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"The Nile was always there. Long before Cairo, long before the tombs of kings... it was the reason for everything. It's a little hard to grasp how far this river's been flowing. This is the rain that fell on Abyssinia. These are the waters drained from central African lakes... that have flowed 4,000 miles to make Egypt green. The Nile has its memories. The story of Khartoum is a recent one... less than a century old. That's yesterday in this part of the world. But however far back you may go... all the Nile's recollections have several things in common. There's always God, for instance. Or, if you prefer, the gods.

It seems to have been quite impossible... to live beside this river... and not to have visions of eternity. And there's always mystery. You never quite know. You wind up with a few questions that no one can answer. One more thing. Why is it that everything was always so big... outsized, larger-than-life? Vanity? Perhaps. Or visions. Vanity was always mixed up with vision. And that's part of this story, too. But it's the Nile that remains the original fact. The Nile and, of course, the desert. Move up, up the Nile. Leave Egypt behind and the green land. Enter the Sudan. A million square miles of desert and scrub."

– Opening Narration to the film Khartoum (1966)

"We are like butterflies who flutter for a day and think it is forever."

– Carl Sagan, Cosmos

Scale Creep: One of the important intellectual struggles of the last three centuries has been against human spatial and time scale.[1] Based on human living experience, a century seems like a long time and a mile or kilometer a long way, especially to the mind of a child learning history.[2] The universe and just about everything outside of humanity, is immensely old and vast, murky creation myths and stories of the gods, celestial spheres and faraway heavens have been replaced now with mind-numbing numbers of distance in light years, but it's all still the same really.

- ✓ "Yu Huan (the author) observes: It is commonly believed that a fish living in a little stream does not know the size of the Qiang (Yangtze River) and the sea. The mayfly, for that matter, does not know of the changing of the four seasons. Why is this so? Because one lives in a small place, and the other's life is short." – from the Weilue 魏略 by Yu Huan 魚豢, Section 30, translated by John E. Hill, September 2004, from University of Washington website.

Rarely does television or movie science-fiction go beyond human time scale and spatial scale is distorted by FTL travel; Darwin's Origin of Species came as a shock, in part, because the scale of time required was much more than the commonly accepted age of the Earth – approximately 5,000 years since Creation (from the Masoretic Text) – as calculated by biblical scholars.

A century or two earlier, Europe had been somewhat troubled to learn that the Chinese had continuous historical records reaching back at least 6,000 years and the Chinese had no record of any worldwide biblical Deluge (the actual historical deluge was a Sumarian flood about 2900 B.C.).

- ✓ "For many the most disturbing immediate problem posed by the discovery of China was its impact on the historical veracity of the Bible. According to the calculations of

> the Jesuit scholar Martini, the Celestial Empire had been founded 660 years before the accepted date of the biblical deluge. However, Chinese annals contained no reference to the Flood. Could it therefore have been merely a local episode, important only to Jews and their immediate neighbors? Some scholars estimated that East Asian civilizations were flourishing even before the accepted date of Adam's Fall. Was it possible then that Adam was the ancestor of the Jews alone, and not of humanity at large? China past and present either was calling to question the universal character of Christianity, or else it was placing doubt on the accuracy of biblical chronology." – Raymond Birn, Crisis, Absolutism, Revolution: Europe 1648 to 1789 (2nd Ed., 1992), p. 169.

Most other ancient religions – Egyptians, Romans, Greeks, Chinese, Hindus – had placed the creation of the world much older (39,000 years was common) or even unknowable (Latin: *ádelon)*. Geologist had, more than a century earlier (Leclerc in 1749, claimed the Earth was 75,000 years old), suspected the Earth to be hundreds of thousands of years old.

- ✓ Information taken from Wikipedia articles, "Dating Creation" and "History of Geology," October 4, 2017.[3]

- Military Miniatures: 'Scale Creep' is a phenomenon in the military miniatures hobby. Miniatures are measured in millimeter scales, that is, 10mm, 25mm, 28mm miniatures, where the standard for the scale is supposed to be the normal human height. So, for example, in 28mm miniatures, human figures should stand 28mm in that scale, and everything else – monsters, cars, buildings, ranges on the tabletop, are set to that scale. But the problem has always been where to measure; originally, 28mm was from the base to the top of the hat, but not all hats are made equally, a Napoleonic shako is different than a revolutionary tri-corner. Because of hats and helmets, some began to measure from the base to the eyebrows, ignoring the head under the hat, helmet, thus warping the scale.

  Much of the industry has tossed scale casually out the window, creating discontinuity between models in their own systems and disconnecting miniatures scale from tabletop range scale (e.g., Axis & Allies War at Sea game). The hobby also discovered that larger miniatures allow better detailing and that larger miniatures demand better details, so there has been this long-running dispute in the industry between miniatures scale traditionalists and artists, but the overall trend has been a creep toward larger and larger miniatures.

  - ✓ In some very strained sense, ***both*** military miniatures and pinball/video game scale creep is not dissimilar to human scale creep of the last several centuries, as our understanding of details has expanded, so has our sense of scale, or our expanding sense of scale has demanded minute details.

- Pinball Phenomenon: Military miniatures are not alone in this, before scale creep crept into military miniatures, it was already in process in inflation of pinball machine scoring. And pinball machine scoring simply carried over into arcade video games.

  - ✓ "Pinball machine scores are just like personal finance in that it's just one person against the system trying to maximize a score. As a result, people are going to do whatever they can to get higher and higher scores. For finance, it's to feel more comfortable. For pinball, it is to make the people feel like their game has been a success. ...

> What on earth do those extra zeroes do? Getting a billion points doesn't mean much anymore if all of the other machines give you a billion points. Just like in the financial world, multiplying your income (and costs of living) by 10 doesn't make you any richer than your neighbors or better off." – Andrew (acgoldis.blogspot.com), "Inflation of pinball machine scores," April 25, 2007.

Production of RPs and costs in GGDM (the 'finances' of GGDM) are expressed in simple numbers, if you have 100 RPs in the Treasury to start the Regular Turn, you feel rich. To make the game seem more 'realistic' to some, several zeros could be appended to the end of RP production and cost in GGDM so that a ship that costs 24 RPs will cost 24 MRPs (Mega RPs, 24,000,000 RPs). I frequented arcades in the early 80s and sometime around 1990 or so, I became aware of the pinball scoring phenomenon; I specifically rejected the idea in early GGDM design. A RP in GGDM is like a koku or gold piece to a peasant farmer.

- ✓ "Some games are simply more generous with their scoring systems than others. Some games will give you 10 points for an action that would earn you 100 points in another. Zeros are particularly easy to append to scores, and many games (especially old ones) do exactly that: display extra trailing zeroes that are never counted internally. Yet in the end, the extra powers of 10 are meaningless and serve only to make one's performance look that much more impressive. ...

  One reason these inflated point counts happen is due to a handful of natural human biases. We like big numbers, yet are also somewhat bad at them, especially in comparison on the fly. 10 is more than 1. 10,000 is basically the same as 1,000 (as far as a ratio goes), but it seems like a lot more at first glance. Even when we start to break it down, we can trigger various human faults over how much we're getting and how much there is actually. It's very likely that early pinball designers inflated scores purely for the ability to state that you can earn more points than a competitor's and thus players of said machine were better despite, as this trope points out, it being an arbitrary distinction. Of course, once we start doing this sort of inflation, we also tend to move our internal definition of 'average'; a pinball machine that gave you scores in the 10s would, at first glance, look and feel much less impressive without some sort of context to justify it." – TVTropes.com article, "Pinball Scoring."

When I first heard of the phenomenon in the 1990s, it was called the Pinball Effect or Pinball Machine Effect, and referred specifically to inflation of pinball machine scoring. In 2019, however, on Google, 'Pinball Effect' now refers to a 2006 book of the same name by James Burke, which refers to the emergent nature of human knowledge and advancement, e.g., "The pinball effect is a metaphor of the seemingly random routes a pinball traces." *Id.* To which is then added a connection to human advancement, "Human knowledge will unadvertedly unleash unexpected consequences: new inventions or discoveries now possible because someone shared an idea." *Id.* Back to the subject:

- ✓ "Scoring is quite unique in pinball; the game is notorious for being generous with 'points,' a unit of measurement analogous to the haypenny, the microsecond, and the nanometer – they are all units of measurement that are too utterly small to be of any use whatsoever. Therefore, scoring in pinball is primarily expressed in 'kilopoints' and 'megapoints,' one thousand and one million points respectively, abbreviated 'K' and 'M.'

> For being sober enough to launch the ball correctly, you are typically awarded something on the order of one million (1M) points. You gain around two thousand (2K) points whenever the ball bonks into a bumper, even though it undoubtedly did so through no fault of your own. Falling in a sinkhole can award you anywhere from 100K to 10M points and doing so repetitively can earn you enough points so that, if each point were worth a nickel, you could purchase a major world power such as Japan or Russia or Microsoft. Some pinball tables award you, as a consolation prize, 50K for losing the ball via a drop lane as opposed to between your flippers. This is a nice gesture, but 50K, in a typical pinball game, is equivalent to one point in bowling, three points in bridge, or 'first date' in tennis. Basically it's like treating Michael Eisner to a dinner at Wendy's." – Samuel Stoddard, "Lights & Noises," rinkworks.com, 1995-1999.

Random reward is at the heart of pinball machine scoring. GGDM may contain some elements of 'random reward' in terms of exploration luck and Concierge Interventions, but is not primarily – and should never be – a mindless exercise in random reward.

"'What is off-putting about them,' one political veteran told me, 'is they do not grasp their essential irrelevance. They think they are special.'"

– Sarah Ellison, "Exiles on Pennsylvania Avenue: How Jared and Ivanka Were Repelled by Washington's Elite," Vanity Fair Magazine, August 27, 2017

Buzzing Lightyears: Does this remind you of the members of any species you spoke to today? I can imagine in the Galactic Salon aliens saying the same about humans.[4]

Call this GGDM setting 101 (see page number). 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.

- ✓ For example, the only measure of time in baseball is outs (and in the modern game, pitch counts). Each team has 27 outs. Minutes and hours don't matter in baseball, except to the fans, advertisers, broadcasters and anyone who hasn't eaten dinner yet, ate too many hot dogs, has stiff old knees, or needs a restroom break. Likewise in this game, the only time that matters is Regular Turns (and Combat Rounds).
- ✓ 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.

Likewise, there is no actual distance assigned to the physical distances between stars in Galactic Space.

4 The Streams of Time - Lightyears

- ✓ For example, the game imagines that the Starlog represents a small cluster of 'close' (if you are not walking...) stars among the hundreds of millions of stars in the galaxy. Alternatively participants could imagine that the Starlog instead represents the stars of an entire 'dark matter galaxy,' such as Dragonfly 44, where dark matter forms 99.9% of the mass of the galaxy with only a few (as in tens of thousands) scattered lighted stars burning distantly from each other. The playing area could also be located in a globular cluster (or dwarf galaxy) looking down on the galactic plane.

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.

- A Story Without Characters: 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.[5] 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 Birthright: 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.[6]

  - ✓ Instead, the position, the collective consciousness of a group of players,[7] acts – especially through Type 4 Fundamental Realities – as a vaguely immortal archetype character of their species in all the usual ways – by speech and action in the game.

  Although a game of GGDM will more likely resemble a big-screen space-opera movie than anything else, the entire lives of the characters in Star Trek might represent less than a Regular Turn; the first three Alien franchise movies might represent a 'short' turn of GGDM.

- A Story That Goes the Distance: 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.

  - ✓ 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.

  Distance is also a matter of human scale (*ut supra*) that we have struggled to overcome. This is no small matter; Napoleon had apparently little idea of the distances involved in his elaborate scheme to have Admiral Villeneuve elude the British ships in the Mediterranean, sail to the Caribbean, attack shipping there, and then hurry back to the English Channel ports to support the crossing of the French Army to invade England in 1805 (see Creaky Communications, 1 The Streams of Time, p. 78, *supra*). A century and a half later, Hitler, like Napoleon who also invaded Russia, seemed to have little vision or grasp of the distances inside Russia.[8]

- A Story in Unreal Time Scale: 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.

- ✓ "After the establishment of the Roman Republic, years began to be dated by consulships and control over intercalation was granted to the pontifices, who eventually abused their power by lengthening years controlled by their political allies and shortening the years in their rivals' terms of office. Having won his war with Pompey, Caesar used his position as Rome's chief pontiff to enact a calendar reform in 46 BC, coincidentally making the year of his third consulship last for 446 days.

  In order to avoid interfering with Rome's religious ceremonies, the reform added all its days towards the ends of months and did not adjust any nones or ides, even in months which came to have 31 days. The Julian calendar was supposed to have a single leap day on 24 February (a doubled VI Kal. Mart.) every fourth year but following Caesar's assassination the priests figured this using inclusive counting and mistakenly added the bissextile day every three years. In order to bring the calendar back to its proper place, Augustus was obliged to suspend intercalation for one or two decades. The revised calendar remaining slightly longer than the solar year, the date of Easter shifted far enough away from the vernal equinox that Pope Gregory XIII ordered its adjustment in the 16th century." – from Wikipedia article, "Roman calendar," April 17, 2019.
- ✓ "The Pontifices were in charge of the Roman calendar and determined when intercalary months needed to be added to synchronize the calendar to the seasons. Since the Pontifices were often politicians, and because a Roman magistrate's term of office corresponded with a calendar year, this power was prone to abuse: a Pontifex could lengthen a year in which he or one of his political allies was in office, or refuse to lengthen one in which his opponents were in power. This caused the calendar to become out of step with the seasons; for example, Caesar's crossing of the Rubicon in January 49 BCE actually took place in mid-autumn." – from Wikipedia article, "Pontifex maximus," April 17, 2019.

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

- ✓ Even science-fiction, in order to remain relevant to humans as literature, rarely violates human time scale in telling a story, or does so very carefully. I suspect that the preceding concept will be most difficult for the participants, who will naturally refer to time in the scales that they know; most games will more likely resemble Star Wars, Battlestar Galactica, Babylon 5, or Aliens than Dune or any of the various science fiction short stories that have truly epochal time scales, e.g., R.A. Lafferty, "Been a Long Long Time" (1969) or Isaac Asimov's Robots-Empire-Foundation continuum. Probably the Concierge should not enforce this issue too much.

"I would love to believe that when I die I will live again, that some thinking, feeling, remembering part of me will continue. But as much as I want to believe that, and despite the ancient and worldwide cultural traditions that assert an afterlife, I know of nothing to suggest that it is more than wishful thinking."

– Carl Sagan, Billions and Billions: Thoughts on Life and Death at the Brink of the Millennium (1997)

The Why Not of the Afterlife: The main question of the afterlife that must be answered for us to continue is, if there is no afterlife, what does it matter what I do on Earth, during my lifetime?

The answer to this form of the Why Not question (see 2 Disruption, p. 269, *infra*) will be discovered in the same way that a child discovers the answer to the question: If I am not going to get into trouble for doing something wrong (mom and dad aren't here), what does it matter if I do whatever I want to do? As we well know, there is a significant portion of the population who grow into adulthood without answering that question.

- ✓ Imagine that we found out that only two of the three were present in the afterlife? What would you choose if you could? Thought and feeling, but no memory? Thought and memory without feeling? Or would you spend eternity in memories and feeling with no thought? Ghost lore rarely credits their apparitions with all three, mostly ghost stories focus on memory and feeling in the afterlife; rarely are ghosts given thought.
- ✓ What if human technology evolved where we could create our own 'afterlife' to replace the imaginary one created by our ancestors? Science-fiction authors have toyed with the idea, usually without stating directly so as to not offend certain parts of the audience. For example, stories where someone's consciousness is preserved in a computer core, or transferred to a new younger body (e.g., Dr. Who's regeneration or the Cylons Resurrection Ship in Battlestar Galactica or the Doctor Who Missy story arc ending in "Death in Heaven" (2014)). But in most cases in science-fiction stories present it as an accidental human occurrence or as vastly superior alien technology; that is, rarely has it been explored as an intentional human-crafted technology and that sociopolitical considerations, for example, wealth disparity, economics, race, ethnicity or political connections may determine in who gets an 'afterlife' (e.g., the movie Elysium (2013) did not feature afterlife, but did feature huge wealth disparity in healthcare). Would this require a new class of priests or judges to determine who gets in? Would criminals be denied entry, or given entry just for the purpose of serving out multiple life sentences, before being extinguished?

The Mahjongg Metaphor – A tribute to Sandy the Storm Kitten: After thousands of years of talking about it, we don't know anything more about death than our ancient ancestors. Not really. We don't know if death is the end of the 'stream of time' for that entity, or even whether conception is the beginning of the 'stream of time' of a being.

Ultimately, it is not the playing off of pieces that we object to, as all pieces must be played off in order to solve the problem; rather, it is the order or manner in which the pieces are played off that matters to the players in ultimately solving the problem. So it is with death as well, we all die, everything dies, everything turns to dust, and we know it well, both abstractly and eventually personally; the question is, what is accomplished with each death, whether it is meaningful and revealing, or whether it is careless and senseless in the larger picture; meaningless, and whether there is, in fact, a larger puzzle at all and whether we are solving it.

"For me, it is far better to grasp the Universe as it really is than to persist in delusion, however satisfying and reassuring."

– Carl Sagan, The Demon Haunted World: Science as a Candle in the Dark [9]

Endnotes.

[1] Citation & Commentary: How much water do you think is required for 1 inch of rain over a square mile area? According to the U.S. Geological Survey, one inch of rain over a square mile area requires 17.38 million gallons of water! Seventy percent of the water evaporates quickly back into the air. The flooding problem in urban areas is caused when the other 30% runs into streams quickly because it is prevented by concrete, roads and buildings from being absorbed into the ground properly (http://water.usgs.gov/edu/earthrain.html).

- ✓ For a simple experience in scale, play computer FreeCell until you are very good at it, then play double deck FreeCell, then go back to playing regular FreeCell. You will discover they are different games.

[2] Commentary: One day when I was 10 or 11 years old, I asked my mother's BFF how old she was. She replied that she was 34 years old. I remember that my immediate verbal response was, "Wow, that's old!" as it was instantly obvious that she was 3 times my age. My mother's jaw hit the floor and I was quickly scolded out of the room. I also remember in my 6th grade year, when we were very cold, I actually thought and said out loud to my mother that a new Ice Age was beginning; I had not understood conceptually the time scales of the last Ice Age.

[3] Commentary: How old am I the little girl asked? Well, let's see, let's go back. Before the internet? Before Space Invaders? Before handheld electronic calculators, I had one of the original Texas Instruments and also one of the first electronic watches, with the red display, you had to push a tiny button on the side to see the time. Before humans ~~colonized~~ landed on the moon? So is this just an exercise in narcissistic curmudgeondry? No, it is a demonstration of both the limited human concept of time and what is considered modernity and the apparent acceleration of history in the 20th Century. Actually, the last two or three generations have been able to make such claims.

[4] Commentary: It's a funny thing that back in 1999, I was determined to keep this project to 100 pages. You are now on Page 101. Keep reading!

- ✓ If you took just a single edition of Dungeons & Dragons, let's say Advanced Dungeons & Dragons from the 1980s (with which I am most familiar) plus all of the material for just one setting (Dragonlance, Ravenloft, etc.) plus all of the Dragon Magazine articles on general AD&D play, GMing, map and dungeon building, world building, weapons and armor, variant classes, magic and deities, planes etc. and describing play in the chosen setting – how many pages would that be? I'd bet it would equal or exceed the 1,591 pages of GGDM. Not many players complained, though they joked about the weight of the AD&D books they hauled around. There is always the game rules and fantasy world setting, and there are layers of dissertations, explanations, angles, arguments, analysis, details, backstories, spin-offs. A decade or two hence, I will not be around to clarify, expound, comment on GGDM, or to defend it, thus I have sought to both educate the reader and provide tone, commentary, analysis and clarity to GGDM to my mortal limits.

[5] Commentary & Citation: On December 12, 2018 when Amazon Prime finally reached my cable box, I inaugurated it by watching the 2009 Star Trek movie, which believe it or not, I had never seen. I am notoriously uncritical of movies, as many of my other comments on movies reveal, I tend to accept the movie for what it is, let the escapism overtake me, unless I see something that is so idiotic or dumb that I disengage from the movie. After watching Star Trek 2009, I felt like I had watched a kids program mashed with one of those 1980s teen movies mashed with a modern big-screen action flick with special effects, explosions, and superficiality. A cocky group of teens led by a brash, self-assured teen hero/idol, who knows everything, tosses all of the rules, puts all of the educated, career adults in their place, zero to hero, and just happens to be lucky and right and destined for greatness. Everything is good because it all turned out right in the end, and the future is in good hands with the next generation who proved their superiority. Not to mention that it copped a bit from the beginning of Star Wars: The Phantom Menace.

I wasn't impressed; the story felt shallow and hurried. If some people claimed that the old Star Trek took itself too seriously (and that is obviously a term I don't even comprehend), Star Trek 2009 was the opposite. Notably, the film received good reviews – mostly for being a fast and loud space-opera franchise movie (e.g., Roger Ebert) – a comment on the long decline of Hollywood and Western audience literary intelligence and expectations (e.g., cf. Paths of Glory (1957), Billy Budd (1962) or even Blade Runner (1982) to Star Trek 2009, I cannot comprehend how IMDB has all four of these movies rated about the same, 8.4, 7.9, 8.2 and 8.0, respectively, why does an intelligent movie like Time Lapse (2014) get less favorable reviews than Star Trek 2009 across many sites? Excalibur (1981), rated 7.4 on IMDB is a far better (and more adult) movie than Star Trek 2009).

- ✓ I have seen many lower-budget and even crowd-funded movies recently that were far better movies than Star Trek 2009; e.g., I would recommend watching Anti Matter (2017), Magellan (2017), and 5th Passenger (2018). The sci-fi short, "FTL" on YouTube is far better than Star Trek 2009.
- ✓ Star Trek 2009 fits perfectly in every aspect Norman Spinrad's description of the wank fantasy, pulp science fiction formula "The Emperor of Everything" plot (Science Fiction in the Real World, 1990, pp. 150-151), except that it does it in the worse possible way with a big screen budget. Compare Star Trek 2009 to Frank Herbert's Dune (1965) or John Campbell's The Hero with a Thousand Faces (1949) which Spinrad notes as literary works worthy of acclaim that use the same "Emperor of Everything" formula (*Id.* p. 151). Although the players in GGDM have godlike control over nascent interstellar civilizations, GGDM is not an "Emperor of Everything" game – for one thing, there are no characters and no hot interstellar Princess to win – and should not be played like a pulp wank fantasy written by "armies of hacks" who "pile up mile-high mountains of adolescent power fantasies." *Id.*
    - See full Norman Spinrad quote, 3 Constructural Elements, p. 205, *infra*.

[6] Commentary: As an aside, when I read Birthright as a young teenager, I really didn't see the main point of the book as being a reverse of the alien-invasion sci-fi trope (which I learned from reading reviews later); rather, what I remembered most and took from the book, at the age of 14, was the 18,000 year history arc, ending in extinction of humanity. I believe this was about the same time I read Brian Aldiss' Galactic Empires anthologies.

[7] Citation & Commentary: In the story "Next Orbit" (story & art by Jean Bello), a master artist from the feelings section of the ship is called to the captain's cavern to witness the ship's approach to another star after a long journey. There, with the godlike presence of the captain, he witnesses with excitement and astonishment, other "planet ships" (i.e. bugs) flying around a lightbulb suspended from the ceiling. Epic Illustrated, Vol. 1, No. 6, June 1981.

[8] Commentary: Consider that if a similar war were fought in the United States, the frontline would run roughly from Portland, Oregon to Chicago, Illinois, a distance of about 3,400 km. If you think you have an idea of this distance, try walking across the state where you live and back again. According to one Quora forum response, the Eastern front was about 3,000 km long, though it is difficult to measure because it fluctuated much. The front stretched approximately from the Baltic Sea to the Caspian Sea, which according to Google, is about 1,200 miles.

- ✓ "The war on the Eastern Front, known to Russians as the 'Great Patriotic War,' was the scene of the largest military confrontation in history. Over the course of four years, more than 400 Red Army and German divisions clashed in a series of operations along a front that extended more than 1,000 miles." – Alan Taylor, "World War II: The Eastern Front," The Atlantic, September 18, 2011 (available free online).
- ✓ "According to Time magazine: 'By measure of manpower, duration, territorial reach and casualties, the Eastern Front was as much as four times the scale of the conflict on the Western Front that opened with the Normandy invasion.' Conversely, General George Marshall, the U.S. Army Chief of Staff, calculated that without the Eastern Front, the United States would have had to double the number of its soldiers on the Western Front." – from Wikipedia article, "Eastern Front," captured June 11, 2019.

[9] Commentary: I am nothing. I am but a transient bit who circles in the back current of our time. Eventually, I will die. The world won't rejoice even, because it doesn't matter and no one will notice. Death is the last refuge of the world in everything; tyrants die, our beloved dies, the wretched and criminals die, pets die, we all die, turn to dust. We are all part of some future generation's history, to be memorized and forgotten by bored school kids, our words to be recited by children until they become meaningless rote. All are equal in death. The world moves on, always with the hope and refuge in the thought that certain unpopular people will die eventually.

- ✓ If you think that there are not people who rejoice at the death of others and imagine that they are now in a place receiving whatever punishment is thought proper and fitting, raise your hand. Then go read some of the articles about the death of Fred Phelps (another transient bit circling in the backwater of some forgotten time).