine local activities (localization is the eigenstate of GGDM Corporations to Government, like Institutes are to Colleges). There may be some possible instances where Corporations could, to a limited extent, produce Acts and Scenes (but they are already providing substitute activations at the cost of no Acts or Scenes). A Corporation in GGDM can never act as or substitute for a Government Title (even if they control it).
 - GGDM Corporations do not have shareholders (or if they do, it is irrelevant to the game unless it's useful to the story), the sole owner of a Corporation in GGDM is the position that issued the Articles of Incorporation and at whose sovereign colony it operates. This is different from MegaCorporations, which will be addressed later. Corporations cannot be transferred.
- A position may not activate an Articles of Incorporation (Special Writ) if it currently has active Corporations equal to or greater than the number of currently undisrupted Government Titles. MegaCorporations memberships do not count as Corporations for this purpose. Corporations that are active and operating do not automatically become suspended or lost due to a Government Title being disrupted, but a position may be unable to issue new or reactivate expired Articles of Incorporation (p. 1247, *ut infra*) due to disruption of the government. The rule linking Corporations to undisrupted Government Titles are applied only on the Regular Turn the Articles are issued or renewed, and thus are a timing issue. (*We Built This City, 1 Corporations, p. 1244*)
 - For example, a position with four currently undisrupted Government Titles has five active Corporations.
 - The position will be unable to renew one of the Corporations when its Articles expire unless a new Title is added and no Titles become disrupted.

- The position would be unable to issue new Articles of Incorporation (i.e. add a new Corporation) until two of the others expire and are not renewed, or until a new Title is added and one of the existing Corporations expires and is not renewed.
 - If one Government Title (of the four) became disrupted the five corporations would continue to operate until expiration, but two of them may not be able to be renewed when they expire.
 - Undisrupted Government Titles plus active Corporations allow a position to approximately double the size of the government or more with the latter half being location-specific activities. There is a price to pay in Power Activations to get there and to maintain the structure.
- The place at which the Corporation performs its location-specific function must be a Friendly, Naturalized, or Converted sovereign colony of the position that owns the Corporation. Conquered colonies cannot be the target location of a Corporation. The colony at which the Corporation performs its functions is called the Host Colony (similar to the Host Colony of a College, see *Campus Life*, 1 Colleges, p. 459, *supra*) and must have at least five population on each turn for each Corporation that operates there. (*We Just Wanna Dance Here*, 1 Corporations, p. 1245)
 - The difference between Hosting Colleges and Corporations is that a College cannot be hosted on a Converted Colony and a College requires a minimum of ten population for each College hosted there. Additionally, a colony hosting a College must have an active Epistemological Constructural Element for the College to operate. Thus, hosting a Corporation is easier than Hosting a College. Colleges and Corporations frequently mirror in GGDM.
 - A colony can host and/or operate any number of Corporations, Colleges, and MegaCorporations as long as it has sufficient population and *all requirements are met for each one*.³² A Corporation can have only one Host Colony; if the activity of a Corporation involves regular circular movement of a ship or ships between colonies, pick one to be the Host.
 - As the Host colony must preexist the corporation (must exist and qualify at the time the Writ is activated), it is not possible for a Corporation to found its own Host Colony. This is not to say that it is impossible for a Corporation to found new colonies however, but those colonies must be sovereign to the position, not Corporation owned. Otherwise, what happens to them if the Corporation is not renewed? They would become government colonies.

Articles of Incorporation (where else but in Delaware!):

- Corporations are created by a Special Writ called an Articles of Incorporation in conjunction with a Commerce Power activation for that purpose costing an Act and a Scene on the proposed Host Colony of the Corporation. Articles of Incorporation are a Special Writ used to create a Corporation (describing its operation and social milieu); other Special Writs previously introduced include Writs of Naturalization and Land Grant Writs. (*Articles of Incorporation*, 1 Corporations, p. 1246)
 - *Jobs for slobs*. Prior to actualizing the Fuzzy Group to activate the Special Writ, a check must be made at the proposed Host Colony to see whether the Commerce Power activation for the purpose of Articles of Incorporation is obeyed. If the Host Colony objects (i.e. fails), local resistance has caused the Power Activation to fail. If the Power Activation fails, the Fuzzy Group is not actualized, the Special Writ is not Activated. Another try can be made on the next Regular Turn. Enlightenment may be applied to a failed die roll if the target colony has an active Epistemological Constructural Element and Enlightenment was designated for the Power Activation.
 - Since Articles of Incorporation are a Writ, they are an official Interpretation, and serve as the Interpretation for the activation of the Commerce Power on the Regular Turn that the Articles are *first Issued*. Like all Writs, it must follow the correct form of the Writ, and must be approved by the Concierge; it must be consistent with the sociopolitical cultural milieu of the position on the

³² It may be unclear from this text whether a population factor could be counted for both a Corporation and a College, but I intended that each population factor supports exclusively either a College or Corporation on a Host Colony, thus only larger colonies could host multiple Colleges and/or Corporations. As Orbital Cities are part of the colony, their population would count for this purpose.

Regular Turn it is activated. Articles of Incorporation have a few different requirements discussed below.

- In the form of the Articles of Incorporation, the Power to which it relates must be the Commerce Power (see Form of the Writ, 2 Writs, p. 438, *supra*). The Directive section of the Articles of Incorporation must describe the Regular Turn operation of the Corporation in its entirety, and include the Power whose functions it automatically performs and the location. (*Who Counts the Money, 1 Corporations, p. 1246*)
- The Corporation will *operate automatically* as described at the location (host) colony each time a Regular Turn is processed for the position until either the Articles of Incorporation expire or operation becomes impossible (e.g., the Host colony is conquered, destroyed, removed, or reverts). A Corporation will continue attempting to operate until its Articles of Incorporation expire, even if operation becomes impossible. (*Marconi Plays the Mamba, 1 Corporations, p. 1246*)
- The operation of a Corporation during the Regular Turn is not a Power Activation, thus does not take up one Power Activation *and does not require an accompanying Interpretation*. No News Event should announce the regular operation of a Corporation. Corporations thus provide a way to do things ‘under the radar’ in GGDM. (*Underneath the Bar, 1 Corporations, p. 1246*)
- Articles of Incorporation **must** have an expiration time in Turn Cycles *after* the turn of activation or renewal, which is equal to or less than the current number of undisrupted Government Titles of the position. The expiration time is reset each time the Articles of Incorporation are renewed based on the *current condition* of the issuer. (*Someone Stole the Stage, 1 Corporations, p. 1247*)
 - Renewing Articles of Incorporation *does not require* an activation of the Commerce Power for the purpose of Issuing Articles of Incorporation, but does require an activation of either the Commerce Power or the Power to whose function it relates, on the same Regular Turn as a Fuzzy Group is actualized to activate the Special Writ.
 - Renewal of the Articles of Incorporation are considered to occur at the Host Colony (even if the Power activated is not at that colony or capable of being specifically activated at one colony), thus renewal can fail due to inactive Constructural Elements at the Host Colony. Such failures only apply to the attempt to activate the Special Writ (i.e. the Articles of Incorporation), and not to the accompanying Power Activation (whether or not it fails for the same reason), and if failed, the Fuzzy Group to be used is not Actualized (i.e. not removed from the Public Space).
 - Renewal of Articles of Incorporation (a Special Writ) *does not serve* as the Interpretation for any Power Activation on the Regular Turn the renewal occurs.
 - These rules *only apply to* activation of Articles of Incorporation Special Writ to renew Corporations and do not apply to any other part of the game, e.g., they do not apply to Host Worlds of Colleges, or to activation of any other Writ.
 - Note that because the expiration time is based on Turn Cycles, *it will continue to run even if the position fails to submit turn actions/process a Regular Turn during the cycle*. The entire game of GGDM is based on the assumption that positions will be active each Turn Cycle and/or Combat Rounds during the appropriate time periods (see The Law of Periods, 2 The Streams of Time, p. 84; Turn, Turn, Turn, 3 The Streams of Time, p. 90; Run Away!, 1 Combat, p. 944, and Capoeira, 3 Combat, p. 970, *supra*).
 - A Corporation can be renewed before it expires, however, this may not be advantageous if 1) some Government Titles have become disrupted and/or 2) because the new expiration time begins the run the Regular Turn after renewal. [***in short, remaining expiration time is lost***]
- Renewal of Articles of Incorporation is not automatic or automatic. A position can chose to let a Corporation expire, sometimes renewal will *be physically or practically impossible*, and each renewal requires judgment by the Concierge that the state of the civilization and circumstances still accords with the Writ. The Concierge can ‘retire’ a Corporation as no longer being consistent with the sociopolitical cultural milieu of the position or physically impossible. All renewals require actualization of a Fuzzy Group to

reactivate the Articles of Incorporation (p. 1244, *ut supra*) or commitment of resources, which may not be possible at that moment, managing corporations requires foresight and planning. (*Then We Just Lost the Beat, 1 Corporations, p. 1247*)

- There is no mechanism except expiration for ‘getting rid’ of existing Corporations when they are no longer wanted or needed. These things take on a life of their own...
- There is no game mechanism for amending Writs because they are very specific to their time and place (i.e. milieu), unlike the broader College Charter (see Amended Charter, 1 Colleges, p. 462, *supra*), thus there is no means to amend Articles of Incorporation. To change Corporate operations, new Articles must be issued.

Corporate Operations (the “front office”):

- A Corporation is a ship launched, it will operate for the number of *Turn Cycles* – whenever Regular Turns are processed – specified as long as it can and is not prevented. It will operate as provided, it will consume or use the resources and ships and other physical items provided and they will not be returned until the time the Writ expires. Thus, in an emergency, the resources cannot be pulled back or diverted. It may become impossible for the Corporation to operate, e.g., the specific colony location where it operates is captured or destroyed or ships are lost, at which time, it may be suspended by the Concierge. (*Putting the Drama Back into Shipping, 1 Corporations, p. 1248*)
- Active Corporations will operate automatically, in the order from oldest to newest, based on the Writ creation date (not the latest activation of the Writ), so that the order always re-mains the same. Planning and management are necessary, it is possible for Corporations to interfere with each other’s operation or to work at counter purposes. (*Good Gravy Man!, 1 Corporations, p. 1248*)
- The Corporation must essentially perform functions that could be performed by Power Activations. Corporations could theoretically be formed to perform any *location-specific task* in the game. The operation of the Corporation is treated as a Power Activation and *can fail normally due to inactive Constructural Elements* at the target colony, ship or both, and be rerolled if Enlightenment has been provided to the Corporation. (*Help this Woman or..., 1 Corporations, p. 1248*)
 - For example, loading population on Colony Transports at a location over several Regular Turns (only useful if CTs are present and ready), taxation of a specific planet every Regular Turn (the planet would however, need to be exempt from normal Taxation Power activations), or to automatically supply Log Ships at a specific location whenever they are present.
 - Corporations cannot be created for anything that does not require a Power Activation, for example, colony defenses operate automatically and thus, cannot benefit from a Corporation. Corporations could, however, build Defense Bases every turn at a specific colony if resources are provided.
 - Some corporations could be created to do odd things that will require some imaginative mental acrobatics to visualize; e.g., a Corporation could be created to activate the Combat Power in a system each turn for the purpose of Combat Alert.
 - Corporations could be created to do certain functions better than the government, this is all part of balancing the Special Writ (i.e. the Articles of Incorporation) and there must be some costs.
 - Corporations can benefit from the Enlightenment in any situation requiring a die roll (e.g., loading populations); if the Corporation is to use Enlightenment each turn, it must be specified in the Writ. Corporations can either be granted or denied access to Enlightenment, it is not automatic, they do not automatically draw on the pool.
 - Corporations should not be allowed that primarily consume Enlightenment to produce a good or service. This is a GGDM systemic boundary separating Corporations from Institutes. There is much twilight area for imaginative participants and, like all else, it should not be declared absolutely impossible. There is, or can be, an odd, sometimes peculiar relationship between Colleges and Corporations in GGDM.

- Corporations may and probably will, require in many cases the assignment of ships or pre-commitment of resources. (*She's in Shock, 1 Corporations, p. 1249*)
 - For example, Loading Populations to Colony Ships or Supplies to Log Ships are not 'free' just because they are being performed by a Corporation.
 - Resource Points (RPs) or units assigned to a Corporation belong to that Corporation until expiration; RPs assigned to a Corporation will be transferred from the Treasury to the Corporation and will not age while with the Corporation (but likely will be consumed, never to be seen again). Renewal of the Corporation may require resources or additional ships.
 - Corporations in most cases should avoid providing 'free RPs' but there is room here for balancing and judgment by the Concierge and participants. The primary purpose of the Corporation is to alleviate the pressure on Acts, Scenes and Power Activations. This is not to say that Corporations cannot be created whose main function is to generate RPs without taxation (e.g., casinos) but there will be other balancing costs and factors (i.e. renewals).
 - Again, 'balancing' in GGDM does not mean no net gain or transformation of one thing to another without benefit. Balancing is not an equal sign in an equation. It means instead gain commensurate with the effort and resources expended. Imagination is key. See *Balancing the Pin, 2 Patents, p. 735, supra*.
 - A Corporation may not automatically use Enlightenment in tasks where it could be used unless granted a number of Faculties per turn, which are 'reserved' during the duration and not available for use elsewhere. Corporations, even 'educational corporations,' should not be allowed to generate Faculties, even for their own use.
 - *See Land Down Under, 1 Corporation, p. 1250 for two examples of how Corporations could be used in GGDM. This reference is placed here for the sake of brevity.*

MegaCorporations (a bigger, badder Corporation):

- A MegaCorporation is an artificial entity created by two or more positions. Unlike Corporations, the Articles of Incorporation for a MegaCorporation are issued by each member by activation of the Diplomacy Power for that purpose on the same Regular Turn as the actualization of a Fuzzy Group to activate the Special Writ. All of the rules that apply to Corporations apply to MegaCorporations unless otherwise noted below. (*Commensurate Complexities, 2 Corporations, p. 1255*)
- The Host World of the MegaCorporation must be designated in the Articles of Incorporation. When all Members of the proposed MegaCorporation have performed the required Diplomatic Power activations and activated their Special Writs to form the MegaCorporation, the proposed Host World must be checked on the last proposed joining member's Regular Turn (even if they don't join) to determine if it accepts the MegaCorporation. This check is made as if a Power Activation occurred at that colony even if it is not owned by any member of the MegaCorporation (next page, *ut infra*), if the check fails due to inactive Constructural Elements at the colony, the MegaCorporation has failed and all of the Power Activations and Writ activations are wasted. Positions may try again... (*Gelt's Casino World, 2 Corporations, p. 1255*)³³
 - This is one of only three instances where an **alien colony** can cause the failure of a friendly Power Activation either directly or indirectly; the others are Load and Unload Resources at an **alien colony**. Failure of an **alien colony** can also mess up a Trucking transaction, but will not cause a friendly Power Activation failure.
- MegaCorporations are formed by issuance of Articles of Incorporation for that purpose by multiple positions. Each position desiring to join the MegaCorporation must independently create a set of Articles of

³³ I was of the mind when I wrote this of a poster I saw long ago called "The Closing" (as in a real-estate sale closing): A group of people in business attire are in a rowboat behind the oars. One fellow with a megaphone yells go, and everyone starts doing their own thing, not in synch. In the next frame, they are all confused and exhausted and the boat hasn't moved an inch from the dock. I think it ends with, 'let's try again next week.'

Incorporation Special Writ. The Concierge should be made aware of the intent to form a MegaCorporation and the identities of the proposed member positions so that the Concierge can view the proposed Articles and determine whether they are appropriate for each position and are compatible and in agreement on the operation of the MegaCorporation. The proposed Articles must list the Diplomacy Power and not the Commerce Power as the associated Power for the Special Writ. (*Too Many C(r)ooks in the Kitchen, 2 Corporations, p. 1255*)

- As noted in the Diplomacy sections, it is expected that private communications will occur in advance between players, which is of no concern to the Concierge. The Concierge will only judge what is necessary and presented. It is possible, of course, because of player communication, for the proposed Articles to have identical language, but that does not mean that they are identically compatible with each position's current milieu. Expect that the process of forming a MegaCorporation may take more than one Turn Cycle.
- It is unlikely that a regular Corporation could become a MegaCorporation by adding members. But like all else, it is not *impossible* with great creativity and imagination.
- All proposed members must share Diplomatic Space with all other proposed members; i.e. two positions that have not had First Contact cannot possibly form or join the same MegaCorporation. The proposed members must decide in advance which colony world will Host the MegaCorporation. The owner does not lose sovereignty over the colony as a result of Hosting a MegaCorporation, and the MegaCorporation does not need to be hosted on a world owned by any member theoretically (but the owner must share Diplomatic Space with all members), if some other position will agree to host the MegaCorporation. Like Corporations, however, MegaCorporations must have some location-specific activity related to the host colony, even if there are activities at other colonies related to the MegaCorporation. (*Sovereign Chefs, 2 Corporations, p. 1256*)
 - A non-member might agree to Host a MegaCorporation at a 'neutral site' to receive the free benefits of the *location-specific* activity of the MegaCorporation at their colony without needing to expend their own Acts, Scenes, Activations or RPs. Call it 'rent money.' Of course, there is a mountain of potential complications in depending on another group of positions for your regular grub, not to mention the unwanted attention it may attract to your colony.
 - Whether a MegaCorporation can own a colony world is an unsettled issue with many ramifications. ... If a MegaCorporation does come into ownership of a colony, in whatever way, that colony is no longer sovereign to any position (until conquered), everything on the colony (including defenses, which might be the purpose of it) passes to the MegaCorporation, and the colony will no longer respond to Power Activations of any position.
- When the Concierge has approved all of the proposed Special Writs to form the MegaCorporation, the proposed members must each on their next Regular Turn, activate the Diplomacy Power for the purpose of Articles of Incorporation which costs one Act and one Scene on the Capital Colony. Concurrent activation of the Commerce Power is not required to create a MegaCorporation. (*Dinner is Served, 2 Corporations, p. 1256*)
 - Any position that fails to do so will lose the opportunity to initially join the MegaCorporation and may in some instances compromise the whole venture if, for example, there were only two proposed members or if that position's material contribution to the MegaCorporation was vital.
 - Positions should be certain that they have the proper Acts and Scenes and can spare the Power Activation on the Regular Turn after everything is ready, go.
 - Only those positions who activate the Diplomacy Power as required are initial members of the MegaCorporation, if the MegaCorporation is tenable with the current membership. The Concierge and/or members may deem the MegaCorporation untenable or inoperable if certain members fail to join by following the above procedures. It may also be possible that the absence of a proposed initial member is irrelevant.
 - The Concierge may, with discretion, allow the process to go forward a second time or third time if desired if the MegaCorporation is untenable without a certain member position, but cannot

force the other proposed members who were stood up ... at the altar to recommit to the process or expend additional Acts, Scenes or Power Activation for second and third tries.

- It is possible for other positions to join an existing MegaCorporation. The process involves three parts; the proposed member must submit the proposed Articles of Incorporation Special Writ (the Concierge must give the proposed Writ the same consideration), the existing members must consent, and when all is ready, the proposed member must activate the Diplomatic Power for the purpose of Articles of Incorporation on the next Regular Turn and make whatever other contributions are necessary. The existing members *are not required* to activate Diplomacy Powers to accept the new member. The addition of a new member cannot substantially change the operation of the MegaCorporation consistent with the previous discussion regarding non-amendment of Writs (see *We Just Lost the Beat, 1 Corporations, p. 1248, supra*). (*Late Dinner Guests, 2 Corporations, p. 1257*)
- Members may leave a MegaCorporation by activation of the Diplomacy Power for the purpose of Break Treaty, or by becoming extinct in the Galactic Space. Members who fail to timely renew their Articles of Incorporation are also considered to have left the MegaCorporation, though they may be readmitted at the discretion of the Concierge and permission of the remaining members. The Concierge may also determine that the Articles of Incorporation are no longer consistent with the current milieu of any member position and refuse renewal. (*Leaving So Soon?, 2 Corporations, p. 1257*)
 - For example, a position whose change of Government Titles and other actions have made it militant, xenophobic, or opposed to the other members, and this is a radical departure from the conditions in which it initially joined the MegaCorporation, might not be allowed to renew the Articles. This is within the discretion of the Concierge to ‘suspend’ Writs as described in *Suspended Writ, 2 Writs, p. 440, supra*.
 - Members who leave may or may not receive back anything they contributed, and whether the departure of a member causes the MegaCorporation to collapse is a situational judgment by the Concierge and members (unless there were only two members!).
- Generally, it would be problematic for positions to apply Enlightenment to MegaCorporate activities. In the same vein, MegaCorporations should not likely benefit from Writ activations or Institute activities of member positions; all are specific to the internal sociocultural state of the member position. But, it could in some circumstances be part of the bargain, to bring expertise to the MegaCorporation. Like Corporations, if a MegaCorporation is to use Enlightenment (the best of the member species) it must be stated in the Articles of Incorporation; one species’ level of enlightenment might be another species’ dumb!³⁴ (*Cold Leftovers, 2 Corporations, p. 1258*)
 - There are two aspects to technology questions regarding MegaCorporations. First, the MegaCorporation benefits from whatever technology is provided to it; thus if a member provides a 3rd Era Cargo Ship, that ship operates for the MegaCorporation as a 3rd Era Cargo Ship (per the abilities granted by its Patent) regardless of the relative technology levels of the other members. Second, if there is any question, the MegaCorporation operates with and has available whatever technologies are available to the position that owns the Host Colony.

Starship Sales:

- ... there is no mechanism in the prior rules for transfer of enhancements, technological devices or starships between positions (*Starship Sales, 2 Corporations, p. 1260*) [***technology, ergonomics issues...***]
 - Corporations and MegaCorporations, if their Articles of Incorporation allow, may manufacture and/or deliver anything that can be produced in the game and/or that is possible to deliver. For example, a Corporation might manufacture and sell Cargo Ships by treaty to another position, or a MegaCorporation might build industry on a colony as part of its function. It is assumed that

³⁴ I remembered while writing this a short story from long ago (but do not remember the title) where a man who had multiple Ph.Ds. was sent as an emissary to a technologically-advanced alien race that had contacted humanity, and they sent him to kindergarten.

whomever is going to be the recipient of the starship would provide the Corporation or Mega-Corporation with the technical information necessary to manufacture the ships to specifications.

Special Operations (Vital Power)

- The Special Operations Power may be activated for the following purposes:
 1. Reconnaissance (Surveillance and Probing, see 2 Information, *infra*),
 2. Recruit Missions (SOMs),
 3. Lodge Missions (SOMs),
 4. Information Operations (see 2 Information, *infra*),
 5. Black-ops (non-Information operations),
 6. Treason (it takes two to tango...),
 7. Train Counter Operations Missions (i.e. Lodge & Recruit COMs),
 8. Counter-Operations (sweeping up the garbage!).
 - **Reconnaissance** – which address[es] observation and military reconnaissance as opposed to espionage and black-ops – and Information Operations – spying, espionage – will be discussed fully in, 2 Information generally, *infra*. This part relates solely to Black-ops and Counter-Operations. (*The Little Black Book, 1 Special Operations, p. 1273*)
- Special Operations Power activations cost one Act, however, when the Power Activation occurs at a sovereign colony (as in Counter-Operations for example) the Power activation *costs a Scene instead*, which must be on the colony. That is, any activation of the Special Operations Power will cost either an Act or a Scene as applicable, but not both, unless a position is Lodging Missions at both alien and friendly units in the same Regular Turn. If the target location is a sovereign ship (or MegaCorporation membership property) which is at a sovereign colony (as in putting SOMs or COMs on a ship), either one Act or a Scene (position's choice) at the colony may be used for the Power Activation. A position may not choose to use an Act when a Scene is required; the Scene must be used. (*Acting Lessons, 1 Special Operations, p. 1274*)³⁵
 - Special Operations Power Activations generally do not fail due to inactive Constructural Elements unless they occur on Friendly, Naturalized or Converted sovereign colonies or ships (i.e. using a Scene). Thus, Power Activation failure for inactive Constructural Elements (see Power Off, 2 Constructural Elements, p. 193, *supra*) can only occur when Special Operations Power is activated to place Special Operations Missions (SOMs) on Friendly, Naturalized or Converted sovereign colonies or ships or to carry out Black-ops at those places, and in any Counter Operations activation on sovereign colonies. (*Making a Scene, 1 Special Operations, p. 1274*)
 - A position may use an Act to Train Counter Operations Missions (COMs) that are being placed on ships at sovereign colonies to avoid the possibility of Power Activation failure. However, this may not always be an option depending on circumstances.
 - Special Operations Power Activation failure checks are only made when a Scene is used, whether voluntarily or by requirement (*ut supra*). Special Operations Power activation failures can be subject to Enlightenment rolls if such is committed to insure the Power Activation and if the target location (i.e. where the Scene is used) has an active Epistemological Constructural Element (see Skool Tyme, 2 Constructural Elements, p. 190, *supra*).

³⁵ It is possible in Special Operations to have missions Lodged or to conduct Black Ops at locations that are not on the civilization's Public Space. I do not believe that merely having a SOM there is sufficient alone to place a Planet, Ship or Star on the owning position's Public Space because the 'consciousness of civilization' in GGDM terms comes from the presence of game units – ships and colonies – and a SOM is not a game unit even when operating alone (cf. Ground Units). Therefore, having a SOM doesn't allow a position to 'see' anything at the target location unless through an Information Operation.

- In short, Special Operations at alien locations does not depend on the operator's Constructural Elements, but may be greatly affected by the target's inactive Constructural Elements, as discussed in more detail in A Heartless Woman's .38, 2 Special Operations, p. 1301, *infra*.³⁶
- Note that like the Taxation Power, the Special Operations Power Activation can fail at each specific friendly location while also executing normally at alien locations (whether successful or not). See Jobs for Jackals, 2 Special Operations, pp. 1290-1291, *infra*, for further discussion.
- Participants should never dismiss the idea of ideological infighting and ineffectiveness as basis for game entropic effects or die roll failure; this especially seems to be true of intelligence services due to the secretive work they do and their prideful position. (*Destruction of the Abwehr, 1 Special Operations, p. 1275*)
- A game mechanic that resolves the result of a Special Operation by die rolls is not a judgment on the merits of the operation. It is thus that some truly harebrained operations (e.g., ST:OS "Journey to Babel") could succeed simply on die rolls and not on merits. ... So, it can never be said that a harebrained Special Operation could never succeed. The Concierge is free to exercise judgment on any Special Operation and may (especially considering the interstellar setting) block or alter the results of the patently harebrained species of Special Operation through Interventions (and an entertaining Special Bulletin New Event!). (*Harebrained Schemes, 1 Special Operations, p. 1278*)
 - The Concierge and participants should distinguish between hairbrained operations and those which are just very *difficult* and are carried out by competent people, but have a low probability of success... (*Mission Impossible, 1 Special Operations, p. 1279*)

Temporal Special Operations ("You forgot to say 'please.'"):

- As discussed in 1 Temporal Technology, GGDM is not suitable for that sort of play, it has the wrong structure. To the extent that temporal technologies are allowed in GGDM, participants should be extremely careful if allowing temporal Special Operations. (*Time Safari, Inc., 1 Special Operations, p. 1268*)
 - I would suggest at the most that such operations be limited – very limited – to Recruiting and Lodging Missions (and possibly remote viewing); actual Special Operations 'black ops' are too problematic in their causal ripple effects. Even Recruiting and Lodging can cause ripples if anyone is doing anything they would not have otherwise done (e.g., became a spy instead of a brilliant professor), but those may be handled within the game by a judicious Concierge...

Entropy from Special Operations ('shit-stirring'):

- Each time that a Black-op (i.e. activation of the Special Operations Power for the purpose of Black-ops, *ut infra*, including activations for the purpose of Treason, see 3 Special Operations, p. 1310, *infra*) or Counter-Operation (i.e. activation of the Special Operations Power for the purpose of Counter-Operations, *ut infra*) is executed (targeted, attempted) against a position, regardless of the results and regardless of who is ultimately 'blamed' for it, an Intervention Potential is *attached to the position* from the pool of general Intervention Potentials (note that this is not the same as an Intervention Potential Plus) *at the location of the Special Operation* and should be used by the Concierge in that Regular Turn or within the Turn Cycle, to create some effect linked to the Special Operation. (*Vortex Manipulator, 1 Special Operations, p. 1271*)
 - For example, whatever the motives and intents of the July 20 Plot conspirators, they inadvertently succeeded in eliminating one of the finest field commanders of WWII (regardless of the alleged myth): The Nazi party, suspecting that Rommel was involved in the July 20 Plot, forced

³⁶ Had I thought of it ... or maybe I did think of it ... I could have made conflict checks for Special Operations on **alien colonies** and ships depend on inactive Constructural Elements treating them as if they were active Constructural Elements for the attacker. I must or might have rejected this for some reason – for example, it would constitute free intelligence and is problematic with the use of Enlightenment for rerolls – but the general idea remained that the Concierge can always creatively and liberally take into account inactive Constructural Elements on or at the target location of a hostile Special Operation.

him to commit suicide on October 14, 1944, and then lied to the German public about his cause of death. Probably, this didn't change the course of the war ... but what if Rommel had been commander at the Battle of the Bulge just a few months later? Had Rommel succeeded in the mutiny of the Western commanders (and his demand letter finally reached Hitler), there might not have been a battle in the Ardennes in December 1944. But he was not a July 20 plotter.

- This effect could be linked to a known Thesis lodged against the position (see Disputation, 2 Reformation, p. 1391, *infra*), if any, or to an ongoing Kairotic Moment effect (see Kairotic Moments generally, *infra*) to create story continuity.
- Merely recruiting and Lodging Special Operations or Counter-Operations Missions *do not* cause an Intervention Potential to be attached, nor does Reconnaissance activations (see One-Way Mirror, *et seq.*, 2 Information, p. 1340, *infra*).
- If the Special Power Activation failed due to Constructural Elements, it never happened, and thus was not attempted, and no Intervention is attached.
- This rule applies only to Black-Ops and Counter-Operations, not to Information Operations.

Special Operations Missions (SOMs & COMs):

- The basic unit of Special Operations (both Black-ops and Counter-operations) is the Mission (but is not a game unit, see The Fine Print, 1 Construction, p. 660, *supra*). The Mission is whatever is needed, that package of people, opportunities, placement, and resources needed to carry out the operation for which the Mission is eventually used. Missions must be first “recruited” and then “lodged” in a specific location or corporation. Missions are only designated as Special Operations Missions (SOMs) or Counter Operations Missions (COMs, see CIT, 3 Special Operations, p. 1320, *infra*). Other than that designation, it is irrelevant what Special Operation or Counter Operation the Mission is eventually used for; it is assumed that at the time of Recruitment and Lodging of the Mission the powers that be have an idea of what the Mission (or cell, CIT, or whatever you want to call it) will be used for, but those are details that do not need to be specified for game purposes until the Mission is actually used. (*SOM-COMs*, 2 *Special Operations*, p. 1289)
- Special Operations Missions (SOMs) are the ‘offense’ of Special Operations, they are the ones who go out and do the dirty deeds (but not dirt cheap). *It should not in most cases, be assumed that those who are carrying out the Special Operations are of the controlling Native Population Type of the position which recruited and lodged them; foreigners (especially aliens) stick out, Special Operations are usually carried out by locals, people you know.* (*Special Operations Missions*, 2 *Special Operations*, p. 1289)
 - Before a Mission can be used for Black-ops, it must be first Recruited and then Lodged (the Who, Who and How?). A SOM may not be both on the same Regular Turn, therefore, it is at least a two-turn process to put Missions in place. Missions should be expended with care.
- ...Missions are only *recruited* during Regular Turns and not during Combat Rounds. Whether or not Missions can be recruited (during the Regular Turn) in units in an ongoing combat is an interesting question for careful consideration, depending on what type of unit (ship, Ground Unit, Defense Base) and what type of combat and who is involved. (*Combat Recruiting*, 2 *Special Operations*, p. 1290)
- When the Special Operations Power is activated for the purpose of Recruit Missions, the position may attempt to recruit as many Missions as desired. For each activation for Recruiting Missions, an amount of RPs *must be* committed (call it a ‘recruiting bonus’: bribery, payoffs, smuggling, fake identification, operations to change appearance or genetic structure, supply drops, infiltration, support for dissident elements, etc.) per Recruiting attempt and the number of Missions desired to be recruited must be specified. (*Jobs for Jackals*, 2 *Special Operations*, p. 1290)
 - The base chance of recruiting a Mission is 35% plus 2% per RP committed.
 - Only one roll will be made per Mission attempted to be Recruited, and there is only a 50% chance that Enlightenment can be used in case of failure, if committed to the Recruiting actions.

Positions cannot use Enlightenment to reroll a failure to be able to use Enlightenment (like wishing for more wishes)! Unused Enlightenment, unlike Combat, is not lost in relation to **any** Special Operation Power activation.

- Again, note that because Special Operations Power activations cost either one Act *or* one Scene and never more, their actions will process early in the Regular Turn order (see Clockwork Universe, 3 The Streams of Time, p. 90, *supra*), in particular, before Taxation, etc.
- Missions just represent potentials, so Missions are very ‘vanilla’ and are not tied to a specific place or event, are not affected by other considerations, such as corporations, colony status, diplomatic relations, and such. Missions are not Recruited ‘against’ any particular opposing position, rather, that is the function of Lodging (p. 1293, *ut infra*). Missions just hang out by the hyperspace pool until either Lodged or not.
- Only Special Operations Power activations (for any purpose) using or requiring a Scene (see Making a Scene, 1 Special Operations, p. 1274, *supra*) are subject to Power activation failure checks at the location where they occur. Thus, Special Operations will fail less often overall than most other Power Activations, and *Recruit Mission will never fail*, and *Lodge Mission and Special Operations activations can only fail if the target is a friendly unit*. Special Operations offense in this regard has a slight advantage over Counter-Operations, the defense. When the Lodging attempt involves both friendly and non-friendly target units, only the friendly units are checked (Back ye foul beast! No unhandled exceptions in GGDM!).

Lodging Missions (on a long ‘vacation’ at an unknown location):

- Activating the Special Operations Power for the purpose of Lodging Missions allows the position to attempt to Lodge as many Missions as desired in any number of locations. (*French Vanilla*, 2 *Special Operations*, p. 1292)³⁷
 - Whenever a Mission is successfully recruited, it should be Lodged on the following Regular Turn. Missions which fail to Lodge **are lost**; additionally if the position fails to issue Actions to Lodge the Recruited Missions (and that’s a strategic risk choice of the position players), they *may be lost at the end* of subsequent Regular Turns due to ‘aging out’ (p. 1296, *ut infra*). Lodging is the process of putting a Mission in a specific place; that is, translating the potential to the real (i.e. collapsed wave function).
 - Recruiting Missions is a commitment to Lodging them on the subsequent turn.
 - Players should note that a Special Operations Power activation for the purpose of Recruiting Missions should be followed on the next Regular Turn by a Special Operations Power Activation to Lodge the Missions and plan accordingly or the opportunity is wasted. Both of these notes suggest that GGDM Black-ops should be selectively targeted with a well-considered plan.
 - It thus takes two Regular Turns to develop a Special Operations Mission – one to Recruit and one the Lodge, Missions cannot be Lodged until the position that Recruited them knows the potential exists to Lodge them. On the third Regular Turn, the position may attempt a Black-op (p. 1297, *ut infra*) against a target at the location where the recruited missions were Lodged.
 - Missions may only be Lodged in a game unit (see View from a Height, 1 Construction, p. 660, *supra*), that is they are either Lodged on ships, colonies or in Ground Units. The target game unit for the Lodging may either be a friendly or non-friendly unit. Lodging on *friendly units* should be considered nearly automatic, unless the Concierge chooses to use an Intervention Potential (representing incompetence, etc.).
 - Missions may not be Lodged on empty planets – in anticipation of aliens arriving later – but then again, GGDM is science-fiction! Isaac Asimov’s robot detective R. Daneel Olivaw lived for about 20,000 years, manipulating the galaxy for humanity, and is discovered lodging on Earth’s

³⁷ Marine Corps running song, “C-130 rolling down the strip, Marine Corps daddy gonna take a little trip. Mission top secret, destination unknown, I don’t know when I’ll be com’n home!”

moon in Foundation and Earth (1986). But that is something that goes beyond the basic mechanics of GGDM; within GGDM, the only way a Mission could be on an empty planet is if it were Lodged in a Ground Unit that was placed there (see Beans, Bullets & Bandages, 4 Combat, p. 988, *supra*).

- The Actions to Lodge Missions do not need to specify which Mission is being Lodged (they are vanilla) but do need to specify where each Mission is being Lodged.
- The chance of Lodging each Mission in a unit or location owned by another position (i.e. non-friendly unit) is 3% for each Monad in the Diplomatic Space between the positions, plus a percentage equal to the Insurgency Level of the target colony (see Fabrication of Order, 6 Combat, p. 1022, *supra*), and 6% may be added also if the target colony has the same Native Population type as the position attempting to Lodge the Mission. A maximum of 1 RP may be added to each Lodging attempt increasing the chances by 15% (money talks, BS walks); participants may decide to adjust this bonus up or down in their game or based on Concierge judgment. Enlightenment – in this case, recognizing opportunity and manipulating others – may be applied to each Lodging attempt using the same rules for Recruiting Missions (p. 1291, *ut supra*). (*French Vanilla, 2 Special Operations, p. 1292*)
 - There is no way within the GGDM game mechanics – similar to opposing combat rolls – for a defender to apply their own Enlightenment against enemy attempts to Recruit or Lodge Missions or conduct Black-ops as the defender or target has no Power Activation. However, clever players may find ways to activate Writs whose effect relates to defending against enemy attempts. And of course, technology is the asymmetric response to the asymmetric offset. And ever onward...
 - MegaCorporations create Diplomatic Spaces and thus contribute that way. A colony Hosting a MegaCorporation of which both positions are members adds 10% to the chance of Lodging.
 - When a Special Operations Mission is successfully Lodged, it is in place, ready to use in an activation of the Special Operations Power for the purpose of Black-ops, and will be recorded as such on the position's game information.
- The minimum Diplomatic Space between two positions that have had First Contact are the two First Spaces, they do not need to be connected for Lodging. This provides an automatic base 6% chance. When two positions are very entangled (i.e. have a large Diplomatic Space), Lodging may be nearly automatic, but I recommend capping the chances at 90%. (*Diplomatic Impunity, 2 Special Operations, p. 1294*)
- Recruited SOMs exist as a pool of potentials with no location until Lodged (*ut supra*, p. 1291), but they aren't just going to walk there. A means, a plot device or mover, is necessary (for which the Lodging activation and/or Scene serves a purpose) to have them appear there; there must be some connect between the position, potential, and actuality of a Lodged mission. First Contact is important in this regard, as is proximity of colonies, ships, business transactions, etc. Participants should give some thought to the means and opportunity to Lodge SOMs and the Concierge should adjust the percentages as necessary to reflect the circumstances and conditions, and stage of the game. No pre-rulings will be issued, but players may pitch a means or meaning of the Lodged SOMs to the Concierge. (*Walking to the Moon, 2 Special Operations, p. 1294*)
- It is also minimally possible to Lodge Missions, by expending 1 RP, against a position with which the attacker has not yet had First Contact. The Concierge may forbid this, but the idea does accord generally with surreptitious alien invasion scenarios in science-fiction stories (e.g., *Invaders from Mars* (1953), *First Wave* (1998-2001), where the humans are a Minor Race in GGDM terms and the invaders took human form) – they know we are here, but we don't know they are here. Does it fit the game story? (*Furnishing Alcohol to Minors, 2 Special Operations, p. 1294*)
- Missions may not be Lodged on ships that are *en-route* between stars. Missions attempted to be Lodged on moving starships are not lost, rather, the Lodging Actions simply are not executed (but the Power Activation is still used). This is [a] game mechanical concession to the fact that, due to Turn Cycling, ships

may move away (or be destroyed) before such is known by the players whose position is attempting to Lodge on the ship. (*Shipping & Freight, 2 Special Operations, p. 1295*)

- A Lodged Mission may be moved by re-Lodging it in another location by activation of the Special Operations Power for the purpose of Lodging Missions, as long as it is physically possible (the Concierge may block attempts that are not physically possible), an unlimited number of times until it is lost either by failure or by aging out (i.e. ‘migration of missions’). Missions Lodged on colonized planets may be moved to ships by “re-Lodging” them on a ship while it is in the system, and vice versa, for movements from ships to planets. This means there is a chance of failing to Lodge the Mission and losing it each time the Mission is Lodged in a new place, not to mention the use of numerous Special Power activations, but it does provide a means of deep infiltration through starships when there is no other way (with considerable risk of loss or aging). Each re-Lodging attempt is treated individually between the Lodger and the target unit and position, as described above.
- Missions Lodged on Colony Ships that Land are automatically transferred (Lodged) to the new colony, Missions in Ground Units move with the Ground Unit if loaded, unloaded or landed from Transports. These are not considered ‘re-Lodging’ of the Mission and there is no risk of loss other than by aging out.
- Special Operations Missions may not – for game sanity – be Lodged inside other Special Operations or Counter Operations Missions... – that would be just too weird in game terms. As noted previously, Special Operations Missions and Counter-operations Missions are not considered ‘game units’ per The Fine Print, 1 Construction, p. 660, *supra*.
- Finally, starships that are *en-route* between stars cannot be targeted for Lodging of Special Operations Missions or Counter-operations Missions, and Missions may not move from ship to ship while *en-route*.
- ...Missions may be moved involuntarily by the action of Loading and Unloading Colony Ships, trade ships, and Troop Transports, without the knowledge of the position that Lodged them. There is much room for play and surprises in this by the Concierge and opportunity for diligent, clever operatives. (*Unclaimed Freight, 2 Special Operations, p. 1295*)
- At the end of each Regular Turn (or Turn Cycle if Regular Turn Actions are not submitted or processed) *after* a Mission (of either type) is either *first Recruited or initially Lodged* (i.e., not on the initial turn it is Recruited or Lodged), at the end of the Regular Turn there is a 30% chance that each Mission (whether Lodged or not) will be lost as circumstances change, opportunities pass, loyalties change, places change, security upgrades, and agents quit, defect, die or are compromised. This *aging process* is independent of any losses caused by successful Counter-Operations (see Spy vs. Spy, 3 Special Operations, p. 1323, *infra*), failure to Lodge, or use of Missions in Black-ops at the location where the Mission is Lodged. (*Ralph Wolf & Sam Sheepdog, 2 Special Operations, p. 1296*)
- A Mission that is Recruited cannot be Lodged on the same Regular Turn; the position must wait until the next Regular Turn to attempt to Lodge the Mission. Thus, Recruited Missions should not ‘age-out’ before an attempt can be made to Lodge them. And a Lodged Mission should not ‘age-out’ before the position has at least one opportunity to use it (however, see Treason, 3 Special Operations, p. 1310, *infra*). (*Punching Time Cards, 2 Special Operations, p. 1297*)
 - Missions that fail to Lodge are lost (p. 1293, *ut supra*), so Recruited Missions will generally disappear rather quickly by one cause or the other.
 - Positions that have successfully Lodged Missions (of either type) should be cognizant that the clock is running (just like the biological clock of your life).
 - **If** participants believe or interpret in the game that time does not pass for passengers and crew of starships during FTL movement (which may take several Regular Turns) and the concept of ‘aging’ is taken very literally, the Concierge could suspend ‘aging’ of SOMs and COMs during interstellar flight. This would greatly extend the range of Black-ops and Counter-operation Target Protection of ships.

Black Ops (“With cold steel magnum force...”):

- The execution of Black-ops and Counter-operations works on details and variables. The players provide the details, attention to the smallest details is very important when living on the edge. The Concierge provides the variables. The Special Operations Power is possibly the part of the game where the Concierge has the most difficult tasks and the greatest influence on the game. (*Life on the Edge, 2 Special Operations, p. 1297*)
 - The Special Operations rules, like the other rules of GGDM, are designed to provide a framework for the story part of the game, and a set of procedures to resolve Black-ops and Counter-operations in a way that keeps the game flowing smoothly along.
 - The degree of deception is what separates Special Operations Power Activations for the purpose of Black-ops from Special Operations activations for the purpose of Reconnaissance (see One-Way Mirror, 2 Information, p. 1340, *infra*). (*Black-Ops, 2 Special Operations, p. 1297*)
- Black Ops may only occur in places where Special Operations Missions (not Counter-operations Missions) have been successfully Lodged previously (and have not ‘aged out’ – ghosts don’t do you any good, you need the collapsed wave function), the Black-op Special Operation Power activation cannot be used in any place where no Missions are Lodged. (*True Little Lies, 2 Special Operations, p. 1299*)
 - A Lodged Mission is considered to have the ability to affect its entire game unit location, thus a SOM Lodged on a colony may act against anything at the colony, including enhancements such as industry, Orbital Cities, Defense Bases, and against anything Hosted on the colony, such as Institutes, but may not act against ships at that location or Ground Units. A Mission Lodged on a ship or in a Ground Unit may only affect those units and anything attached to or on them. As Missions must be Lodged in a game unit, they can only indirectly affect Government Titles and Corporations (the Host Colony) by their actions against the game unit in which they are Lodged.
- The Special Operations Power may be activated multiple times per Regular Turn in the same or as many locations as necessary; however, Lodged Missions at one location cannot participate in more than one Black-op or Information Operation (see 2 Information, p. 1349, *infra*) per Regular Turn. When the Special Operations Power is activated for the purpose of Black-ops, the position executing the Black-op must send a Profile to the Concierge with the Actions. The Profile must contain at the minimum a concise detailed description of the proposed Black-op, with a concrete result if the operation is successful, and the list of Lodged Missions to be expended during the operation. *Lodged Missions are expended – lost, eliminated, removed from the game – regardless of the success of the operation.* The Profile may also, but is not required to add up to 5 RPs to enhance the success of the Black-op, and may also indicate other outside support for the operations, such as ships that are in place or arriving, and so forth. Possible Profiles are limited only by the imagination and circumstances – but should be short, concise, not a treatise. (*Profile in Perfidy, 2 Special Operations, p. 1300*) [*not a treatise... that’s funny in GGDM! Ho, ho!*]
- The base chance of successfully executing a Black-op is 30% plus 5% for each additional Mission used (that are not soaked off by Counter-Operations Missions on Target Protection, see Quartering Act and Secret Services, 3 Special Operations, pp. 1321, 1323 respectively, *infra*) and 2% per RP committed. The Concierge may increase or decrease the percentage based on the superior knowledge and judgment of the Concierge. The adjustments are not complicated, and are based on common sense. (*A Heartless Woman’s .38, 2 Special Operations, p. 1301*)
 - For example, the sympathy level of the colony where the operation is taking place, the nature of the operation, the results of the operation, security considerations and other factors known only to the Concierge (and/or the target position).
 - One key factor that the Concierge should consider is the active or inactive state of Constructural Elements at the target location or unit. Pursuant to the previous discussion of the ‘meaning’ of inactive Constructural Elements in GGDM (see Artifice, 2 Constructural Elements, p. 191, *supra*), the inactive Constructural Elements should weigh in favor of success of the Black-op reso-

lution at that location or unit, whether a colony planet or a ship. Thus target ships that have retreated from combat or traded at **alien colonies** (see 3 Disruption, generally, *supra*), or target colonies that have suffered Disruption Events (see 2 Disruption generally, *supra*), or newly Converted Colonies, or positions that have not Cohered or are affected by an ongoing Kairoitic Moment or **apostasy** (see Aliency Apostasy, 3 Disruption, p. 283, *supra* and Wave Motion, 2 Kairoitic Moment, p. 1432 and Ship of Fools, 3 Kairoitic Moment, p. 1444, *infra*) are most vulnerable to Black-ops.

- Resolution of a Black-op requires two rolls. (*Murder by Numbers, 2 Special Operations, p. 1303*)
 - The first roll, **described above**, determines whether the Black-op was successful.
 - The first roll is a yes or no answer, and thus may be the subject of Enlightenment rerolls if such have been dedicated to the Power Activations. Application of Enlightenment is the *same* in resolving Black-ops as in Recruiting and Lodging Missions (p. 1291, *ut supra*).
 - Regardless of the result of the first roll, a second roll is made to determine the ‘degree of success.’ This should be on a scale of 1-10 (1d10).
 - The Concierge will then merge the results of the two, on a sliding scale, based on his best judgment and the Profile submitted, to determine the actual outcome of the operation.
 - For example, if the operation was deemed unsuccessful on the first roll, but had a high degree of success on the second roll, then the operation was ‘almost successful,’ whereas, if the operation was deemed successful on the first roll, but had a low degree of success on the second roll, the actual result would be marginally successful.
 - The *actual results* will be tailored to the scale of success of the operation and may include unintended consequences or degrees of lesser or greater success.
 - The *reported results* may not be entirely accurate however, as the situation dictates; if you are shooting in the dark, it is not always possible to know if you hit anything. Using large numbers of Missions may not enhance either die roll.

Treason (Black-ops between Regular Turns):

- Activation of the Special Operations Power for the purpose of Treason allows a position to attempt one Black-op between the activating position’s Regular Turns similar to Combat Alert, Treason is a Black-ops Alert. The Treason activation of the Special Operations Power expires at the beginning of the position’s next Regular Turn if not used; additionally the Lodged Missions reserved for the Black-op may age out (see Ralph Wolf & Sam Sheepdog, 2 Special Operations, p. 1296, *supra*) *at the end of the same Regular Turn as the Treason activation* (and that sucks!). (*Treason, 3 Special Operations, p. 1310*)
 - Treason implies that the agent is in a position to act, usually a position of authority or trust. This becomes problematic in a setting with aliens, one must assume that the Lodged agent is a *secretly* dissident part of the alien population, which implies deception and personal dishonesty. This circles back to the issue of the two-step difficulty of recruiting and lodging SOMs on Native **alien colonies**.
 - Each time that a position does not use Lodged Missions during a Regular Turn (*whether SOMs or COMs*), those Missions may ‘age-out,’ except on the Turn in which they are initially Lodged (see Punching Time Cards, 2 Special Operations, p. 1296, *supra*).
 - The activation must include all that is necessary for a normal Black-op activation, that is, a Profile, Missions at the target location, how many Missions to be used, etc. See True Little Lies, *et seq.*, 2 Special Operations, p. 1299, *supra*.
 - Missions designated/reserved for the Treason activation cannot be used for any other Special Power Activation (including re-Lodging) during the same Regular Turn as the Treason activation.
 - Thus, the position activating the Special Operation Power for the purpose of Treason must have a very specific anticipation of need which requires timing and circumstances or events precedent to taking the decision to act. The Treason activation of the Special Operations Power thus acts

similar to the Combat Alert activation of the Combat Power (see DefCon 1, 1 Combat, p. 946 *supra*) – both require forces to be in position waiting – but due to the nature of Black-ops, have more specific requirements, and additionally, can be negated by loss of opportunity due to aging of Lodged Missions!

- The Treason activation of the Special Operations Power only applies to Black-ops and not to Counter-Operations.
- The Black-op profiled and/or used in a Treason activation of the Special Operations Power does not require that actual treasonous acts occur. Rather it is a ‘sexy’ term for a Special Operations *interrupt* that likely may (but not necessarily) involve an ongoing Combat (i.e. not passing artillery parts during peacetime, Dreyfus Affair, p. 1309, *ut supra*) – which is the main reason for the existence of this action in the game. (*The Gibbet, 3 Special Operations, p. 1311*)

Plausible Deniability (like farting in a crowded elevator):

- Regardless of the outcome of any Black-op or Information Operation, a die is rolled to determine if anyone ‘noticed.’ The Concierge may determine that the operation was noticed automatically, for example, when a ship blows up when it shouldn’t (e.g., the Rainbow Warrior) or there is an **alien** plague on the colony, it’s hard not to notice. (*Plausible Deniability, 3 Special Operations, p. 1314*)
 - It is somewhat more difficult to determine when the Black-op was unsuccessful or less than successful (Information Operations are automatically successful if not blocked, see 2 Information, p. 1349, *infra*). The base chance of anyone noticing the Black-op, if it is not determined to be automatic, is ... 50%! The Concierge may again, adjust the base percentage depending on the result of the previous rolls, the nature of exactly what happened, and where it happened, and other knowledge within the ken of the Concierge, mainly, whether anyone is ‘looking.’ The position executing the Black-op may not be informed of whether their operation was noticed by anyone, if the Concierge determines that they have no realistic way of knowing whether anyone noticed.
- If the Special Operation has been ‘noticed’ by the target, then it’s a question of whodunit? As law enforcement knows, even if the crime is discovered soon after it was committed, it is oftentimes difficult to discover whodunit. The basic chance of being able to officially blame anyone is 50% and half of those times the actual perpetrator of the operation will be discovered (e.g., French intelligence agents in New Zealand, p. 1313, *ut supra*), and the other half, that it will be blamed on someone else. Somebody will be blamed, if possible, it’s our nature. But that still leaves a 50% chance that no blame can be attached. (*The Blame Game, 3 Special Operations, p. 1315*)
 - The victim of the Special Operation will be informed who appears to have committed the ‘crime’ against them.
 - It is up to the victim to determine the accuracy of the report. As before, the Concierge may adjust percentages based on the entire situation and upon their superior knowledge and divine wisdom. The chances of not being blamed may improve somewhat if the position executing the operation provides the Concierge with some kind of plausible deniability (see Merriam-Webster definition, previous page, *ut supra*) as to why the victim cannot blame them.
- The second roll is only necessary if the Special Operation – whether successful or not – was noticed. It is thus that players may later discover some little thing changed in their position data with no explanation. It is not an error. (*Liar’s Dice, 3 Special Operations, p. 1316*)
- If the position has any remaining unused Enlightenment from the Black-op, there is a 50% chance that it can be applied to failed Plausible Deniability rolls at the discretion of the Concierge on what constitutes failure (see Harsh Mistress, 2 Colleges, p. 478, *supra*). Positions may in the Profile of the Black-op specifically elect that no Enlightenment will be used for the Black-op but that Enlightenment will be applied if possible to Plausible Deniability regardless of the results. This they might do if it is important to not be discovered. (*Truer Lies, 3 Special Operations, p. 1317*)
 - Whether the defender can use Enlightenment to force a reroll is an open question for the Concierge to determine and apply consistently. It depends on whether the Plausible Deniability roll is

considered an ‘opposing die roll’ (see Army of Light, 2 Colleges, p. 479, *supra*) or whether they are considered neutral game processes.

- Though it may seem silly to be able to use Enlightenment in Black-ops on **alien colonies** and especially, in Plausible Deniability, it’s a fuzzy mechanism to cover a number of situations, including an equal lack of enlightenment in the leadership of the other side. (*Soft White Bulbs, 3 Special Operations, p. 1317*)
- The game mechanics of the blame game and plausible deniability exist only within the game; the Concierge will interpret that the result is what is believed by the *people on the ground* to be true or most likely and players must accept that within the game and act accordingly – in good faith – within the game. It is of course possible for positions to contact each other outside the game.... The game cannot account for these communications, of course. (*Muddy Waters, 3 Special Operations, p. 1317*)

Counter-Operations Missions (COMs, and it’s not really funny at all!):

- Counter-Operations Missions (COMs) are different from Special Operations Missions (SOMs) in that they are recruited and operate only in friendly territory; they contain a mixture of police, intelligence, and other elements that constitute the security and law enforcement forces of the civilization they are protecting (e.g., SMERSH). Counter-Operations Missions, like Special Operations Missions, must be placed at or in a specific game unit, i.e. ship, colony, Ground Unit. (*CIT, 3 Special Operations, p. 1320*)
- An activation of the Special Operations Power for the purpose of Train Counter Operations Missions allows the Recruiting and Lodging of Counter-Operations Missions on a sovereign colony and friendly ships currently at a sovereign colony by the owner, *in one step*: ‘Train’ in this sense is used as a one-word substitute for two actions, like a cutter pitch in baseball. (*Training Day, 3 Special Operations, p. 1320*)
 - Train Counter Operations Missions activation on a sovereign colony requires a Scene at the colony and is thus subject to possible Power Activation failure (see Making a Scene, 1 Special Operations, p. 1274, *supra*); whereas, as mentioned in Acting Lessons, 1 Special Operations, p. 1274, *supra*, training Counter-Operations Missions (COMs) on a friendly ship at a sovereign colony may use either an Act or a Scene at that colony.
 - Training Counter-Operations Missions is automatically successful (in the sense of Recruiting and Lodging), it is just a matter of cost and time. Each Counter-Operations Mission trained will cost 1 to 3 RPs, and the position submitting Actions to train Counter-Operations Missions must specify either a number of Counter-Operations Missions (at variable cost) or a max budget for new Counter-Operations Missions (however many you can get) *at each location*.
 - Newly trained Counter-Operations Missions do *count against* the GDP of the target colony on that Regular Turn.
 - Thus, the structure of GGDM Special Operations gives the speed advantage to the defense: Black-ops require three Power Activations to Recruit, Lodge, and use Missions, whereas, Counter-Operations require just one step to Recruit and Lodge Counter-Operations Missions (through the police power of the State). The difference between one step Recruiting and Lodging of COMs and two-step Recruiting and Lodging of SOMs represents the difficulty of projecting Special Operations Power into **alien cultures** and across interstellar distances.
- Unlike Special Operations Missions, Counter-Operations Missions may only be Lodged in a sovereign unit that is or is at the location where they were Recruited on the Regular Turn in which they were Recruited. This includes sovereign ships and Ground Units that begin the Regular Turn at the colony where the Counter-Operations Missions were Recruited, e.g., in the movie Cargo: Space is Cold (2009) an intelligence operative was added to the crew just before departure to protect them from Neo-Luddite ‘terrorists.’ New ships that are finished in the same Regular Turn do not ‘begin’ the turn at the colony. On the same turn that Counter Operations are ‘trained’ *they must also be assigned* to either Target Protection (the defense) or Counter-Operations (the offense of the defense) at that location. (*Quartering Act, 3 Special Operations, p. 1321*)

- Though not entirely realistic, GGDM makes no distinction between being on a surface colony or on Orbital Cities over the colony, unless it is necessary for play (for example, different Native Population Types). Thus a Mission Lodged on a Colony is also possibly on any Orbital Cities, Defense Bases or Shipyard, as necessary, because those are not ‘game units’ but rather, ‘colony enhancements’ in GGDM.
- Counter-Operations Missions assigned to Target Protection must stay with their target, wherever it goes, and cannot be ‘re-Lodged.’ If the target is moved to a ship, the missions assigned to Target Protection move with it (this does not count as re-Lodging); if their target protection assignment is a ship or a colony, they stay there ‘til retirement. Only COMs assigned to Counter-Operations may need to be re-Lodged occasionally.
- It is of questionable value in most cases to recruit COMs assigned to Counter Operations on ships using an Act to avoid the possibility of a Power Activation failure, then on subsequent turns, re-Lodging those COMs to a colony, which requires a Scene.
- Like Special Operations Missions, Counter Operations Missions ‘age-out’ at the end of each Regular Turn (or Turn Cycle if Regular Turn Actions are not submitted or processed); there is a 50% chance that each Counter Operations Mission will be lost at the end of each Regular Turn. Unlike Special Operations Missions, Counter Operations Missions are not ‘expended’ or lost during the defense against *any* operation. (*Police Pensions, 3 Special Operations, p. 1322*)

Target Protection (Retail Theft Prevention Systems! ☺):

- Counter-Operations Missions must be assigned to either Target Protection or to a Counter Operation on the Regular Turn they are either Trained or Lodged (previous page, *ut supra*). This occurs automatically as a step of Recruiting Counter-Operations Missions. (*Counter Operations, 3 Special Operations, p. 1322*)
- Counter-Operations Missions assigned to Target Protection will attempt to block or ‘soak off’ Special Operations Missions which are committed to a Black-op against their target. The base chance of each Counter-Operations Mission intercepting a Special Operations Mission is (surprise!) 50%. The Conci-erge will adjust the base chance based on several factors, including comparing the *loci* of the Special Operation and the Target Protection. (*Secret Services, 3 Special Operations, p. 1323*)
 - For example, if Counter Operations Missions were assigned to Target Protect the colony, and a Black-op targeted the Ground Bases at the colony, the loci overlap, but are not exactly the same; that is, the Black-op is aimed at a specific target installation, whereas, the Counter-Operations Missions assigned to Target Protection must defend the entire colony. As a result, the Counter-Operations Missions assigned to Target Protection must have a slightly lesser chance of blocking the Special Operations Missions targeting the Ground Bases. Conversely, if the Target Protection assignment was Ground Bases, then it would be a head-on collision between Special Operations Missions and Counter Operations Missions doing Target Protection during the Black-op, with Counter Operations having the legitimate authority/police power advantage in blocking in their home territory.³⁸
 - Note that there is no provision within the GGDM system for learning whether there are alien Special Operations Missions Lodged at any specific location. The system provides for only passive Target Protection and active Counter Operations to purge a location. It is possible that

³⁸ Target Protection assignments should not be confused with Lodging. A COM can only be lodged in a game unit, thus can only be lodged in a colony, ship (or system boat), or at a Ground Unit when not at a ship or on a colony (a Ground Unit ‘becomes’ a game unit when not an enhancement or being transported). Conversely, target protection is an ‘assignment’ or designation applied to the COM when recruited, which means it could be assigned to protect technological devices (noting that some TDs could be ‘game units’), colleges, Corporation HQ, or classes of enhancements. The test of the distinction comes down to this: A COM could be lodged at a colony with the target protection assignment of Ground Units at the colony, whereas, when the Ground Unit is away from the colony (say in Ground Combat), COMs could be lodged in the Ground Unit (as sort of a ‘game unit’ – this is a judgment call as to when a Ground Unit becomes a ‘game unit’ for this purpose). This system was intended to provide story flexibility as provided in the example above.

players may learn (or be fooled) about the existence of Special Operations Missions through informal player diplomacy which is, as noted previously, beyond the GGDM system.

Counter-Operations (not working in the ac(bean)counting dept.):

- Activation of the Special Operations Power for the purpose of Counter-Operations is the counter-offensive, the attempt to purge (discover and eliminate, sweeping up the garbage) enemy Special Operations Missions Lodged at their location (presumably to disrupt a future Black-op). (*Spy vs. Spy*, 3 *Special Operations*, p. 1323)
 - Consistent with the previous rules, each Counter-Operations Mission will have a 50% chance of eliminating a Special Operations Mission, if any exist at that location. And the Concierge may adjust the base percentage based on factors known only to the Concierge (on the advice of a 6' 3½" tall invisible rabbit named Harvey). The owner of the Special Operations Missions, whether or not any are eliminated, *may or may not be informed* of the Counter Operation (that is, may think they simply 'aged out'); likewise, the position conducting the Counter Operation *may or may not be informed* of any Special Operations Missions eliminated, in fact, may receive false positive results (by use of a Concierge Intervention). Only your hair stylist knows the true color of your hair, and he won't tell anyone ... really.
- The possibility of 'flipping' opposition SOMs and COMs to work as 'double agents' is, as always, intriguing but also difficult in the interstellar environment of GGDM. If we assume that SOMs are most likely from the native population of wherever they are Lodged or at the least, of a ubiquitous alien species resident at that location, then flipping them to COMs is possible. (*The Great Pretender*, 3 *Special Operations*, p. 1324)
 - In flipping COMs to SOMs as double agents, one has to ask why the COM would prefer an **alien master**. There are, of course, many possible answers mostly relating to be dissident or having dissident sympathies, based on hopes and promises of what will happen when the **aliens** conquer the colony. And never underestimate greed and promises of power...
 - Within sci-fi tropes, there are many other possible answers. You know, the usual: mind control, intelligent alien parasites, alien religion and revelation, the desire to get off the colony planet, two people occupying one body at the same time, time travel ... *is Louise Banks in Arrival (2016) a Lodged SOM for the heptapods?* You know...
 - Flipped COMs and SOMs would still 'age out' naturally, and that likely puts a wet towel on the effectiveness of flipping Missions. If COMs can be flipped to SOMs at a location, then a sort of chaining effect may happen, without the necessity for Recruiting and Lodging. Game mechanically, since Black-ops and Information Operations (see 2 Special Operations, p. 1297, *supra*, and 2 Information p. 1349, *infra*, respectively) require Mission Profiles, flipping could be attempted via the Profile. On the Counter-Operations side, there is no profile, but it is possible that other means may be developed in game, such as technologies or Writ activations, that would target flipping SOMs instead of eliminating them during Counter-Operations or even when blocking during Target Protection.
 - It is not necessary that a position know that there are enemy COMs or SOMs at a location to attempt to flip them. This is a game of double blind; Lodged COMs and SOMs were generally only 'discovered' or 'appear' at the moment of execution of a Special Operations Power activation. Sort of like 'wave function collapse'....
 - It is also possible that flipping may sometimes occur randomly ... err, by Concierge Intervention. Just for the fun of it. Or maybe the COMs and SOMs just revolt against their current masters and cause an incident.

Information (like, watch out for the purple alien with the slouch hat and binoculars!):

- Reconnaissance in GGDM refers specifically to activities that would be called passive 'listening' or 'observation' (Surveillance, maintaining a presence) and active military reconnaissance (Probing, without the overt deception of Black-ops) against known or discovered alien locations. Reconnaissance and the

‘information game’ in GGDM does not refer to cyber warfare, hacking, or backdoor electronic surveillance, all of which would be more appropriate as Black-ops, see 1 and 2 Special Operations generally, *supra*. Counter-Operations Missions (COMs) (see CIT, 3 Special Operations, p. 1320, *supra*) are ineffective against Reconnaissance activations of the Special Operations Power and Special Operations Missions (SOMs) (see SOM-COMS, 2 Special Operations, p. 1289, *supra*) are not used or required (or even considered) in Reconnaissance activations. (*Pinging & Poking, 1 Information, p. 1331*)

- Reconnaissance in Special Operations overlaps somewhat with Scouting in the Expansion Power, except that Scouting only works until the system is successfully explored and might not be specifically directed against or find alien locations. However, it may also be possible to cleverly pair activations of the Special Operations Power for Reconnaissance and Black-ops in the same Regular Turn and location so that they complement each other, but in any case, those are always two separate functions.
- The Concierge will freely report to players, as appropriate, information that is open and obvious to them, that can be seen by their units or that would be otherwise knowable to the position. For example, if **alien** Colony Ships arrive in the Capital Colony’s system, and were not somehow protected from detection, then it would be reported to the players of the respective positions by the Concierge as appropriate. Such reporting may not take the form of an Information Bulletin; rather, certain events such as the arrival and departure of ships will simply be reflected on the Public Spaces or elsewhere on the position’s information and will be up to the players to ‘look’ for and discover on their own. Therefore, players will have to look and study their turn results as they would in any other PBEM game. (*Seeing is Believing, 1 Information, p. 1332*) [*in wargaming, this is called ‘fog of war’ mechanics*]
 - Rarely the Concierge may need to report important information to players of a position by email when the information would not be obvious by studying the Public Spaces. The subject line of these emails will be “Information Bulletin” which should not be confused with the special News Event posting by the Concierge on the News Event forum, called a “Special Bulletin.”
- The ability of a position to accurately, more or less, estimate the Habitability Class and Maximum Habitability of a planet relative to another species, either as a result of exploration or observation, is at the judgment of the Concierge. The Concierge will take into account the technical expertise and capabilities of the position, as well as, the quality, quantity, and length of contact with the other species, including relevant Reverse Engineering attempts (see 3 Technology, p. 712, *supra*). For example, if two species have had First Contact but have not encountered each other’s colonies, the chances of accurately determining the suitability of a planet for colonization by the other species is lower than if the two species have shared colony planets and colony systems for an extended period of time and/or have a large Diplomatic Space. (*Xenobiology Section, 1 Information, p. 1333*)
 - This issue comes into play during situations where a position might observe a planet as described in the next section, 2 Information, *infra*, or use Information Operation activations of the Special Operations Power to obtain xenobiological information.

Observation:

- Observation begins with the arrival of any friendly unit in the system. Observation occurs automatically whenever any ship or sovereign colony is in a system with a ship or colony not owned by the owner of the ship or sovereign colony (i.e. any friendly unit in the same system with alien units). ‘Observation’ reporting involves answers to the basic question of ‘what an entity is’ (see feature quote, 1 Information, bottom p. 1329, *supra*) or what an ‘appearance’ is. The answer depends on how close you want to get, and/or how long you are willing to wait around. Information in Galactic Space is obtained three ways:
 - by automatic, passive Observation requiring no specific Power Activation (like your eyes and ears),
 - and by Surveillance and/or Probing which requires an activation of the Special Operations Power for the purpose of Reconnaissance. (*One-Way Mirror, 2 Information, p. 1340*)

- Upon arrival in a starsystem, the owner of the arriving ships will automatically see all colonized planets (orbits, owners, but *not* numbers of population factors, Native Population Types *or* enhancements *or* political status except Capital Colony) and will see ships at colony planets and ships in the system (owners, types, numbers, but *not* cargo or enhancements), and whether or not the colony planets have orbital installations (numbers, but not types). There is also a 50% chance to detect each combat (including Besieged Colonies) in progress in the system, providing the name of the combatants and the type of combat. (*ABBA Arrival, 2 Information, 1340*)
 - The Concierge may carve out some limited exceptions to this rule, for example, a *Low Population Colony* (see 4 Taxation & Census, p. 326, *supra*) with little or no industry and no orbital installations, nothing in particular to give away its presence on a big wilderness planet, might be allowed to escape instant detection.
 - Additionally, no report or a partially inaccurate report may be received if the arriving ship(s) initiate combat, join an ongoing combat, and especially if they are destroyed (e.g., by exploration Hazard Roll, see Then Never Comes, 3 Expansion, p. 907, *supra*).
 - Conversely, arriving ships will be seen and noted by any other position whose units are in the system, so arrival observation works both ways when someone is arriving and someone is already there. However, if a ship is destroyed during exploration, *it might not be noticed*.
 - See discussion of GGDM's generous sensor rules, Riding the T, 3 Temporal Technology, p. 828, *supra*. Note that ships which successfully enter the system surreptitiously will not be automatically detected by units already present.
- While Observation does not require a Power Activation, it does require submission of Regular Turn Actions from positions that indicate that they are 'looking' (i.e. still playing in the game): The information received from Observation is reported as part of the results of the Regular Turn Actions and represents a 'snapshot,' or photograph, of the situation in that place on the moment the results were generated. All news in space is old news. (*Freeze Frame, 2 Information, p. 1341*)
 - Ships executing Short Movement arrive at the end of the turn in which they began movement ... thus they will be present between their owner's Regular Turns for all other positions to see on their Regular Turns. That's a possible downside observation-wise, whereas, ships executing long movement are still *en-route* and arrive at the beginning of their Regular Turn, but are not there for critical 'beginning of the turn' supply activities. See Space Hop and Long Jump, 2 Movement, pp. 850-851, *supra*.
 - Observation reporting on Regular Turn results should not be confused with initiation of Combat by other positions on their Regular Turns that occur between your Regular Turns. A *position will always be notified when they are attacked* between their Regular Turns so that they can submit Combat Orders for the first Combat Round. See Capoeira, 3 Combat, p. 970, *supra*. This is necessary because GGDM runs on a continuous Regular Turn Cycle (see The Law of Periods, 2 The Streams of Time, p. 84, *supra*) and because Combat Rounds run independent of Regular Turns in GGDM (see Relativity, 2 The Streams of Time, p. 85, *supra*); i.e. ships arriving by Combat Movement that weren't there before could initiate combat.
 - Information from Observation in GGDM gets old quickly due to the Turn Cycle. Things may happen, come and go, from the system that are never reported because they *occurred between Regular Turns* of the position that owns the observation ship or colony.

Reconnaissance – Surveillance (Special Operations 'Scouting'):

- When the Special Operations Power is activated for the purpose of Reconnaissance, the position may use either an Act or a Scene, regardless of whether a sovereign colony is in the target system. See Acting Lessons, 1 Special Operations, p. 1274, *supra*. The position may choose to use a Scene on a sovereign colony in the target system if such exists, risking a possible Power Activation failure based on the Constructural Elements at that colony. However, using a *Scene*, instead of an Act, also *enhances* the possible results of Surveillance and Probing. (*Pistols & Posies, Patience, 2 Information, p. 1342*)

- It is also possible that a position may choose to use a Scene because it is there and because no Acts are available on the Powerstrip or the available Act(s) is being used for additional Special Operations Power activations in the same Regular Turn.
- Enlightenment may be used in Special Operations Power Activations for the purpose of Reconnaissance, but cannot be used in regular Observation (for example, the 50% chance of detecting an ongoing Combat in the system) as no Power Activation is associated. Failure to obtain the information in a Reconnaissance activation is a clear ‘no’ result that will trigger use of Enlightenment if such has been assigned (see *Harsh Mistress*, 2 Colleges, p. 478, *supra*), if the unit involved has an active Epistemological Constructural Element (see *Skool Tyme*, 2 Constructural Elements, p. 190, *supra*). (*Went to a Garden Party*, 2 Information, p. 1342)
- Activation of the Special Operations Power for the purpose of Reconnaissance must target all friendly units in a system where at least one friendly unit is present. For *each* friendly unit present, the Power Activation must designate either Surveillance or Probing. Both are possible in the same system in the same Regular Turn and can augment each other. All game units are capable of Surveillance to a greater or lesser degree, only ships, system boats and colonies with a Fighter Complement are capable of Probing. See discussion of game units, View from A Height and Fine Print, 1 Construction, both p. 660, *supra*. Units are *unable to participate* in the Reconnaissance activation if they are:
 - Currently engaged in combat, or ordered to initiate combat during the same Regular Turn as the Reconnaissance;
 - Ordered to Load or Unload anything at a Besieged Colony (i.e. Blockade Running, see 4 Commerce, p. 1233, *supra*);
 - A Besieged Colony (see 3 The Sidereal Stage, p. 124, *supra*);
 - Ordered to Land to create a new colony in the target system (see The Landing, 4 Expansion, p. 920, *supra*);
 - Ordered to initiate interstellar movement from the target system during the same turn as the Reconnaissance activation (see generally 1 Movement, 1 and 3 Expansion, 1 Combat, 1 Commerce, *supra*);
 - Loaded on a ship; that is, Ground Units, Fighters, Population Factors on ships have no observation/surveillance ability independent of the ship.
 - In short, if you are fighting, running, cowering, cargo, loading, landing or leaving, you are not able to engage in Reconnaissance. (*Private Eyes*, 2 Information, p. 1342)
- Units at a location that are assigned to Surveillance by activation of the Special Operations Power for the purpose of Reconnaissance may or will attempt to report observed events at their location that occur *between Regular Turns* that can be seen within their sphere. In short, Surveillance continues Observation between Regular Turns, turning the ‘snapshot’ into a short film, but the results are still only received and available on the *next* Regular Turn results. Sphere in this sense refers to their sphere of operations, that is, the Combat Type(s) in which they could engage/initiate as discussed in Keep Your Friends Close, Your Enemies Closer, 3 Combat, p. 972, *supra*, if they were hypothetically able to do so (e.g., hypothetically in the case of Cargo Ships, Colony Transports, etc.). (*Taking It All Down*, 2 Information, p. 1343)
 - For example, a colony will naturally see anything that comes within its orbit or lands on the surface as it can be engaged as a defender in a Colony Combat or Ground Combat. A colony that has a Fighter Complement may engage in Ship Combat in system space and thus may report events in System Space during Surveillance. Ground Units, which may only engage in Ground Combat, will only see events on the surface of the planet where they are located; Ground Units on ships don’t see anything, *ut supra*.
 - At the discretion of the Concierge, Low Population Colonies (see 4 Taxation & Census, p. 326, *supra*) may not be able to notice ships that come into orbit at their planet, and even less likely ships entering their system (having only a high-school telescope). This is the flip side of not being noticed upon arrival, *ut supra*, by virtue of having little industry and no orbital installations.

- Another example, a Cargo Ship can be attacked in Ship Combat, so its sphere for Surveillance is System Space and whatever might be observed at colonies since it can load and unload at colonies.
- Events refer primarily in this case to overt Power Activations at that location by another position, as long as such could be noticed, e.g., ships arriving or leaving are likely to be noticed, Census Power activations might prompt a report of the approximate population of a colony to appropriate units on Surveillance, but recruiting Counter-Operations Missions wouldn't be noticed. Events also include Combat Orders and results of Combat Rounds that can be seen.
- Surveillance automatically detects changes in all of the conditions apparent to basic observation (see ABBA Arrival, p. 1340, *ut supra*) – which may be the result of other positions' Power Activations or Combat Orders – plus there is a 5% chance that each unit involved in the Surveillance may obtain a nugget of information not available to regular Observation. For each unit that could possibly observe the potential target (due to their sphere of observation, *ut supra*) there is a small chance that each of the following may be determined (each is treated as a group):
 - Number of population factors on each colony and Colony Ship.
 - Native Population Types present on each colonized planet (even if in Orbital Cities) and Colony Ships.
 - Colony political status (Capital Colonies are automatically known in Observation).
 - Enhancements currently on each colony (not colonized planet as they can be Balkanized), including Fighter Complements, Ground Units, and Industry.
 - Types and numbers of each colony's current Orbital Platforms (Ship Yards, Orbital Cities, Orbital and System Defense Bases, unfinished Keels).
 - Cargo currently on each Cargo Ship or the contents of each Log Ship.
 - Enhancements on each ship present (this includes Fighter RPs).
 - Being located on or at the same planet as a colony engaged in Surveillance during the inter-turn period should *double the chances* of that unit obtaining information, i.e. colonies sharing the surface of a Balkanized world or ships loading, unloading, or transferring, or being built at that world. (*Field Reports, 2 Information, p. 1344*)
- There is no defense to Observation or Surveillance other than being alone. To share a system or a planet with aliens is to be exposed to automatic Observation and possible Surveillance.... The only way to avoid or correct the problem is to take action: someone has to leave. (*One is the Loneliest Number, 2 Information, p. 1344*)
 - Note that being subjected to Observation or Surveillance cannot possibly act as a Conflict Check in Government Titles because they are passive and the position may not be aware they are occurring. However, there are several Conflict Checks relating to not sharing planets or even systems with aliens.
- If a Scene was used in the Reconnaissance activation instead of an Act, and a Power Failure did not prevent the activation, the base chance described above for Surveillance results is 8%, which can double to 16% if located on the same planet (*ut supra*). (*Ground Support, 2 Information, p. 1345*)
- Observation and Reconnaissance reports (whether Surveillance or Probing) are secret information belonging only to the position that owns the units performing the task. Thus, other positions don't know what has been seen, what other positions present may know or not know; this creates situations where cooperation and bluffing are possible in the game via player emails and informal diplomacy discussed in Greys Diplomacy, 1 Diplomacy, p. 1097, *supra*. The Concierge will not provide clarification or additional information. (*Compiling Dossiers, 2 Information, p. 1345*)
 - Intelligence work is what the position players extract, interpret from the Observation and Surveillance information included in their Regular Turn results. [**Information is not intelligence!**]

Reconnaissance – Alien Probing (I don't need a psychic probe to know what you are thinking...):

- Both Surveillance and Probing can occur in the same Reconnaissance activation, but each unit involved can only do one or the other. All Probing is resolved before Surveillance at the same location; this is important when Enlightenment has been assigned to the Reconnaissance activation. (*Alien Probes, 2 Information, p. 1346*)
 - Probing does not cause a Disruption Event at the target colony regardless of the outcome, see *Burning Sky, 2 Disruption, p. 275, supra*.
 - It is possible, though they are not mentioned above, for Ground Units to also engage in Probing, limited to opposing colonies or targets on the surface of the world where they are located. The Probing procedure below is written on the premise of Probing attempts from space, but could be adapted for Ground Unit Probing attempts, with the caveat that Fighter Complements would be much better for the same task.
- Each ship (or System Boat) or Fighter Complement assigned to Probing must be given an objective. The objective must either be all ships of a target position in the system or a planet (not specific colony) by Orbit Number. Multiple units can be assigned to Probing the same objective forming a 'reconnaissance in force' at that location. Units assigned to Probing do not need to be able to initiate combat, thus Cargo Ships can Probe at great risk. (*Flyby, 2 Information, p. 1346*)³⁹
- Each Probing attempt is resolved separately, even when multiple units are Probing the same objective. There is a 50% chance that each 'combat unit' or enhancements (i.e. Defense Bases, Fighter Complements) at the objective will *fire once* at the Probing unit. This fire will be *normal fire*, not expending Ship Missiles or other expendable enhancements and all normal Combat Shifts apply (i.e. Scouts Defensive Shift). If multiple units Probe the same objective, the same defending units may attempt to fire at each Probing unit, a defender may have multiple fire opportunities during various Probing attempts. (*Bloody Noses, 2 Information, p. 1346*)
 - A Probing is a reconnaissance-in-force skirmish, it is a combat to those involved, thus Combat Shifts apply. It is not a Combat Power activation, however.
 - If the Probing unit is a Fighter Complement, Close-in Defense Fire will occur; if the defending unit is a Fighter Complement, it will make an Interception Attempt with both Sorties on the Probing Unit; if both are Fighter Complements, a Dogfight will occur (see *Dogfighting, 3 Carriers and Fighters, p. 1072, supra*). Interception attempts in Probing only occur when the defending unit is a Fighter Complement, as regular units cannot Intercept Fighters but Fighters can Intercept regular units. *Id.*
 - Defensive fire occurs automatically, no Combat Power Activation is necessary or used on behalf of the defender in attempting to repel **Alien Probing**. Enlightenment cannot be used in defense against Probing. Targeting and resolution are handled automatically and firing units are determined randomly. The defender will be informed that Probing has occurred, *but not what was learned*, with a 50% chance that the assailant will be identified.
 - It would be incredibly problematic to require the defender to have a Combat Power activation at that location to defend against Probing. Such would allow aggressors to burn off Combat Alerts by Probing.
 - It is possible that there will sometimes be no defense against Probing attempts. The target planet or ships may have no combat ability, or all defenders might fail their 50% chance to fire (flip a coin, get tails ten times in a row) or may simply miss with all of their fire attempts (like an 80s Miami Vice shootout scene) at the Probing unit.

³⁹ Yes, it is possible to Probe with loaded Colony Ships. One might construct an extreme circumstance where it is necessary to do so, but the self-policing limit on using Colony Ships for probing is that a Disruption Event would occur at their origin colony if they were destroyed.

- The Probing unit does not fire at the defenders, except that it may fire Close-in Defense against Intercepting Fighter Complements. The Probing action is finished when all of the shooting is done, no retreat is necessary or is considered to have occurred on either side. Enlightenment assigned to the Reconnaissance activation cannot help Probing units survive as Enlightenment can never be applied to opposing die rolls (see Army of Light, 2 Colleges, p. 479, *supra*), however, Close-in Defense against defending Fighter Complements may expend some Enlightenment assigned to the Reconnaissance. (*Never Tell Me the Odds*, 2 Information, p. 1347)
- There are three possible results of Probing. If the Probing unit is not hit, it is successful, if the Probing unit is hit once, it is turned away, but not destroyed (a ‘hit’ in Probing is not destruction), and may report some information at a much lower chance of success. If the Probing unit is hit twice, it is destroyed. Engaged results from Fighter Complements have no effect, so both sorties will need to be successful to score a hit in Probing. (*Results Rolling In*, 2 Information, p. 1347)
 - The Probing unit is not trying to engage in combat, it is trying to avoid combat. The turned away result is a peel off because we are gonna get clobbered (like when the Death Star was operational), it’s a game of chicken in space. The Probing unit is likewise not trying to intimidate or scare off the target; the objective is to get a good scan.
- The information received from Probing is determined individually per unit involved. If the result of the Probing was a success, the Probing unit has a 15% chance of learning information in each category outlined in Field Reports (*ut supra*, pp. 1343-1344) that applies to the sphere of the objective or target of the Probe. If the Probing attempt was turned away, the chance is 5%. If the Probing unit was destroyed, no report will be received for that unit. If the Special Operations Reconnaissance activation for the Probing used a Scene instead of an Act, the chances above are doubled if the Power Activation did not fail. Finally, Enlightenment assigned to the Special Operations Power Activation may be used for the Probing unit’s report if that unit has an active Epistemological Constructural Element (see Skool Tyme, 2 Constructural Elements, p. 190, *supra*). (*The S-2*, 2 Information, p. 1347)⁴⁰

Information Operations (Special Operations espionage, aka spying):

- The Special Operations Power may be activated for the purpose of Information Operations to assist in garnering intelligence. Sometimes the information supplements or corroborates information received via diplomacy or observation, while at other times, the Information Operation is the only way to obtain the needed information. (*I Spy*, 2 Information, p. 1348)
 - GGDM makes no distinction in Recruiting and Lodging Special Operations Missions (SOMs) for either Black-ops or Information Operations, any SOM can be used for either as long as it survives and it is not required to predesignate the intended use of the SOM. *This is purely a game mechanical convenience*, as there is a wide difference between the two. [***practically speaking***]
- Information Operations are *automatically successful* in the sense some kind of information will be reported and no die rolls are involved for resolution, unless the target is protected (see Quartering Act and Secret Services, 3 Special Operations, pp. 1321, 1323 respectively, *supra*). (*Information Operations*, 2 Information, p. 1349)
 - Enlightenment *may not be assigned* to Special Operations Power activations for the purpose of Information Operations. The operation is automatically successful and Enlightenment cannot be used to affect another position’s die rolls (e.g., if the target is protected by COMs). See Army of Light, 2 Colleges, p. 479, *supra*.
 - Plausible Deniability (see 3 Special Operations, p. 1314, *supra*) procedures will also be followed for Information Operations to see if the operation was ‘noticed’ by the target and who they think did it.

⁴⁰ The key to both Surveillance and Probing are large numbers of units – each unit individually has a low chance of learning anything useful, but if a large number of units are used, the chance of success is much greater. The individual percentages are not cumulative in one roll or in each roll, rather, each unit is rolled separately with a 5, 8, 15, 16, or 30% chance of success.

- Information Operations are only resolved as part of a Regular Turn Action and thus, if units in combat are targeted (that is, have Lodged SOMs) the information received will be as of the Regular Turn – a snapshot – there is no provision in GGDM for Information Operations to be resolved during a Combat Round, even by using a separate activation of the Special Operations Power for Treason (see 3 Special Operations, p. 1310, *supra*) which is only for Black-ops, even though it may be treasonous...
- There are certain areas where Information Operations and Surveillance would seem to overlap. For example, why couldn't Surveillance collect information about **alien** language, culture, government, through listening and watching, picking up the media from a target colony or from ships? For game purposes, however, those are separate functions; someone with a lot of education and expertise has to sort through the data collected to extract information more complex than which species lives there or how many Fighters are on that Carrier.
- Information Operations have two distinct differences from Special Operations. First, Special Operations Missions (SOMs) used during Information Operations are not expended as in Black-ops (see Profile in Perfidy, 2 Special Operations, p. 1300, *supra*); a Lodged SOM may be used to gather intelligence over several Regular Turns, but like all Lodged SOMs, they will eventually 'age-out' and disappear (Melita Norwood was 88 years old when she was revealed as a spy, more than three decades after she quit spying) and may be eliminated by Counter-Operations (see Spy vs. Spy, 3 Special Operations, p. 1323, *supra*). Second, in Information Operations, the information received has a Reliability Rating. (*Reliability Rating*, 2 Information, p. 1350)
 - The Profile for an Information Operation must ask a specific question or set of questions, **and** set forth a specific area and/or location on which information is being sought. The more general or numerous the nature of the question or areas of inquiry, the less specific or reliable the information will be when received.
 - The resultant information report will be given a Reliability Rating of 1-10 by the Concierge where 10 is best. The Reliability Rating is, as the term suggests, a rating of how 'reliable' (true, accurate, current, timely, trustworthy) the information is deemed to be *from the viewpoint of the position receiving the information*. The Reliability Rating should never be taken as absolutely true, as the information may be more or less accurate, true, complete, current, or trustworthy than the rating suggests. Information is best when corroborated and when it paints a complete intelligence picture rather than when it is taken as single reports and facts.
 - The Reliability Rating is not random, it is a judgment call by the Concierge. Thus, there is no opportunity to use Enlightenment to affect Reliability Rating. The Concierge is not bound by his own Reliability Rating, true information may be given with a low Reliability Rating, it's only a perception point of the position's intelligence professionals. But, to mean anything in the game, it should approximately correlate.
 - Game mechanically, Information Operation covers broadly all the ground that is not otherwise addressed in other activations of the Special Operations Power. Information Operations are, for example, the only way to obtain information on the Public Space – by asking the right questions – such as Cultural Pieces, Conflict Checks, and non-physical sorts of information *as it relates to the operational location*.
 - There is some small chance that the target of an Information Operation will be informed of the operation (see Plausible Deniability, 3 Special Operations, p. 1314, *supra*); this is more likely if the target of the operation was protected or if the place where the operation is conducted has a large number of Lodged Counter-Operation Missions.

Bang-A-Gong (Mysticism, Magic & Psychic Powers in GGDM):

- **Note:** 3 Information is not strictly a 'procedural game rules' section but rather, addresses with suggestions, in a wide-ranging commentary, how to handle the introduction of the ever-popular magic and psychic powers into the science-fiction, space-opera setting of GGDM.

- Mysticism and mystical arts is humanity's natural drive for the asymmetrical advantage. So is magic and telepathy. Humans have never been satisfied with the empirical world; there has to be more, there has to be a way around it. When we could make up stories to explain creation and the phenomenal world around us (i.e. mythopoeic thought), mysticism and such were natural fits and adjuncts to that world. Empiricism has proven corrosive to mysticism, tearing away veils, pretense of learning, making squares fit into squares and nothing more and nothing less, all measured and explained and testable, repeatable. The sociocultural reaction was Western Esotericism and Theosophy, various Hermetic Orders and neo-Pagan movements. (*De-mystification, 3 Information, p. 1365*)
 - Asymmetric advantage is eroded by *imperfect execution* and *cognitive limitations*: Even if a batter in baseball could read the pitcher's mind perfectly, he still might not get a hit because pitchers frequently don't execute their pitches; in fact, in that case, the worse the pitcher is, the less useful the psychic ability of the batter! The batter might be hit in the head by a bad pitch because he is not looking for where the pitch is, but where it is supposed to be due to his psychic abilities.
- The game rules do not assume the existence of any sensory abilities beyond those which existed in the species' primal state, and which have been subsequently enhanced by technology (i.e. the game does not assume the existence of psychic abilities unless specified by a Fundamental Reality). And in the fine tradition of most science-fiction trope, the aliens – the races in the game – are assumed to have the same sensory ranges and organs as humans, or at least animals on Earth, which is part of the process of placing them on the same galactic shelf as humans (see discussion, 1 Technology and 1 Diplomacy, *supra*), and saving a lot of production costs in movies. (*The Slide-ways View, 3 Information, p. 1361*)
 - The point of systems such as radar, night-vision systems, and infrared cameras, microphones and listening devices, is to gather information from electromagnetic spectrums above and below our normal sensory range or at a spatial distance beyond our sensory range, and reduce, display the results within our sensory range in a way that is useful. Therefore, even with 'advanced technology' to expand our ability to collect data, the basic sensory package of the human species has not changed, the basic human does not have any means of naturally sensing and collecting data about the environment that we did not have a million years ago. The same goes with the ability to process the information received, we have superfast computers, we still have the same cave-brain.
- Magic always refers to the improbable or impossible non-causal occurrences based on our current knowledge and understanding (see Intonation of the Three, 1 Technology, p. 688, *supra*). The idea of 'magic' suggests divine intervention and/or the operation of forces which we cannot understand, but which presumably are accessible to us. Like quantum entanglement and quantum tunneling. (*Majik, 3 Information, p. 1361*)
 - Understanding is a relative matter, a matter of perceptions, and there is already a suggestion of 'magic' in the game in line with Clarke's Law, in the form of *Uber Alles*. From our perspective, the technology of the 2nd and 3rd Eras might as well be magic, and thus the *Uber Alles* are able to 'grant' abilities upon reaching a new Era, without need for detailed explanation (which would be impossible given our current state of understanding). It might be possible to introduce into the game a concept of 'actual' magic which is not technological (as in *Uber Alles*) or biological based (which would probably be called telepathy or psionics instead of magic), but again, it would require extensive and careful consideration beforehand by the players and the Concierge.
 - Magic is a pre-technological concept. Very few now have an understanding of magic in the pre-technological sense. In most fantasy, especially fantasy role playing games, magic is a crude substitute for technology effects, without any internal logic or justification. I have long suspected that our pre-technological ancestors would not have understood magic as a personal servant or tool at the bidding of the sage, diviner or caster. Nor would normal humans have been able to imbue magic – divine power – into normal artifacts or natural objects. The way our pre-technological ancestors viewed magic and the way we treat magic in fantasy are both very revealing of different worldviews at both ends of 2,000 years of humanity. There is a deference,

fear, and mystery to magic that has been lost and replaced by egocentric, materialism, and vain-glorious individual empowerment.

- Some sort of “techno-mage cult” – which has had some popularity in science-fiction literature – might be possible in GGDM. Personally, I have never been entranced with the techno-mage idea or compelled by the visions of such presented on television (e.g., Babylon 5). Techno-mage cult ideas share the same root as Western Esotericism, attempting to return enchantment to the future technological worlds of science-fiction, and projecting into humanity’s future, a return of ‘knowledge’ rejected by science, rationality, and modern intellectuals.
- It is possible, within the scope and course of a game, for species to develop profound, new, heretofore unknown biological-based sensory abilities (i.e. telepathy, empathy, ESP), biological-based abilities to manipulate matter and energy (e.g., telekinetics, psychokinetics, pyrokinetic) or biological based abilities to affect the behavior of other creatures (i.e. mind-control, coercion, hypnotic suggestion), either individually (i.e. special talents, the term Robert Heinlein used in *Starship Troopers* (1959)) or as a group effort (i.e. a meta-concert, the name that Julian May gave to group focused mental powers in the *Pliocene Saga* (1981)). Such a development must or will likely become part of the greater game story arc. (*Farsight, 3 Information, p. 1362*)
 - It is possible that such developments might be included as part of the *Uber Alles* for the 2nd and 3rd Era, or it could accompany the transition from the pre-Interstellar Era to the 1st Era, for example, the sudden appearance of verifiable telepaths coincided with interstellar travel in Babylon 5 and were [a] critical underpinning to the entire story arc. It is a development, however, that the players and the Concierge would need to work out in some detail before being implemented since the game mechanics don’t really support it. A psychic is a walking causality violation, things ‘appear’ to them before they ‘appear’ in the universe. Such new abilities can never be allowed to become all powerful or to unbalance the game but could be fun.
- Generations of intellectuals have considered and writers have toyed with the concepts and consequences of reliable and operational telepathic abilities among humans and aliens. Most of these musings have not ended with a favorable conclusion, much having to do with the wall between the sexes. Are men ready to let women into what they really think, want, and feel, and *vice versa*? To experience (mentally only) what it is like to be the other sex? Are we ready for a new telepathic priests and ruling class or are we willing to live in the fish tank of a communal mind? It is clear that widespread telepathic abilities would require an entire different and new framework, a new culture that is centuries or millennia away from today. (*Let My People Go, 3 Information, p. 1363*)
 - If any human population demonstrated an evolutionarily-significant developmental advantage over the general population, one of two courses would occur:
 - The group would either become the rulers or controllers of a significant part of civilization or be marginalized, controlled or eliminated by the current government, or ...
 - The group would assume control of humanity and thereafter, either find a way to evolve the rest of humanity to their level, or eliminate mainstream humanity, or eventually be overthrown, marginalized, controlled or eliminated. (*A Bowl of Biskies, 3 Information, p. 1364*)
 - Marginalization can take many forms, including, in an interstellar setting, departing into the unknown to found new colonies far away from the current governments. This is a theme which was explored in Babylon 5 via the telepaths, especially the last season, and various short stories – such as the one where a Moses-like leader of normal kids (*ut supra*) wants to lead his people to a new planet, or self-imposed or forced exile, such as Khan Noonein Singh (can you still hear Captain Kirk screaming his name?) and the Auguments in Star Trek.

Reformation (going long!)⁴¹

Disputations (Thesis Statements):

- The entry point for a Reformation in GGDM is the Thesis Statement (go figure, eh?). Each position may issue a Thesis Statement during Regular Turns *in lieu of one Power Activation* during that Regular Turn, if all conditions precedent are met. The Thesis Statement must be in the proper form, and must be submitted with the position's Regular Turn actions. (*Disputation, 2 Reformation, p. 1391*)
 - This is, however, not a Power Activation, but uses one. Thesis Statements thus cannot fail due to inactive Constructural Elements (and are not targeted at units in any case), and there is no opportunity to apply Enlightenment to Thesis Statement as there are no die rolls involved.
- Even though the loss of a Power Activation presents a cost to issuing a Thesis Statement, in practice, there will be Regular Turns when a position does not need or want to use, or cannot use, all available Power Activations. These are turns when Thesis Statements may be issued; probably in an attempt to advance an agenda. This is expected game behavior. (*Not 95, 2 Reformation, 1391*)
 - A specific limit has not been placed on the number of Thesis Statements that can be issued because the process should be self-policing. Given all of the possible uses of a Power Activation and all of the competing interests within a position (e.g., Government Title Conflict Checks), Thesis Statements should be naturally limited.
- A Thesis Statement may only be directed toward another position with whom they have established Diplomatic Space (i.e. after First Contact). Each Thesis statement may target only one position and should be tailored to what the issuer knows about the target position. Thus positions cannot just randomly start lobbing bombs in the first turns. The *conditions precedent* for issuance of a Thesis Statement are that a Diplomatic Space exists between the two positions (see Diplomatic Spaces, *et seq.*, 2 Diplomacy, p. 1116, *supra*) *at the time of issuance*. Once issued, a Thesis Statement cannot be withdrawn or altered by the issuing position, so Thesis Statements should be issued with care, and not in retaliation for current events. A Thesis Statement may or may not ever Coalesce into a Reformation, and it may happen quickly or take a long time. (*Dialectic Diplomacy, 2 Reformation, p. 1392*)
- Generally, Thesis Statements are issued secretly (i.e. even the Concierge might not know the issuer if handled by a computer assistant) and the queue of Thesis Statements targeted to each position are kept secret *from other positions*, but can be seen by the target position who are naturally aware of their own dissident factions. Some forms of Special Operations (i.e. Reconnaissance or Black-ops) seeking to identify dissent in a civilization may discover 'dissent' represented by queued Thesis Statements. (*Conspiracies & Counter-Reformations, 2 Reformations, p. 1391*)
 - If the Concierge is unable to see the identity of the issuing position of a Thesis Statement it may be difficult to determine if it is blatant retaliation for current in-game events. Whether or not this is important depends upon how the no-retaliation rule (*ut supra*) is observed and enforced in the game by the participants.
 - Because of private diplomatic communications, there is no way for the Concierge to determine or prevent collaborative efforts at lodging Thesis Statements. There is no enforceable requirement that the Thesis Statement be authored by one position or even be authored by the position that lodged it, and it is not really a concern to the game in any event. While players may be irked by the lodging of Thesis Statements against their positions, what one can do, all can do; but it should not play that way.

⁴¹ I have never seen any other game that has a Reformation, Expose', or Kairotic Moments. Even games set in the Reformation, or about the Reformation, such as Here I Stand or Machiavelli, are simply renditions of historical events within the setting of a wargame, without substance or circumstances. None have dared before to address the issues discussed or simulated in Kairotic Moments in GGDM. Thus, I believe on that point alone, you will not see anything like GGDM elsewhere. Reformations, Expose' and Kairotic Moments in GGDM grew organically within the game design process; I did not set out saying, I am going to design a game that has a Reformation mechanic or Kairotic moments. Rather, they are the logical, honest end result of a macrosocial and macrohistorical game that goes where GGDM goes, Reformation mechanics would not be possible without all that was set up before mechanically and in commentaries throughout GGDM.

- Because the recipient or target position does not know the origin of the Thesis Statement (and should consider them, like a News Event, to not originate from other players), it is possible for the Concierge to issue Thesis Statements as well, using Intervention Potentials, hastening the coming Reformation. Intervention Potentials are the Concierge's position in GGDM. In the end, the effect is the same regardless of the source.
- Positions may engage in a counter-Reformation effort by lodging 'favorable' Thesis Statements against their own position, but only after a Thesis Statement has been lodged against them (no shadow boxing!). As with the historical Counter Reformation (1545 to 1648 A.D.), these home-grown Thesis Statements may be somewhat effective in keeping the dragon insanity (e.g., Cordwainer Smith, "Game of Rat and Dragon" (1954)) at bay.
- *A priori*, any 'counter-x' requires an 'x' to exist first. Counter-Reformation Thesis Statements should not be issued before there is a Disputation. The Concierge may choose to 'ignore' preemptive Counter-Reformation Thesis Statements.
- Thesis Statements should be assumed to represent the desires and arguments of *dissenting forces* within the target position's civilization. Like News Events, Thesis Statements are not 'caused' by the issuing position (see The Nature of News Events, 2 Dreamtime, p. 146, *supra*). Unlike News Events, the target position is not informed of the source, but to the extent that they might figure it out or learn afterward, the target position should not retaliate against the issuer (e.g., see The Story of V and Keep the Sand in the Sandbox, 2 Dreamtime, pp. 146-147, *supra*), but instead, consider the Thesis Statement and any Coalesced Reformations, as the internal dissident's part of the story. (*Dissonance, 2 Reformation, p. 1392*)
 - Thesis Statements create – by speaking – within the game position a dissident, dissonant element to what would otherwise be a mostly harmonious, monolithic whole of a position controlled by a small group of human players (see The Singleton, 1 Government Titles, p. 579, *supra*). Although Thesis Statements are mechanically different than News Events, they can be given similar weight, importance, in the game.
- Because there is *no Power Activation* associated with the issuance of a Thesis Statement, *no News Event should be provided*. Further, Thesis Statements *are not considered official Interpretations in the game*; that is, wishful thinking is not Coalesced into Universal Legislation (see Official Interpretation, 1 Dreamtime, p. 130, *supra*) by issuance of a Thesis Statement. Further, the Concierge cannot decline a Thesis Statement if it is in proper form, thus there is no acceptance requirement by the Concierge as there is with an 'official interpretation,' see Flavors of Fact, 1 Dreamtime, p. 134, *supra*. (*Dog-Ma, 2 Reformation, p. 1393*)
 - As part of the emergent play of the game, the Concierge may, with discretion, issue a Special Bulletin for Thesis Statements (for story purposes, this is not construed as 'acceptance'). This is a decision that should be made from the beginning of a game, whether or not to issue Special Bulletins for Thesis Statements; there is a risk that the target or other positions may easily determine the Thesis Statement's author from the Bulletin, but also, it does serve to engage the players in the story of the game and may propagate ideas.

Ontic Numbers:

- When each Thesis Statement is accepted (meets the conditions precedent), the Concierge must *secretly* assign a 'weight' to the Thesis Statement based on judgment of how likely, accurate, relevant it is as a dissident element in the target position's current civilization (i.e., not whether it accords or agrees with the target position's current civilization). This is a complex judgment that is expressed in a number value attached by the Concierge to the Thesis Statement. It is not merely a matter of opposition, but a measure of how widespread is the opposition expressed by the Thesis Statement, how much strength/depth does the dissident movement possess. (*Ontic Numbers, 2 Reformation, p. 1394*)
 - The target position will see the Thesis Statement text (the opposition voices their displeasure) but will not see either the source (as indicated previously) or the weight assigned by the Concierge.

- For example, if the current Earth civilization (as a whole unified GGDM position) were the subject of a Thesis Statement that declared “The Earth is Flat,” the value assigned would be ‘0’ because, while arguably some people still insist that they believe it is, it is not an issue that is either important to our current civilization or likely to gain widespread support, become a sociopolitical movement. Most people first, believe or know (take your pick) that the Earth is spherical, and second, are indifferent to the issue in their daily lives (while enjoying the benefits of satellite-enhanced communications and broadcasting). Conversely, if a Thesis Statement read, “The proletarians have nothing to lose but their chains!” (Karl Marx, *The Communist Manifesto* (1848)), it might receive a greater weight in the post-Cold War world, but much less than it would have if the position were on 19th and early-20th Century Earth.
- The scale used is up to the Concierge, but should be decided before the game and applied consistently to all positions. The base assumption might be a scale of 1 to 10 or 0 to 9, but there is room for other scaling schemes, e.g., 0-3, 1-3, or 1-6, 1-20, etc., and each could be developed into a well-defined criterion for each increment. There are arguments for larger or smaller scales, so it’s a matter of taste. (*Ontic Scale, 2 Reformation, p. 1394*)
 - “Counter-Reformation” Thesis Statements issued by a position targeting itself might be assigned negative numbers in the scale used, if the Concierge interprets them as counter-argument to the dissidents, or they may simply receive a regular positive number on the scale if the Concierge interprets the Counter-Reformation Thesis as representing an opposing dissident group or the whole process as a widespread conflict. This is not historically inaccurate, and serves to represent the bumbling of authorities that often results in actions that seem on one hand to target the issue, *but actually produce a different result*, showing that those in charge don’t understand or didn’t anticipate properly, e.g., the ATF “gunwalking scandal” aka Operation Fast and Furious.
 - This is an integrity point for the Concierge, since the weights assigned to the Thesis Statements are secret, there is no external judgment of consistency of application or the scale used (e.g., I have experienced ‘editing standards drift’ working on GGDM and have had to circle back to the beginning to keep it all consistent). If GGDM is assisted by a computer program, the scale should be entered when the game is set up and cannot be changed even by the Concierge during the game, so that all calculations are made from the same scale.
- At the end [of] the Regular Turn processing for each position that has Thesis Statements previously lodged against it, there is a chance that a Reformation will Coalesce. The chance is the value of all Thesis Statements lodged against the position as a percentage of the top number of the Ontic Scale used by the Concierge. (*Pontic Event, 2 Reformation, p. 1395*)
 - For example, the total value of all Thesis Statements against a position is 7 and the scale used by the Concierge is 1-20, so as 7 is 35% of 20, the chance of Coalescing a Reformation is 35% *each Regular Turn*. Thus, the frequency of Reformations is controlled by the top number of the Ontic Scale used; the lower the top number the more frequently Reformations will occur in the game; e.g., if the top number in the example above were 10, the chance would be 70% each Regular Turn, if it were 30, it would be 23% (fractions truncated) chance of Coalescing each turn. And the Concierge doesn’t get Enlightenment rerolls...
 - It is important to remember that this roll is happening every Regular Turn and thus may Coalesce on the first roll or require many Regular Turns. The number will also change over time as additional Thesis Statements are added; the Concierge may also change previous values based on changes in the position and events, enhancing or destroying dissident points.

A Reformation Coalesces (reap the whirlwind):

- When a Reformation Coalesces, the target position will not be informed, no position will be informed, but the Concierge will know. The Concierge may resolve the Reformation at their discretion, but it

should be resolved as quickly as possible before conditions change too much. As no position is informed of the Coalescence, Thesis Statements may be added by other positions during the process of resolving the Reformation. (*A Coin in the Coffer Rings, 3 Reformation, p. 1398*)

- The first step in resolving a Coalesced Reformation is to make a *collage* out of the Thesis Statements. The Concierge must look at the Thesis Statements, look at the civilization and try to find a theme into which they all fit, that can be expressed in one or two simple sentences. Not everything must be included, not every issue must be addressed, just try to find something central that fits the target position's civilization in particular, and the game story in general. The resulting Collage does not need to be positive, happy, or fruitful in our sense of things (not all emergences or transformations are positive results to all viewers nor will all dissenters be pleased), but should be sweeping insofar as the target position's civilization and contribute something to the game story arc. (*Here I Sit, 3 Reformation, p. 1399*) [***a Collage from a Thesis Statements in a Reformation should not be confused with Colleges in GGDM***]
 - This is possibly the most difficult single process in the game for the Concierge, but will be much easier if the Concierge is immersed and engaged in the game (not everyone can be a Concierge, just as not everyone is suited to GM a RPG, I was a terrible GM). This is art, this is an 'interpretation,' the Concierge must just do the best with the material (i.e. the Thesis Statements) provided by the participants and try to find something emergent from it.
- A Reformation is resolved in GGDM through a series of Interventions by the Concierge on the target position related to the Thesis Statements that make up the Reformation. To resolve the Reformation, the Concierge should create a 'program' of events that happen rapidly to the target position in one or two Regular Turns, through Interventions, that reflect the Thesis Statements of the Reformation and lead to the Collage formed by the Concierge previously. The Concierge does not need to inform the position that a Reformation is being resolved, until the end when the Collage is presented. (*The Ink Had Scarcely Dried, 3 Reformation, p. 1400*)
 - The resolution of a Coalesced Reformation should use a number of Interventions equal to *at least* the number of Thesis Statements including counter-reformation Thesis Statements (see 2 Reformation, p. 1391, *supra*), thus, counter-Thesis may increase the chaos later (the Ontic Numbers are irrelevant for this purpose). Intervention Potentials Plus (IP+) against the target position should be used first, and are considered two Interventions for this purpose. After that, the Concierge can draw from the pool of regular Interventions in the game (plus those attached by Blackops and Pollution Potentials). The Concierge should use as many Interventions as necessary to make the Reformation story work out correctly, noting that these events will be occurring while the game is still moving and positions are still posting News Events.
- Upon completion of the Reformation resolution, the Collage becomes a new 'rule' for the target position. The position should henceforth operate within the parameters of the Collage resulting from the Reformation. The Collage is not a rule in a game mechanical sense that the position will be prevented from violating the rule – for example, like a position will be prevented from moving at twice its current maximum ship speed without any special enhancements or new Ship Speed technology (unless the Concierge uses an Intervention) – but rather, the Collage (not to be confused with Colleges) is like a Fundamental Reality, only much closer, much, much closer, to the current reality, and thus, the Concierge may assess an Intervention Potential Plus (IP+) against the position for apparent or continued violation of the Collage. That means the Concierge must be paying attention to the game... (*A Soul from Purgatory Springs, 3 Reformation, p. 1401*)
 - Adverse News Events posted by the position should not be considered violations of the Collage (or even Fundamental Realities) because, as stated in The Nature of News Events, 2 Dreamtime, p. 146, *supra*, the source of the adverse News Event is not the 'cause' of the event.
 - When the Collage is presented, the Reformation is 'resolved' and the Coalesced Thesis Statements are set aside (but not forgotten). Their Ontic Numbers are no longer counted, and thus do not count toward the next Reformation (see Pontic Event, 2 Reformation, p. 1395), the resolution

is a reset. But the same issues may come up again later, previous Thesis Statements may be considered in future resolution of Coalesced Reformations, because history is never really over...

- The Reformation process, an Exposé News Event (see *Edge of Reality*, 4 Writs, p. 452, *supra*), hegemony (see *In Spite of Ourselves*, 4 Order, p. 554, *supra*), and Era progression (see *All Things are in Motion*, 1 Eras, p. 760, *supra*) are the only means in the game to expand the Public Space *directly*; the Diplomatic Space (see *Fourth Direction*, 2 Diplomacy, p. 1117, *supra*) is also an expansion, but is shared with another and traces to the Public Space only through the Capital Colony. After the Reformation is resolved, in addition to the new restrictions of the Collage, the target position may receive additional Monads on the Public Space determined by a yes/no die roll (i.e. 50%) for each Intervention used in the Reformation resolution. Thus, the more Interventions used, the more Monads that can be gained (small consolation...). Enlightenment cannot be applied to this roll because there is no Power Activation involved. (*Built Spaces*, 3 Reformation, p. 1401)
- Because random insertion of new Monads into an active and full Public Space could destroy adjacencies and formations, and distances of colonies from Government Titles, it should/might/will probably be done manually by the Concierge; however, Reformations (Era Progressions and Exposé) do tend to upset existing arrangements and connections, therefore, random insertion by the computer assistant would not be entirely improper. The Concierge should decide initially how this will be handled and be consistent through the game, but knowing human predilections, it is likely that insertions will be done randomly by the computer assistant. As with Diplomatic Spaces (see *Shared Spaces*, 2 Diplomacy, p. 1118, *supra*), insertion of Monads will simply displace everything a space because the edges of the Public Space are considered to wrap around, such that things on the edge may be considered adjacent to things on the other edge. (*Mental Space*, 3 Reformation, p. 1402)

Kairotic Moments (going deep!)

- A Kairotic Moment is whatever a moment is – you know what a moment is, but you don't know what a moment *is* – as in the 'I know it when I see it' (feel it, hear it, experience it, *look when it matters*) colloquial expression. But a Kairotic Moment is in any case or sense, a moment. The GGDM sections about the Kairotic Moment have little to do with the moment – the details of which must be provided by the Concierge and participants (like the TV movie, *Lost Room* (2006)) – but are instead about the before and after the moment. (*What Happened in the 1960s?*, 1 Kairotic Moments, p. 1419)
- News Events have a limited ability or role in relation to Kairotic Moments because of the time periods probably represented by GGDM Regular Turns, see previous discussion of literary characters in GGDM, *A Story Without Characters*, 4 The Streams of Time, p. 102, *supra*. A Prose Intervention Special Bulletin may be useful instead. (*Old News Reels*, 1 Kairotic Moments, p. 1419)
 - Kairotic Moments are strongly related to Aspects in GGDM. The extent to which Aspects are not congruent with emotion, feeling (see *Affliction of Aspects*, 2 Culture, p. 369, *supra*) is the extent to which Kairotic Moments are also not solely descriptive of an emotion, feeling. This is important to remember when participants add color to the game-mechanical outlines of the Kairotic Moment in GGDM.
- Kairotic Moments are not a 'tool' of the players but instead, a storytelling 'tool' of the game. The Concierge initiates and creates the Kairotic Moment at *opportune times* and the players deal with the consequences, and perhaps try to exploit them (because players will try to exploit anything), during the game. (*Blasphemy*, 1 Kairotic Moments, p. 1420)
 - It would be considered good form if the Concierge would issue a Special Bulletin (Intervention) when the Kairotic Moment is officially triggered (see *Critical Mass*, 3 Kairotic Moment, p. 1438, *infra*). The Special Bulletin should include the key Aspect that is associated with the Kairotic Moment and perhaps something to give it context; the game mechanics of the Kairotic Moment need something to give them context in the story. It is possible that the Concierge could also use a Prose Intervention (see *2 Entropy*, p. 236, *supra*), but in whatever form it is given, it is not an official 'interpretation' in that it does not create or govern any game mechanic in the game, i.e.

the statement by the Concierge did not create the Kairotic Moment. The statement is merely to provide the Aspects for the Kairotic Moment and something of a story for the players to work off of as the Moment runs its course. (*Biblical Blurbs, 1 Kairotic Moments, p. 1420*)

- Although the concept of a ‘teachable moment’ might be characterized as the modern cousin to the ancient rhetorical concept of the kairotic moment (*ut supra*), participants should not be fooled into thinking that kairotic (or even emergent) moments are always positive. A kairotic moment is just an opportune moment in a conflict, argument, debate where something important may occur. But opportune for whom? (*Equilibrium Epiphany, 1 Kairotic Moments, p. 1421*)
 - In the story of a GGDM game, a Kairotic Moment does not need to be religious, but does need to be a core experience, opportune moment for *something* to happen to or in a civilization. The story is what that is.

Hallowed Round (Terra Sancta):

- A Kairotic Moment in GGDM must occur at a specific place, that is, a colony. While it is possible that it could occur at an uncolonized planet or ship (e.g., Arthur C. Clarke’s “The Star” (1955)), Kairotic Moments are about population and especially, those who are looking for meaning, and that suggests very strongly that a colony (or homeworld) is involved. (*Terra Sancta, 1 Kairotic Moment, p. 1420*)
- A Kairotic Moment is not a Power Activation, and thus cannot fail on a colony or ship due to inactive Constructural Elements. No effect of a Kairotic Moment described in this and following sections can fail due to inactive Constructural Elements. (*Terra Sancta, 1 Kairotic Moment, p. 1420*)
- When the Kairotic Moment process is loosed upon the game by the Concierge, *a place must be chosen as the location* (see Terra Sancta, 1 Kairotic Moments, p. 1420, *supra*). There are many possible criteria for choosing a location, but the default might be the sovereign colony which is adjacent to the most pieces on the Public Space of the Aspect that triggered the Kairotic Moment. So much the better it is if the colony also fits other criteria or if it fits the story arc best (and if the Concierge has a great idea...). (*Wells of Initiation, 3 Kairotic Moments, p. 1441*)
 - It is possible that if two or more positions share the key Aspect of the Kairotic Moment on their Aspect List, that the game might experience simultaneous Kairotic Moments in two or more positions. This *might require separate target planets for each position* (lending perhaps a ‘Mormon-like’ mystery to the game) or if a single Balkanized or other suitable location is available on both Public Spaces, perhaps this is even better! It is also possible for the game to experience rapid fire consecutive Kairotic Moments featuring different key Aspects if several are near the Critical Mass and continue to be Exposed. That could be an interesting twist in the story.

Moving Dots:

- When a Kairotic Moment is triggered in a game of GGDM – how it is triggered will be discussed later – a set of game processes is launched which positions can resist or ride. A Kairotic Moment always has a specific location (i.e. colony, see Terra Sancta, 1 Kairotic Moments, p. 1420, *supra*) and a specific point in time (i.e. Regular Turn of the originating position) where it begins. (*There are Three Paths You Will Go By, 2 Kairotic Moments, p. 1429*)
 - On the Regular Turn that the KM is triggered, a blue marker appears on the *Terra Sancta* chosen by the Concierge and a red dot appears on the position’s current Capital Colony. The color dots have no game effect and no meaning that the position players do not assign to them. Each time the position’s Regular Turn is processed afterwards, the dots will move along the Pathways connecting each of the colonies to a Government Title (see All Roads Lead To..., *et seq.*, 2 Government Titles, p. 595, *supra*) until they reach the opposite colony. When a color dot reaches the Government Title via Pathway, it will pass through the Title as if it were one Monad, and proceed up the Pathway from the Government Title to the opposite colony. (*Sojourn, 2 Kairotic Moments, p. 1429*)

- Each color dot will move 1-3 Monads per Regular Turn, equaling the current Intensity Level of the Kairotic Moment.
- There is no non-interpretative effect from the color dots passing through the Government Titles, it is merely as symbolic as the participants think it is.
- If the Terra Sancta colony and the Capital Colony share the same Pathway, the dots will simply move along the Pathway toward each other, passing at some point, and reaching their opposite colonies directly.
- At the time the Kairotic Moment is triggered, an ‘intensity level’ of either 1 or 3 is randomly determined, with three being very intense, and one being somewhat anemic; some movements start small and languish in the corner then grow big and explode, some movements explode onto the scene and run their course with a short shelf-life. At specific points determined by the Concierge – possibly based on the progress of the dots – the intensity level will move up one notch if it started at 1 or down one notch if it began at 3, until it reaches the opposite end, where it will remain at its final intensity level for 0-2 Turn Cycles (Turn Cycle is not the same as Regular Turn, see definition in *Buzzing Lightyears*, 4 The Streams of Time, p. 101, *supra*). Afterward, the Kairotic Moment has passed. (*Intensiteit*, 2 Kairotic Moments, p. 1429)
 - The Turn Cycle distinction being made here is that the colored dot only moves on the KM position’s Regular Turns, not on the next or subsequent positions’ Regular Turns.
- When both moving color dots have reached their destinations, they disappear and are replaced by a single dot (of whatever color, it doesn’t *matter* unless participants think it does), on the Capital Colony. On the next Regular Turn processed by the position, the dot will pass onto the First Space of each Diplomatic Space (even if the Capital’s status is suspended, see *Waving the Flag*, 2 Constructural Elements, p. 190, *supra*) and thereafter, proceed in the same way across each Diplomatic Space to the opposite First Space, and then on the next Regular Turn, end on the alien position’s Capital Colony where it will remain until the end of the alien position’s next Regular Turn. There is no direct effect on the alien Capital Colony from this except perhaps timing of Intensity changes in the Kairotic Moment which should be in its final stage at that point (but timing is always up to the Concierge). (*Convictions*, 2 Kairotic Moments, p. 1430)
 - It is up to the participants to decide if the color dot can cross Diplomatic Spaces where there is no connection between the First Spaces, i.e. the positions have had First Contact but have not developed any Diplomatic Space. But it seems unlikely to occur unless some valid reason can be given for bridging such a gulf (that is, something emergent). A color dot that cannot move due to no connection between First Spaces will remain on the First Space until the phenomenon has run its course.

The Testing (‘Friendly’ Constructural Elements):

- Beginning on the position’s Regular Turn after the Kairotic Moment is triggered, at the end of each turn processing, one of three Constructural Elements (Epistemological, Symbolic, or Ideological, see 1 Constructural Elements, *supra*) will be randomly chosen. (*Undecidabilities*, 2 Kairotic Moments, p. 1430)
 - Every active Constructural Element of the type chosen on sovereign colonies or ships will be ‘tested’ to see if it becomes inactive. This is not a Disruption Event nor is it considered an *apostasy* (see GGDM Disruption Event in *Stewed, Brewed, Boiled, Baked & Fried*, *et seq.*, 1 Disruption, pp. 258-259, and *apostasy* in *Alieney Apostasy*, 3 Disruption, p. 283, *supra*).
 - There is a 5% chance *times the current Intensity Level* for each active Constructural Element of the type chosen to become inactive. Inactive Constructural may be returned to active status normally by activations of the Culture Power for the purpose of Cohering (see 5 Culture, p. 421, *supra*), or on ships by being located at colonies at the end of the Regular Turn (see *Mutiny on the Bounty*, 3 Disruption, p. 282, *supra*). These checks continue each Regular Turn until the Kairotic Moment has run its full course. (*What’s in the Box?*, 2 Kairotic Moments, p. 1431)

- If the Symbolic Constructural Element of the Capital Colony becomes inactive, it loses its Capital Status (see Waving the Flag, 2 Constructural Elements, p. 190, *supra*). This will not prevent passage of the colored dot through the Capital into Diplomatic Space (*ut supra*). If the Epistemological Constructural Element is inactive, the colony or ship may not receive the benefits of Enlightenment (see Skool Tyme, 2 Constructural Elements, p. 190, *supra*).
 - When 25% or less of any Constructural Element remains active after being ‘tested’ on the turn it is chosen (not if the condition exists on a turn it is not chosen), *all Constructural Elements of that type will become active and may not become inactive* (by any means, including testing) for one to three Regular Turns afterward (an immunity period). This process ends when all three Constructural Elements – Epistemological, Symbolic, and Ideological, have passed through to immunity (or the Kairotic Moment expires, *ut supra*, previous pages), however, it is possible for one Constructural Element to pass through twice (after the first immunity period) if the process lasts long enough. (*Gom Jabbar, 2 Kairotic Moments, p. 1431*)
 - Positions can fight this process by Cohering or they can surrender and let it run its course. It’s hard to say which is right, because it depends on circumstances turn by turn, having only 25% of a Constructural Element active can cause massive Power Activation failure problems, government Conflict Check failures, etc. Some positions may begin with a lot of inactive Constructural Elements and it may be beneficial and quick to let the percentages go down and come back up. There are many moving parts in any GGDM Turn Cycle, e.g., News Events, Disruption Events, Patents, Writs, wars, colonization, Corporations expiring.

Apostasy Plus (Alien Constructural Elements):

- During the time that the Kairotic Moment is in progress, any alien ship “that Unloads, Loads or Transfers Cargo, Population, Supplies or any Enhancements (including Looting and Trucking)” (quoting Alieneity Apostasy, 3 Disruption, p. 283, *supra*) at a Friendly or Naturalized colony (not just the Terra Sancta) owned by the position undergoing the Kairotic Moment has the normal chance of **apostasy plus** the current intensity level expressed in a percentage. (*Wave Motion, 2 Kairotic Moments, p. 1432*)
 - This effect cannot occur if the Power Activation failed due to already inactive Constructural Elements because the Load, Unload or Transfer never occurred (you know it already, Power Off, 2 Constructural Elements, p. 193, *supra*). In this case, you may be saved by incompetence.
 - For example, a One and Only True Earth Cargo Ship Unloading at a Alieneity Aliens Friendly Colony who are undergoing a Kairotic Moment at Intensity Level 3, will have a 13% chance of each active Constructural Element on the Cargo Ship becoming *inactive* and the resulting inactive Constructural Elements (**apostasy**) cannot be made active until after a Census Power activation by the One and Only True Earth.⁴²
- A ship belonging to a position that is undergoing a Kairotic Moment, may affect Constructural Elements of Friendly or Naturalized **alien colonies** with which they interact – as if the colony were a ship – as described above. That is, a ship from a position undergoing a Kairotic Moment can inflict **apostasy** on an **alien colony**; this is the only time this can happen (e.g., Christians in shōgunshoku era Japan). If the **alien colony** is the same Native Population Type as the Kairotic Moment position, the Intensity Level is squared before being added. (*A ‘Total Gurgler,’ 2 Kairotic Moments, p. 1433*)
 - Continuing the Previous Example: An Alieneity Aliens Log Ship makes a delivery of the goods paid for by delivery of RPs by Cargo Ship in the previous example. During the Transfer from the Alieneity Aliens Log Ship to the One and Only True Earth colony, there is a chance that active

⁴² It is important to think of the percentages in Kairotic Moments in terms of the number of rolls being made and the Law of Large Numbers; similar to Surveillance in Special Operations. Sometimes it might be a nothingburger, other times, it can be really bad.

Constructural Elements on the One and Only True Earth colony will become inactive as if the colony were the ship at an Alieny Alien colony (in the previous example).

- If the **alien colony** was the same Native Population Type as the ship's position, and the Intensity Level was 3, the 3 would be squared before being added to the base chance, i.e. 9% would be added to the chance of each active Epistemological, Symbolic or Ideological Constructural Element at the colony becoming *inactive*. Inactivation is still not a sure thing because the best possible chance would be 19% that each active Constructural Element will become inactive (see Alieny Apostasy, 3 Disruption, p. 283, *supra*).
- Constructural Elements made inactive in this way cannot be activated by any means until a Census Power activation has occurred in their owning position. [*i.e. same as a normal apostasy*]
- Normally, alien ships interacting with colonies do not affect the colonies based on the pseudo-physics idea of the difference in population masses (like Earth and the Sun), even the smallest colony has many times the population and closer local government control than the alien ship with which they are interacting. Thus, it is the alien ship that normally might be affected (see Alieny Apostasy, 3 Disruption, p. 283, *supra*). These rules give the Kairotic Moment transcendent power, like the alpha particle that finds itself 'instantly' outside a gravity well that it could not normally escape (see similarly, Lynn Montross quote regarding "explosions of human energy," 6 Diplomacy, p. 1177, *supra*). (*Pseudo-Physics of the KM, 2 Kairotic Moments, p. 1434*)
- It is possible that all Constructural Elements on a ship or colony might become inactive by the preceding exposure to the Kairotic Moment either because the ship or colony had only one active Constructural Element or because more than one active Constructural Element was ... converted ... to an inactive Constructural Element that cannot be made active. What to do, what to do? These situations are more aligned with emergent storytelling than firm GGDM game mechanics... (*Tsunami, 2 Kairotic Moments, p. 1434*)

Percolation Point (the coffee pot is boiling!):

- All Aspects from the Aspect List of all positions are collected into a master list for the purposes of Kairotic Moments (the list could be called 'The Fall' or the 'Tome of Doom,' etc.) It is important to remember for Kairotic Moment purposes that several positions may have the same Aspects on their List, though no two Aspect Lists should be identical. (*Critical Mass, 3 Kairotic Moments, p. 1438*)
 - The 'percolation point' that triggers a Kairotic Moment in GGDM is determined by Exposed Aspects. At the beginning of the game, a critical mass number is determined. At the end of each Turn Cycle (see Buzzing Lightyears, 4 The Streams of Time, p. 101, *supra*), all current Aspects are counted (a snapshot) and the Aspect that has the greatest total presence on *all* Public Spaces, 'wins' the Turn Cycle (a sort of zeitgeist).
 - In addition to the normal cycle of Exposing Aspects, Aspects from Trucking Transactions also increase the number of Aspects on Public Spaces. See Fairies Wear Boots, 4 Commerce, pp. 1227-1228, *supra*.
 - If two or more Aspects are tied, both 'win.' When one Aspect has been dominant a number of times in the game equal to the critical mass number, a Kairotic Moment is triggered for all positions that have that Aspect currently on their Aspect List.
 - This is *not the same as counting the number of times an Aspect has been Exposed in the game*, which was another possible mechanic for Critical Mass that was rejected because it aligns less with the idea of zeitgeist.
 - The Critical Mass number is effectively, the minimum number of Turn Cycles the game will run before a possible trigger of a Kairotic Moment (assuming the same Aspect wins every cycle, which is not likely). Each Turn Cycle won by a different Aspect will stretch the time before the occurrence of a Kairotic Moment. It is suggested, therefore, that Kairotic Moments are better in the mid- to late-game than the beginning (unless part of a big story plan by the Concierge), and

thus the Critical Mass number should be greater than or equal to ten (or six), with the bottom parameter adjustable to participants' tastes. It could also be set so high as to be unlikely to occur in the game, see shelf-life discussion, *It was the End of History*, 1 Resolution, p. 1456, *infra*.

- If the game is being run manually, the Concierge will have to generate the Critical Mass number and track Aspects 'wins'; if, as I assume, the game is being run with computer assistance, there is no need for the Concierge to either know the Critical Mass number or count Aspects at the end of each cycle and track wins. Let it be a surprise! Additionally, when a Kairotic Moment is triggered and the Concierge becomes aware of it, the Concierge is not required to allow it to occur or proceed, Kairotic Moments are at the discretion of the Concierge and should be used as a storytelling tool or maybe just to shake up a dull game position. However, if a computer assistant is used to run the game and track the data, a Kairotic Moment cannot be triggered until the requirement is fulfilled, thus the Concierge would not be able to create one that doesn't exist. (*Meditations of the Overmind*, 3 Kairotic Moments, p. 1438)
 - Since the Concierge is the gatekeeper – like a Judge is the gatekeeper of evidence and instructions presented to a Jury at trial – it is possible that a triggered Kairotic Moment may never occur in the game (and there is no appellant court!). This is a waste of a good storytelling potential; a good overmind is a terrible thing to waste!
 - As noted in Aspects A to Z, 2 Culture, p. 324, *supra*, each position has its own secret list of Aspects that are available to the position; this helps to reduce the effectively infinite list of possible Aspects to a manageable number (dominant in that species) for the game. It is possible that the same Aspects may appear on two or more lists and because of that, those Aspects may dominate the game and trigger the Kairotic Moment. It is also possible that a position that Exposes (not to be confused with the Expose' News Event, 4 Writs generally, *supra*) the same Aspects repeatedly (an unrealistic mechanic, but necessary for the game) could somewhat manipulate the Kairotic Moment.

Nine Landings ('Friendly' Aspects):

- When the Kairotic Moment is triggered, all Aspects of the triggering position are immediately checked for 'conversion' to the Aspect that triggered the Kairotic Moment. There is a 25% chance that each Aspect currently on the Public Space will immediately change to the key Aspect of the Kairotic Moment. If converted, they will be replaced on their Monad by the key Aspect as if they were newly Exposed Aspects (see *A Bustle in Your Hedgerow*, 2 Culture, p. 365, *supra*) and will thereafter 'age-out' normally. (*Nine Landings*, 3 Kairotic Moments, p. 1442)
 - As this is not part of a Power Activation, and due to the nature of the event, it is not likely that Enlightenment should be applied to reroll Aspect conversions.
- It is vaguely possible that no pieces of the key Aspect will be on the Public Space when the Kairotic Moment is triggered; this could occur if two or more positions share the same Aspect on their Aspect Lists (blame this mess on the other guy!). The more positions that share the same Aspect, the more likely and the sooner it will trigger the Kairotic Moment. If the Concierge allows the Kairotic Moment to trigger, *it is irrelevant if any pieces of the key Aspect are currently on the Public Space* of the target position(s), the 'conversion' process will still happen (which kind of solves the problem...). (*Winded*, 3 Kairotic Moments, p. 1442)
- During the course of the Kairotic Moment effect, there is a chance that each Aspect that is Exposed by the position will instead of the chosen Aspect become the key Aspect of the Kairotic Moment. The chance for each is equal to the current intensity level times 10%. (*Rose of the Winds*, 3 Kairotic Moments, p. 1442)
 - This may constitute a 'failed die roll' that can trigger the use of Enlightenment if it has been dedicated to this Power Activation.
 - If the key Aspect of the Kairotic Moment is Exposed by activation of the Culture Power for the purpose of Exposing Aspects, the chance of Exposing the Aspect is enhanced by the addition of

the current Intensity Level times 10%, thus, at Intensity Level 3, the chance of Exposing the key Aspect is 80%.

Hitting Bottom (Alien Aspects):

- There are four opportunities for a Kairotic Moment to affect (or infect) the Aspect pieces of another position (this does not apply to Constructural Elements, *ut supra*):
 - 1) Balkanized colony planets,
 - 2) Sharing the same colony system,
 - 3) Ships returning with inactive Constructural Elements that cannot be reactivated (as described in Wave Motion, *et seq.*, 2 Kairotic Moments, p. 1433, *supra*), i.e. **apostasy** due to contact with another position's Kairotic Moment, and
 - 4) Shared Meanings and MegaCorporations (see 2 Corporations generally, *supra*). (*Unfinished Well*, 3 Kairotic Moments, p. 1443)
- Aspects adjacent on their owner's Public Spaces to any **alien colonies** on a Balkanized colony planet or in the same starsystem with a Friendly or Naturalized colony of the position affected (afflicted) with a Kairotic Moment may be affected. (*Frontier Outpost of Syene*, 3 Kairotic Moments, p. 1443)
 - During the initial trigger of the Kairotic Moment described in Nine Landings, above, there is a 15% chance that each Aspect *adjacent to* **alien colonies** on their owner's Public Space, may either be converted to the key Aspect of the Kairotic Moment (if it is on the alien's Aspect List), or to a random Aspect (present on the alien's Aspect List) or simply eliminated. Ten percent is subtracted if the **alien colony** is on a different planet in the same system, making the chances of effect negligible (5%).
 - During the time that the Kairotic Moment is in progress, there is a chance equal to the current Intensity Level times 5% that an Exposed Aspect placed next to the **alien colony** will change to another Aspect or fail before being placed, if the **alien colony** is on a Balkanized planet with a Friendly or Naturalized Colony of the Kairotic Moment position. If the **alien colony** is in the same system, but not on the same planet, the chance is reduced to a percentage equal to the current Intensity Level of the Kairotic Moment (i.e. 1%, 2%, or 3%).
 - However, 20% is added to either of the preceding chances (after other adjustments) if the Kairotic Moment position's colony is also Terra Sancta for that Kairotic Moment.
 - For example, the M.A.N. position is undergoing a Kairotic Moment at **Intensity Level 3**: 1) during the initial trigger, **alien colonies** on the same planet as a Friendly or Naturalized M.A.N. colony have a 15% chance (this is not affected by Intensity Level) of each adjacent Aspect either changing to another Aspect or being eliminated, the chance is reduced to 5% if the **alien colony** is on a different planet; 2) during the alien's Regular Turn, there is a 15% chance that newly Exposed Aspects placed adjacent to the colony planet on the alien's Public Space will change to another Aspect or fail before being placed (this occurs after a successful roll to expose the Aspect) if the colony is on the same planet as a Friendly or Naturalized colony of the position undergoing the Kairotic Moment, or a 3% chance if on a different planet in the same system.
 - If the colony owned by the position undergoing the Kairotic (cathartic) Moment (e.g., "weeping martyrs" – Beowulf (2007)) is also the Terra Sancta of the event, 20% is added to each of the chances described above, so that the chances become 35%, 25% and 23%, respectively.
- Each ship:
 - 1) With an inactive Constructural Element that is blocked from reactivation due to **apostasy** from interaction with an **alien colony** experiencing a Kairotic Moment (see Wave Motion, 2 Kairotic Moments, p. 1433 *supra*),
 - 2) That "Unloads, Loads or Transfers Cargo, Population, Supplies or any Enhancements (including Looting and Trucking)" at any Friendly or Naturalized colony owned by its position, (*Id.*)

3) Has a 25% chance, at the end of the Regular Turn, of causing any Aspect adjacent to the colony to either change to something else or be eliminated (this occurs after elimination due to aging).

- This effect does not occur if the Power Activation fails, and may be subject to Enlightenment if Enlightenment was dedicated in the Power Activation and some rerolls remain unused.
- This is different from the effects on colony Constructural Elements from interaction with Kairotic Moment position's ships described in A Total Gurgler, 2 Kairotic Moments, p. 1433, *supra*. The effects described above come from *friendly ships* that have interacted with colonies currently undergoing a Kairotic Moment, then return to colonies owned by their position. The effects are also different because they effect Aspects on the Public Space, not Constructural Elements on a ship or colony. (*Ship of Fools, 3 Kairotic Moments, p. 1444*)⁴³
- Ten percent is added to all of the preceding chances (i.e. as described in both of the preceding sections) of changing or eliminating adjacent Aspects if the **alien colony** in question is located on a planet that is Hosting a MegaCorporation, regardless of the current ownership or Native Population Type of the colony that is Hosting. Additionally, five percent is added to all of the preceding chances if the alien position and the position experiencing the Kairotic Moment have a Shared Meaning. (*Diplomacy in the Hive of Scum & Villainy, 3 Kairotic Moments, p. 1445*)

After the Fall (Changing Aspect Lists):

- When the Kairotic Moment has completed, run its course, passed – see Intenseit, 2 Kairotic Moments, p. 1430, *supra* – the Aspects Lists of all positions that had the Key Aspect on their List may change. (*After the Fall, 3 Kairotic Moments, p. 1445*)
 - When the Kairotic Moment has passed, there is a 3% chance per Regular Turn Cycle elapsed since the trigger, that each Aspect on the Aspect Lists of the positions that had the Key Aspect – including the Key Aspect – may change to another Aspect. Any pieces of that Aspect on the Public Space at the time will simply change to the new Aspect. It's messy, but necessary.
 - Thus, Aspect Lists may change throughout the game, and this may affect Writs, Fuzzy Groups and even Government Titles. Changes in Aspects should be also reflected on the master list for the next Kairotic Moment.
 - It is possible that the Concierge may do this manually, with or without die rolls, plugging in new Aspects that fit the story.

Resolution (The End of History)

- Gestalt Genesis-Day Million is a science-fiction sandbox, a vision of civilization, a model of historical and cultural process, but it is also a game and to be a game, there must be an objective end, a form of victory determination. Ideally, Gestalt Genesis-Day Million should continue until the players have 'completed the story arc' or, alternatively, until the players mutually agree that the game has been played to a satisfactory conclusion and/or the civilizations developed to a suitable end (or until the players have exhausted their collective creativity). As likely, the game will end because (this being the internet) players simply disappear or quit playing or quit responding or submitting Actions. (*The Million Year Picnic, 1 Resolution, p. 1455*)
- When the game ends is mostly determined by the players. The game ends when one of the following events occur:
 - There is only one position left in the game (for whatever reason).
 - The majority of positions inform the Concierge that they wish to end the game.
 - The Concierge ends the game for lack of player participation.

⁴³ The prongs come together, the circle is closed; a ship with *apostasy plus* affects (infects) alien Aspects. Ta-da! (takes a bow, claps)

- The Concierge may also end the game due to extraordinary events, such as massive data loss, illness, and other entropy, like an alien invasion, disrupting the game. (*It was the End of History, 1 Resolution, p. 1457*)
- Ideally, the game should end at the completion of a Turn Cycle – that is, the first position that submitted Regular Turn actions has processed a turn, and all other positions afterward have processed turns, until it is time for the first position to submit Regular Turn actions again. This closure may be important in any measure of victory that counts ship building or Colleges for example. This provides full closure of the game instead of foreclosure. (*Closure, 1 Resolution, p. 1457*)

Three Victories:

- There are three types or criterion of victory: subjective victory, objective victory, and group victory. Objective victory is determined by the process described in the Lords Temporal section; and group victory is determined by the process described in the Lords Spiritual section. (*Training Ground for the Faithful, 1 Resolution, p. 1458*)
 - As mentioned in Macrosocial Simulation, 3 The Big Bang, p. 17, *supra*, GGDM is more of a simulation than a game, and thus, winning is not the point of playing GGDM exactly. Still, there must be an end point and a satisfactory conclusion.
- The first criteria of victory, however, is subjective. Within three days of the end of the game, each position must send a message to the Concierge indicating whether the position desires to win the game. In the vast majority of cases, it is expected that players of the position will indicate that the position desires to win the game. However, there may be some instances where a position decides, for whatever reason, that it should not or does not desire to win the game, and if so, this criteria gives the position players the opportunity to so indicate to the Concierge. The information provided to the Concierge regarding the first criterion will be kept secret until the final determination of victory is completed, and then will only be revealed *if necessary* to explain the final results. (*Victory in the Desert, 1 Resolution, p. 1458*)
 - In other games, when players feel that they should not win the game or do not desire to win the game, such players will usually subordinate their interests to their allies or to whomever they think should win the game, and oftentimes, such games will witness strange ‘give away’ and ‘cave in’ behaviors and unrealistic endgame strategies. Such endings do not act well, and in them no honor lies. With subjective victory as the first criterion here (and a game ending not determined by artificial rules or Victory Point ceilings), such odd behaviors and endgame moves are not necessary, as the position can simply indicate in the end that they do not desire to win the game. Positions can act with honor to the end of the story.
- Positions win victory in this game, victory does not go to individual players, but rather to ‘teams’ represented by the positions. A position that wins either the objective victory (Lords Temporal) or group victory (Lords Spiritual) *and* also has indicated to the Concierge that they desire to win the game, ‘wins’ the game. (*Victory in Space, 1 Resolution, p. 1459*)
 - It is possible in this system, if different positions win each of the criterion, for there to be co-winners of the game, if both positions have indicated to the Concierge that they desire to win the game.
 - It is also possible, though probably rare, for a position that indicated that they do not desire to win the game, to win the game anyway, by virtue of winning both the objective victory and group victory criterion.
 - So it is possible to win the game when the group votes against you (subjective victory plus objective victory) and it is possible to win the game even if you choose not to (win group victory and objective victory). It is possible to not win the game even if you have the biggest, baddest interstellar empire in the universe and Palpatine is your emperor and Darth Vader your loyal servant. It is also possible to be extinct (or nearly so) and win the game if the group votes for you (win group victory plus subjective victory) in which case, the story arc of the game is the story of your race’s extinction.

Countdown to Extinction (the “wastebasket of history”):

- Extinction occurs whenever a position 1) no longer controls any colonies, or 2) when there are no remaining population factors of the position’s native population type and that position controls no colonies in the Galactic Space (i.e. 99% or 100%, *ut supra*). The former condition – when a position no longer controls any colonies or Homeworlds, is called *Political Extinction* (or more properly, Polity Extinction). The latter condition – when there are no remaining factors of the position’s native population type in the game (i.e. the Galactic Space) and the position controls no colonies or Homeworlds, is called *Total Extinction*. It is possible for a position to have no remaining population factors of its Native Population Type left in the game – even under the control of other positions – and still control colonies and/or Homeworlds filled with native populations of other positions; this would not be considered an extinction condition. (*Countdown to Extinction, 1 Resolution, p. 1462*)
 - A position that is Totally Extinct has no vote in determination of the Lords Temporal and Lords Spiritual victory criterion, but may still inform the Concierge whether or not that position desires to win the game. A totally extinct position could still win the game. (*Into the Wastebasket of History, 1 Resolution, p. 1463*)
 - A position that is politically extinct from the game obviously will not be able to either vote for or compete in the Lords Temporal victory criterion, but may still vote for determination of the Lord Spiritual criterion. And, of course, the politically extinct position must still inform the Concierge whether they desire to win the game. (*Captive Honor, 1 Resolution, p. 1463*)
- It is possible, and unfortunate, that some positions may choose not to participate in the endgame/post-game voting (for example, the players of the position cannot agree on anything). An existing position which fails to timely send an email to the Concierge indicating that they either desire to win the game, or desire to not win the game, will be assumed to desire to win the game. An eligible position which fails to vote in the Lords Temporal or Lords Spiritual criteria of victory will be ignored and assumed to have ‘passed.’ An extinct position which fails to vote will simply be ignored and will not be able to win the game, though they may still win laurels and honors. In order for an extinct position to win the game or have any chance of winning the game, the position must at least ‘raise a hand’ and let the Concierge know that at least one player in the position is still interested in the outcome of the game. (*Passive Extinction, 1 Resolution, p. 1464*)

Lords Temporal (‘lords of this moment, lords of the real world’):

- Temporal power is secular power, the power in the here and now. Not to be confused with time travel. This distinction is necessary only because this is a science-fiction game. Pre-20th Century people would not be confused by the term, which dates from the late medieval period. (*Lords Temporal, 1 Resolution, p. 1465*) [***Blame it on Dr. Who, the Lords Temporal are not the Time Lords! Brits know that, Americans don’t!***]
- The Lords Temporal, objective criterion of victory is determined by ‘measures’ of the objective quantifiable power, qualities and achievements of each position. There are thirteen Measures of Victory, detailed in the following section, of which some, most, or all might be used in determining objective victory in this game. (*13, 1 Resolution, p. 1465*)
- At the same time that each position indicates to the Concierge whether or not they desire to win the game, each position should also secretly vote for one of the thirteen Measures of Victory detailed below. A position might vote for a Measure of Victory which they think they can win, or they might vote for a Measure of Victory which they think their ally might win. *Each position, excluding extinct positions, gets one vote only.* Of the thirteen Measures, seven will be used initially. Duplicate votes for the same Measure will be disregarded; alliances of positions might consider coordinating their votes. (*7, 1 Resolution, p. 1466*)
 - If there are more than seven different measures voted for (as might occur in a game where more than seven positions finish the game), the first seven received by the Concierge will be counted. If, through duplicate vote elimination and/or less than seven positions finishing the game, there

are initially less than seven Measures chosen, the Concierge will choose the remaining Measures by a random means, until seven Measures have been chosen from the list.

- The position which wins the majority of the first seven Measures, wins the objective victory. If no position wins the majority of the first seven Measures, the Concierge will randomly add one Measure at a time and determine who wins the Measure, until such a time as a position has won the majority of the Measures. The position that wins the majority of the Measures, wins the Lord Temporal criterion of victory. (*1, 1 Resolution, p. 1466*)

Objective Measures of Victory:

- The following are the thirteen Measures of Victory used in determining the objective victory criterion described in the Lords Temporal section (see Lords Temporal, *et seq.*, 1 Resolution, pp. 1465-1466, *supra*). Two or more positions can be tied for a Measure of Victory, in case of a tie, both are considered to win that Measure. The first seven measures chosen by the position votes and Concierge will be checked to see if any position wins the majority (even if tied) of Measures. For example, if two positions were tied at two wins each and three other positions had each won one, the next Measure of Victory will be randomly selected and checked until either a position wins the majority of Lords Temporal Measures of Victory or they are exhausted. (*Objective Measures of Victory, 2 Resolution, p. 1470*)
- **The following is a list of the objective measures of victory in GGDM:**
 - Population Measure
 - Resource Production Measure
 - Technology Measure
 - Faculty Check Measure
 - Fleet Size Measure
 - Exploration Measure
 - Vitality Measure
 - Diplomatic Prowess Measure
 - Meanings Measure
 - State of Readiness Measure
 - Technological Devices Measure
 - Seeding Space Measure
 - Cohering Measure
 - *The preceding list is offered here for sake of brevity, see original GGDM text for details.*

Lords Spiritual ('lords in essence, lords of the greater realm'):

- In the same email where each *position* indicates to the Concierge whether they desire to win (subjective victory criterion) and their vote for the Measure to be used in the objective victory criterion (Lords Temporal), the position should also *vote for which position they think should win the Lords Spiritual* (group victory criterion) in this game. (*Lords Spiritual, 2 Resolution, p. 1475*)
 - The position receiving the most votes will win this criterion.
 - This vote will be taken before the players are informed which position won the Objective or Lords Temporal victory in the game. Players may have an idea who probably will win the Lords Temporal, but will not know for certain when voting for Lords Spiritual, so the two are not necessarily linked. It is not impossible that the Lords Temporal position was also the best in whatever the Lords Spiritual vote measures, but it's not guaranteed or necessarily so.
 - Each position gets one vote; thus it is a vote of the positions and not a direct polling of the players.
 - Every position (except the Concierge) must vote. This burden is imposed on the participants for completeness of the endgame resolution, representing the voices of all.
 - Unfortunately, it is possible that some positions may not respond, even if they won the Lords Temporal criterion; they may have stopped responding, don't care who won anything, and not

sent in the email with their votes and choices. They could still win if the group votes for them in Lords Spiritual and they won the Lords Temporal.

- Political and Total Extinction positions can still vote, and should still vote because they could win the game if they desired to win, and the group voted for them in Lords Spiritual.
- Positions may vote for themselves. They may in fact be schizophrenic about it, voting for themselves in Lord Spiritual while declaring that they do not desire to win the subjective criterion. The two are not related except by interpretation.
- Because there are three victory criterion, participants should endeavor to determine a winner for Lords Spiritual. If two or more positions are tied in votes, the first tiebreaker will be the position controlling the greatest number of planets that have been *Terra Sancta* to a Kairotic Moment (see 1 Kairotic Moments, p. 1420 *supra*). The second tiebreaker will be the position with currently the least number of un-Coalesced Thesis Statements lodged against the position (see Disputation, 2 Reformation, p. 1391 and A Soul from Purgatory Springs, 3 Reformation, p. 1401, *supra*), which makes endgame Reformations favorable. (*Lords Spiritual, 2 Resolution, p. 1475*)
 - It is irrelevant whether the colony on the *Terra Sancta* planet was subsequently destroyed or whether it relates to any Kairotic Moment experienced by the position during the game. In short, having someone else's 'holy place' – even if just the ruins – is useful (e.g., the Dome of the Rock and the Al-Aqsa Mosque).
 - The relative lack of Thesis Statements lodged against a position may be attributable to either a position that has been lucky to avoid Thesis Statements, or a game that has not featured a lot of barb trading (i.e. everything is peachy!) or that the position may have undergone a Reformation near the end of the game. It is somewhat a matter of luck and is thus the second tiebreaker after something that is more controllable.
 - Only the number of un-Coalesced Thesis Statements is counted, not their assigned Ontic Number.
- If after two tiebreakers the winner of this criterion cannot be determined (a very rare event) the Concierge may either call for a new vote, after a period of discussion on the forums, or may determine the winner by a die roll, depending on the Concierge's sense of how much the players actually care about who wins. Any position, *excepting extinct positions who fail to participate in the end game voting*, may win this criterion and this criterion is the only opportunity for an extinct position to win the game. (*Lords Spiritual, 2 Resolution, p. 1475*)
- Unlike the Objective or Lords Temporal criterion, the game does not predefine elements or criteria for voting for any position in the Lords Spiritual. That is up to the position players to determine what they will vote for and why. (*Pure Post-game politics, 2 Resolution, p. 1477*)
- Ideally, the final determination of victory and honor should be completed within a week of the end of the game. The final determination will not be unduly delayed waiting for player responses, unless it becomes utterly impossible to proceed due to lack of player participation. In that case, the Concierge may eventually determine that there is no game winner and/or no honors, due to lack of interest, after a reasonable time has passed for player responses. (*Postgame Wrap-up, 2 Resolution, p. 1477*)

Player Honors (Pulitzers, Golden Globes, Ig-Nobels and Razzies):

- After the winner of the game is determined, the Concierge will solicit player votes for the three Player Honors in the postgame. (*Player Honors, 2 Resolution, p. 1478*)
 - The Player Honors process requires **individual players** to submit votes, it is not counted by position votes. Votes for Player Honors *should not be submitted* with the position's votes for the victory criterion above. And it follows that the Player Honors are for individual players and not for positions or teams. The player receiving the most votes for each of the three Player Honors wins the Honor and receives an Honor on the standings or scores page. If two or more players are tied for an Honor, the players share the Honor, and each receives the full Honor on the standings or scores page. It is the intent of the game designer and Concierge that this process not turn into a

bitter, protracted argument. If no one can agree on the winner of an Honor or no one votes, then no one will win the Honor.

- The Creator/Newsmaker Player Honor should go to the player who has shown the greatest or best creativity in the Interpretations during the game. Remember that the *player-generated* Interpretations are News Events, Writs, Patents, Meanings and Shared Meanings. Therefore, the player who wins this Honor might be the ‘propaganda master’ or the ‘patent king’ or the ‘writ lawyer’ of the game. As most of the Interpretations are kept secret during the game (at least by the Concierge), the overall impression of players as to the winner of this Honor relies heavily on News Events, and postgame show & tell time. (*Creator/Newsmaker, 2 Resolution, p. 1479*)
- The Player Honor for Leader/Commander should be awarded to the player who was the best overall leader in the game in the sense of being the best ‘team leader,’ ‘position politician,’ ‘military commander,’ and/or ‘position manager.’ A brilliant military victory might be the key, or building a good alliance might garner the votes. Perhaps foresight of exploration outside the main area, which leads to the survival of the position’s native population type against all odds might be considered the ultimate in leadership. Winning makes (almost) everyone happy, and it is likely (though not necessary) that the winner of this Player Honor (or any player honor) will be tied to the positions that won the game. (*Leader/Commander, 2 Resolution, p. 1479*)
- The Hero/Bad Guy Player Honor reflects mostly the best and most consistent role-playing effort of the game, or perhaps the ‘best actor’ award. This may be awarded both for individual role-playing and also for a player whose vision and leadership in the position-team helps to create a unique and consistent racial or species identity for the position’s Native Population Type. Or it might be awarded to the ‘best low-life’ of the game; as for every hero there must be a bad guy or evil empire. A large portion of this award then, will be related to communications and diplomacy, the player who wins this award might be considered the ‘master diplomat’ of the game. (*Hero/Bad Guy, 2 Resolution, p. 1479*)

And would the last ones out of this universe, please turn off the stars...

[fade to black]

Endnotes.

ⁱ Wait... I’m not quite finished yet! The extended Kardashev scale has allowed us finally, conceptually, to arrive at ‘god’ by a technological means – it is called the Type 5 Civilization. We have arrived at the idea that our entire universe might simply be a ‘Type 5 simulation’ (see videos on YouTube), and certainly, Robert Heinlein in *Job: A Comedy of Justice* (1982), was describing Yahweh, Loki, Lucifer and others in terms of a Type 5 Civilization wherein our entire universe is but a hologram of some sort (“Yahweh has claimed it, yes – he has pronounced Time Stop and torn it down.”). This is consistent with David Hume’s “stupid mechanic”... While this technological explanation of God is enticing, the extended Kardashev scale still comes up incurably short in one vital area: The first cause, prime mover question: Where did the Type 5 civilization come from? Who were they? Did they create themselves? Were they always there? Could it be that even the Type 5 Civilization does not know from whence they came or why they are there? Did they consent to be ‘here,’ are they able to choose to have never existed? If so, why do they exist? Do they have faith, do they have causality, is that even a concept? Are they part of someone else’s simulation, *ad infimum*? The Type 5 Kardashev civilization is not the answer to the endless regression of causes; they are but another step down a backward path. But that’s the best a pre-1st Era civilization who did not consent to being here can do for now.

ⁱⁱ I guess I cannot help but to comment. During the process of creating this document, I was looking more closely into David Hume’s *Dialogues on Natural Religion* (1776), I read parts where Philo was arguing, I read Spark Notes and other commentaries. Then it amusingly occurred to me how attacked and ridiculed worldviews progenerate and continue to reappear over time. Because, Intelligent Design reappeared in the mid-1980s into the early 1990s as the fashionable rational alternative to flat-out Creationism. But then in reading Hume, I discover that the argument from intelligent design (and its little cousin, Leibnitz’ ‘The best of all possible worlds’ – which is the ultimate extreme of intelligent design argument, see Pangloss in *Candide*) had been thoroughly mauled and thrashed by the preeminent philosopher of the English language in the mid-18th Century! Did it go away? No, and this explains how the experience of history has not completely erased prior worldviews, for example, that there are still racists, anti-Semites, and Neo-Nazis (and some of them get elected to government positions or are made top executives at big businesses); if one cannot erase by rational argument creationism and intelligent design, participants in GGDM should not assume a worldview ever ‘goes away’ during the game.

ⁱⁱⁱ Light takes five and a half hours to reach Pluto from the Sun, it takes eight minutes to reach the Earth. Either figure is mindboggling considering that light travels at 186,000 miles per second; that's about four equatorial orbits around the Earth per second. We really cannot even imagine that; this demonstrates the futility of human scale in the universe. How do we reconcile human scale with the scale of even our own solar system? Space opera glibly glosses over the problem because the story is out there, they need humans to be at distant planets and even more distant stars as the setting to the story. But if we are going anywhere, we need to reconcile, to become something that can *grok* those distances. And that's not even considering the relativistic time-dilation problem! My porch cats have no concept of the distance I travel each day to my workplace, my indoor cats even less so as their world is much more circumscribed. Nor do they have any idea where the cat food comes from or how their kitty houses are heated in the winter and why the water in their dish doesn't freeze over solid. Can anyone, in that light, be surprised at the mythic religion of our ancestors?