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*“I have neither the time nor the inclination to differentiate between the incompetent and the merely unfortunate.”*

– General Curtis LeMay, commander of SAC, 1948-1957

*“The strikes are not intentionally indiscriminate but rather result from a lack of ... experience with dropping munitions and firing missiles,’ the specialist said, according to a [State] Department account of the meeting. ‘The lack of ... experience is compounded by the asymmetric situation on the ground where enemy militants are not wearing uniforms and are mixed with civilian populations,’ he said. ‘Weak intelligence likely further compounds the problem.’”*

– Warren Strobel and Jonathan Landay, Reuters News Service, October 10, 2016 <sup>1</sup>

**The Four M’s:** Every soldier comes to the battlefield armed with all of the tools of his civilization, material, mental, morale, and moral. Combat is the most intensive test of a civilization. Sometimes GGDM proceeds from axiomatic statements; however, consider the following:

- ✓ “Fliers bring the stress of their lives onto the plane. They are working too hard or not enough. They are worried about money, politics, health care, or their family. The outside world is a factor, experts say. It’s baggage they can’t check.” – John Ostrower, “The new age of airline rage: Why everyone onboard is on edge,” CNN Money, May 8, 2017.

Just as you come to GGDM armed with a lifetime education, cultural and political indoctrination, shared impressions and memories of your generation, opinions and morals imparted upon you by your parents and biases, prejudices and judgments. You come clothed in existential realities.

- ✓ “It would be an injustice, nevertheless, to accuse these middle-aged staff officers of mere callousness. Almost without exception they were men of rigid honor who had dedicated their lives to duty. Unfortunately, they were also narrow men, uneducated in economics, history and the social sciences, uneducated even in the broader lessons taught by war. Their schooling, received in such academies as St. Cyr, Sandhurst and West Point, had given them an excellent technical foundation for the command of professional armies. But neither in training nor tradition were the military monks of 1914 fitted for leadership in a modern armed nation.” – Lynn Montross, War Through the Ages (3<sup>rd</sup> Ed., 1960), p. 729.<sup>2</sup>

This is a really interesting comment by Mr. Montross in light of the Aspects of Sociology discussion in 2 Culture, p. 371, *supra*, because Clarence Marsh Case, whose book was published ten years after the beginning of WWI, indicates that even in the early 1920s, sociology (or even social studies) were not accepted as sciences. Considering that the leaders of WWI were educated in the late 19<sup>th</sup> Century, it is not surprising that colleges and military academies did not educate them in an area that was not considered science or scientific in any way. Economics was barely a science then, and by Mr. Case’s account, even the “mental sciences” (e.g., psychology, etc.) were not widely recognized as science proper at the time WWI leaders were cadets. Mr. Montross’ statement *also shows* that the view had changed significantly by the time of his writing in the post-WWII years.<sup>3</sup>

- ✓ Rhetorical Question: Was Imperial or NAZI Germany or Imperial Japan (or even the Confederate States of America) morally, politically, culturally or socially wrong *because they lost*? How about the British Empire? How about the Zulus? Romans? Christianity has tried to link the fall of the Romans to moral depravity.
- Dregs to War: Do not assume that those being sent to war are the ‘dregs of society’ or the criminal or most expendable parts. That may have been somewhat true in the past (e.g., the noted centuries of declining quality of the Roman Legions due to lower quality recruits, civil war, and shift in virtues) but has become less viable in modern war. The stakes are too high to send less than the best available.

The controversial modern case study on this issue are the decisions of Secretary of Defense Robert McNamara to lower military recruiting and acceptance standards, resulting in a wave of recruits and servicemen dubbed, “McNamara’s morons” (see e.g., Hamilton Gregory’s book McNamara’s Folly: The Use of Low-IQ Troops in the Vietnam War (2015)). Though I went to training in the mid-1980s, I met more than a few that made that impression; in artillery school, one Marine was given a large painted rock to carry around as his ID card, another was handed a shovel and told to go dig his own grave, which he spent a long cold November afternoon doing (what he did was so dumb, inattentive, and dangerous he was ejected from the firing line). And then I was sent to Okinawa...1986; duty station Okinawa Japan is a place that brings out the stupidity in bored and listless young men fresh from high school and boot camp (really, most first enlistment military are high school kids with guns).<sup>4</sup>

- ✓ “The nation that will insist on drawing a broad line of demarcation between the fighting man and the thinking man is liable to have its fighting done by fools and its thinking done by cowards.” – Lt. Gen. Sir William Francis Butler, Charles George Gordon (biography) (1889), p. 85.
- Nationalist Armies: We live in a Western milieu where the major militaries are *nationalist*, regularly trained, supplied and paid citizen volunteer (or conscripted) forces backed by stable governments and industries. There is simply no question in the mind of any U.S. service person that they will be paid, equipped, fed, housed, trained and cared for; it is a major recruiting attraction, an escape and a new chance for young people (it was my escape hatch).
- ✓ “Another woman, Agnes Sorel, had a leading part in bringing it about. First of the royal mistresses who have molded French history, she helped to urge upon Charles [VII of France, reigned 1422-1461] the necessity for a military establishment capable of keeping his own house in order. As a result the first standing army of the Middle Ages came into being – 9,000 permanent troops, paid and equipped by the king, which could be used to crush the king’s foes either within or without the realm. The raising of this small force, which set a precedent for other monarchs, is one of the landmarks of military history. The feudal age might perhaps have struck a compromise with gunpowder, but the impact of the standing army dealt a death blow.” – Lynn Montross, War Through the Ages (3<sup>rd</sup> Ed., 1960) p. 186.

The existence of a Combat College *may assume* these conditions exist in GGDM, but that is up to the participants, there is much space-opera fiction out there based on mercenaries. And national armies have not frequently been the case in other times; much of world history has been shaped and governed by the actions of unpaid, undisciplined, underequipped, ill-trained, and ill-supplied military forces. Or militia forces that became mercenary bands.

- ✓ See for example, the 1527 Sack of Rome by Habsburg mercenaries, discussed in Unintended Consequences, 2 Entropy, p. 236, *supra*.

Corruption can be rampant, officers dishonest and incompetent, the loyalty of the troops questionable or uncertain (Concierge Interventions!). Sometimes troops have fled the battle before first contact. In other incidents, e.g., Iraqi Army in 2014, non-existent soldiers were on the payroll, and vital equipment regularly disappeared to be sold on the black market.

[The Abh patrol ship Gosroth is being attacked in Planespace by ten smaller human Assault Ships]

21:13 **Captain:** *A textbook attack formation.*

21:32 **Bridge Officer:** *Captain, the enemy space-time clusters have completely surrounded us. The enemy is really practiced. Their advance is a textbook case. Captain: However, we are just as well trained. Me and my precious crew. Ok, here we go, the moment we've waited for. Commence battle!*

– from Crest of the Stars anime (1999), “Battle of the Gosroth” (Episode 5)

**Textbook Attack:** The Battle of the Gosroth is told from the perspective of the Abh crew on the Gosroth. The Gosroth destroyed seven attacking human ships in close range space-time bubble combat, before being overwhelmed. Both sides executed formations, weapons and tactics nearly perfectly in the battle, it was a matter of small percentages.

- ✓ Strategically, the human command sacrificed a squadron of ships to eliminate a patrol ship to prevent their activities from being discovered.

**Combat Formations:** 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.

- ✓ For example, the 18<sup>th</sup> Century Prussians drilled their troops to fire five volleys of musket per minute, the English developed the “thin red line” during the Napoleonic Wars, ancient Greek phalanxes used eight rows instead of the traditional sixteen rows, German U-Boats in WWII used “wolf pack” formations, during the Vietnam War, American pilots developed the “wild weasel” tactic to bait SAMs into firing and giving away their positions, the Romans developed the famous legion from tiny phalanxes, the Germans developed Blitzkrieg in the 1930s, Gustavus Adolphus had the Swedish Brigade Order, modern naval fleets use a 30 km circular formation, the Japanese became the early 20<sup>th</sup> Century experts at jungle warfare, the U.S. Marines became amphibious landing experts.
- ✓ “Also, events exposed a severe lack of procedures for emergency staunching of bleeding. The original Japanese doctrine explicitly forbade first aid to fellow soldiers without prior orders from an officer, and first-aid training was lacking. As result, a large proportion of Japanese dead was due to hemorrhaging from untreated wounds. Furthermore, up to 30% of the total casualties were due to dysentery.... To reduce

susceptibility to diseases, future Japanese divisions would commonly include specialized Epidemic Prevention and Water Purification Departments. Finally, the Japanese food rations were found to be unsatisfactory, both in packing and in nutritional value.” – from Wikipedia article, “Battle of Khalkhin Gol,” captured May 18, 2020.

And who can forget the Adama Maneuver in Battlestar Galactica? Or the Cochrane Deceleration Maneuver in Star Trek? Whether these are possible in GGDM generally depends entirely upon the participants of the game, and specifically on the properties of the Stardrives used and other factors such as colleges, doctrinal templates, and opportunities.

Doctrinal Templates are subject to approval and interpretive rulings by the Concierge.

- ✓ “Doctrinal Template” as used in GGDM is an extreme stretch of the term and is certainly not what battlefield intelligence means by that term. I simply grabbed it for a catchy game term; I know the difference.
- **Brain Trust:** 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).
  - ✓ 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.<sup>5</sup>
  - ✓ 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.
    - It is likely that in many, if not most, positions, the Combat College will be the oldest (or nearly so) College, from which Enlightenment (i.e. Faculties) will be subtracted first. See Nightlight, 2 Colleges, p. 477, *supra*. Doctrinal Templates and Institutes related to the Combat College will additionally strain the Faculties.
    - The Austrian army was not great in modern times – in fact, they were the punching bag for every would-be conqueror (Napoleon, Frederick the Great, Mustafa Pasha, Gustavus Adolphus) from the Thirty Years War onward. But somehow, the dynasty, the empire, always survived.
  - ✓ 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.
- **Intuition:** 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.
  - ✓ 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.

- ✓ “A British admiral once said, ‘It takes three years to build a ship, but 300 years to build a tradition.’” – Geoffrey Regan, The Guinness Book of Decisive Battles – The Battle of Tsushima 1905 (1992).

*“Quantum physics defies our physical intuition about how the world is supposed to work. In the quantum world, objects resist such classical banalities as ‘position’ and ‘speed,’ particles are waves and waves are particles, and the act of observing seems to change the system being observed. But what if we could develop a ‘quantum intuition’ that would make this all seem as natural as an apple falling from a tree?”*

*Physical intuition starts developing early, long before we ever encounter Newton’s laws on a blackboard. ‘Babies have a few skeletal principles that are built in to the brain and help them reason about and predict how objects should act and interact in the world,’ says Kristy vanMarle, an infant cognition researcher at the University of Missouri. They understand, for instance, that objects can’t pass through each other, a notion that’s at odds with a quantum effect called tunneling, which allows objects to slip through barriers that, in the classic world, would be impenetrable....*

*Babies also intuitively grasp that objects exist even when you’re not looking at them, a concept called ‘object permanence’ that goes against the classic Copenhagen interpretation of quantum mechanics, in which an object can’t be said to have any definite properties until the moment at which it is observed. Since Jean Piaget first pegged object permanence as a milestone in infant development, psychology researchers have found evidence that ever-younger babies have some sense of it; affirming object permanence seems to be the main theme of peek-a-boo.*

*These innate notions, plus ‘elaborations’ born from watching and interacting with the world, add up to a sort of ‘naïve physics’ that we all grasp without any formal physics training, says vanMarle. But what about building quantum intuition after that early mental groundwork has already been laid? Most students don’t begin studying quantum physics until college, when they already have both an intuitive and a formal, or mathematical, toolkit for classical physics.”*

– Kate Becker, “Is Quantum Intuition Possible?” NOVA, July 28, 2014 <sup>6</sup>

**You Already Knew It:** Human intuition is one of the most difficult phenomenon to explain; it can seem magical, like quantum tunneling.

This is at the core of televised professional team sports, the professional players (in addition to all of their other attributes) have a level of intuition for the game – their processing speed is such that the game moves in slow motion for them – that allows them to do the amazing, over and over again. *Like an emergence.* The success of a televised professional team sport is entirely linked to the opportunity in that sport for intuitive, emergent play by teams and especially, individual star players who experience the sport at a different frame rate. But intuition is not limited to televised sports, it is available in any endeavor in which learning, knowledge, experience, and understanding contribute to a favorable outcome.

- ✓ Intuition is strongly related to illustrativeness; it is the level at which we internally illustrate concepts. Thus, in discussing quantum intuition vs. classical intuition, Ms.

Becker is revisiting a concept in physics that was disparaged as unnecessary in the Bad-Nauheim Debate in 1920 (see 2 Temporal Technology, EN 9, p. 827, *infra*).

Empirical types will cringe at the comparison of magic and quantum anything. But what else is to be said when a particle (alpha particle radiation) that does not have the potential energy to escape the well, is suddenly on the other side of the boundary? Quantum tunneling.

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- ✓ “For radioactivity to be understood, the development of quantum mechanics was required. But it should be noted that the birth of quantum mechanics was not initiated by the study of radioactivity but by Max Planck’s study of radiation from a black body in 1900. It was an old field that was not the object of the same interest and publicity as the new spectacular discoveries. It was not until 1928, more than a quarter of a century later, that the type of radioactivity that is called alpha-decay obtained its theoretical explanation. It is an example of the tunnel effect in quantum mechanics.” – Nanny Fröman, “Marie and Pierre Curie and the discovery of polonium and radium,” nobelprize.org, captured October 31, 2018.

In this, Ms. Fröman appears to compare the – let us call it an *emergence* – of quantum mechanics from a different source, and the quarter century delay to quantum tunneling in human sense. A sort of ‘burrowing under’ of an event or discovery, unnoticed, unremarked, to appear later in a different guise or unexpected effect.

Something of this sort is reflected in the movie *Interstellar* (2014) when the computer says (objectively) it is impossible to match the spin rate of the spaceship and Cooper says, “No, it is necessary.” They then dock with the spinning ship indicating that in a moment, Cooper has transcended the impossible. Because the computer cannot be wrong. Right?

- ✓ “‘Our minds evolved to find food and to avoid being eaten,’ says [Daniel] Styer. ‘The fact that our minds ‘overevolved’ and allow us also to find beauty in sunsets and mountains, waterfalls and people; allow us to laugh and to love and to learn; allow us to explore unknown continents, and outer space, and (most bizarre of all) the atomic world, is a gift that we neither deserve nor (in many cases) appreciate. That we can make any progress at all in understanding quantum mechanics is surprising. We must not berate ourselves because our progress is imperfect. Instead, we must continue poking around, in joy and in wonder and sometimes in pain, exploring and building intuition concerning this strange and beautiful atomic world.’” – Daniel Styer (Oberlin College) as quoted by Kate Becker, “Is Quantum Intuition Possible?” NOVA, July 28, 2014.
- Improbables: Sometimes, I just tear through a Mahjongg game, somehow making all the right choices and guesses that I frequently cannot logically explain. Arguably, Mahjongg requires an improbable series of 72 consecutive correct guesses; however, if a player has the skill to remember which tile pairs have already been played off, the number of correct guesses is reduced greatly by knowing with certainty that the second tile pair is an elimination of that tile from the board.
  - ✓ ‘Guesses’ naturally imply that you are operating with imperfect information. That does not mean one is operating with no information, e.g., many partial tiles can be seen under the top tiles, but not all tiles are partially exposed. Further, like terrain,

there are places where one tile can ‘hold up’ the entire game and it would be impossible to have seen it initially.

The number of guesses is also reduced to zero at the point when there are no covered tiles remaining, but that doesn’t guarantee victory (there can be bad formations in a single layer). Sometimes, I don’t remember or am not sure if I had previously played a tile pair off, and in any case, that still leaves a lot of consecutive correct guesses required to resolve the board.

- ✓ In the middle of the third period of the Pittsburgh Penguins vs. the Anaheim Ducks on October 10, 2019, the puck was shot toward the Penguins goal and went down the inside of the back of goaltender Matt Murry’s jersey. You could watch a thousand NHL games and never see that again. But that it happened once it is no longer just theoretically possible. Just extremely improbable, like winning the Big Lottery.
- ✓ I have solved hundreds of Mahjongg games.

Mahjongg is also such that one can make an apparent mistake that turns out to be harmless (like in baseball) or is actually the correct choice, and one can never know until the end, when the board is resolved or not, whether any particular move is a fatal mistake. In these circumstances then, the human player, through experience, develops a general set of operational rules (which make success more probable) to assist in making choices of which tiles to play, for example, when presented with three tiles and needing to play off a pair of them, the strategic value of the tiles (vertically and horizontally) may determine which get played off. Sometimes, all three tiles are of equal weight and it’s just a guess as to which pair you take. In the end, it’s still a judgment call.

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**Earth President Susanna Luchenko:** *Well, Captain, you caused quite a stir. Half of EarthForce wants to give you a kiss on the cheek and the Medal of Honor. The other half wants you taken out and shot. As a politician you learn how to compromise. Which by all right means I should give you the Medal of Honor, then have you shot. I confess the idea had a certain appeal when I mentioned it to the Joint Chiefs two hours ago. [...] The bitch of it is that you probably did the right thing. But you did it in the wrong way, in the inconvenient way. Now you have to pay the penalty for that. I know it stinks, but that’s the way it is. – Babylon 5, “Rising Star” (1997)*

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**Interdisciplinary Approach:** From the mid-19<sup>th</sup> Century, after the passing of the generation that defeated Napoleon, into the early 20<sup>th</sup> Century, most of Europe – excepting Prussia who was able to exert their military will on all of their neighbors to form modern Germany – experienced a distinct decline in military leadership.<sup>7</sup>

Events such as the disastrous operations of the Crimean War, the Elphinstone Massacre on the road to Kabul, the war against the Mad Mullah in Sudan to the defeat at Isandlwana to the nightmare of World War I, demonstrate overreliance on technological superiority and descent into military mysticism, in place of military leadership, to support European imperialist ambitions until the whole mess imploded in August 1914.

- ✓ “Waterloo, by cutting short the demolition of European thrones by the sword, had no other effect than to cause the revolutionary work to be continued in another direction. The slashers have finished; it was the turn of the thinkers. The century that Waterloo



was intended to arrest has pursued its march. That sinister victory was vanquished by liberty.” – Victor Hugo, *Les Misérables* (1862).

The apparent reason or cause of this was a fear by civil governments of all types, of another situation such as had occurred with the French Revolution and Napoleon – thereafter, any young military officer who showed ability and ambition and any measure of popularity or political connections, would be subtly or openly pushed out or shunted off to the sidetrack; military ambition and ability were clearly considered threats to civil government. Top commanders were safe choices – members of the nobility or established aristocracy, often old and nearly senile, or young and vain with little military ability; etiquette and propriety, gentlemanly pursuits, and above all, blind loyalty to the crown, were preferred assets for top commanders.<sup>8</sup>

The major European war of the mid-19<sup>th</sup> Century, the Crimean War (1853-1856), is considered to be the bookend of the later disaster that was August 1914. The Crimean War is noted for very poor leadership and planning, disregard for the lives and welfare of troops, and is best remembered for the famed and misdirected Charge of the Light Brigade at Balaclava (1854) – as an epitome of poor military leadership, and for the nurse *par excellence*, Florence Nightingale, a pioneer founder of modern nursing, hospital sanitation and statistics, social reformer.<sup>9</sup>

Battles even became in the mid-19<sup>th</sup> Century, a civilian spectator event, an afternoon picnic, such as at the First Battle of Bull Run (or Manassas) or during the several battles and the Siege of Sevastopol during the Crimean War – a grotesque, macabre affront to our modern sensibilities.

Conversely, popular revolution plus military genius might result in another continental generational war, and there was always fear of another European uprising. But technological and logistical superiority without leadership is just as dangerous as that which the civilian governments feared from a robust military college.

- ✓ In 1785, Napoleon Bonaparte, a 15-year-old 2<sup>nd</sup> Lt. from the Paris Academy, applied and was considered for a position in the La Pérouse Expedition, but was rejected. He graduated in September 1785, 16 years old, and was posted to an artillery unit. The La Pérouse Expedition vanished in the Pacific sometime in March 1788 after leaving Botany Bay, Australia. On December 22, 1793, at the age of 24 years, Bonaparte was promoted to Brigadier General. The rest is history in our timeline. If one had the power and desire to change history, this would be a point where a little bribe to the correct person could alter the entire course of Western history.
  - This history is also notable in light of Emperor Napoleon’s later well-documented disdain for naval men. Was this disappointment the beginning?
- Payment of Generations: History is nothing without ramifications, that’s why it’s history; ramifications only stop if time itself halts. Fast forward to 1940:
  - ✓ “Like lost and bewildered children, a people broken in spirit placed their last faith in the paternal leadership of Marshal Henri Pétain, and the eighty-four year old hero of Verdun had only the solution of despair. Three generations of Frenchmen had trusted in vain to the military occultism of a General Staff which proved to be a sphinx without a secret. The failure of 1870 had been redeemed by the valor of armed citizens, while in 1914 enough allies had been at hand to turn defeat into victory. But there was no balm for the wounds of fallen France in 1940. Civilians could only share the blame with professional soldiers... Still, it would be unfair to heap too much blame

on poor Gamelin's inept leadership. Joffre and Foch must also be held to stern account. For the class of 1914 had consisted of 750,000 Frenchmen, while in 1939, only 450,000 answered the call to arms. The gaps in the ranks of the nation's defenders represented the 300,000 unborn sons of the 'human grapeshot' who had been sacrificed to the offensive doctrines of 1914 and 1915." – Lynn Montross, War Through the Ages (3<sup>rd</sup> Ed., 1960), pp. 810-811.

Military historian Barbara Tuchman has been accused of being a Francophile. Likewise, some may accuse Lynn Montross of being Francophobic, or at least, unkind and unsympathetic to the French in 1940. It is important to understand, and it is clear to me from a lifetime of reading Montross that rather than being overly critical of the French military in the early 20<sup>th</sup> Century, Montross was writing lessons for the *next war*, which in 1946 and 1960 seemed sure to happen despite the fact that he opened the 2<sup>nd</sup> and 3<sup>rd</sup> Editions with this dedication to his son, "in the hope that his world may learn from books instead of bombs."

- ✓ "The enthusiasm of the country for the Maréchal was tremendous. He was welcomed by people as diverse as Claudel, Gide, and Mauriac, and also by the vast mass of untutored Frenchmen who saw him as their saviour." – Richard Griffiths, Pétain (1970) as cited in Wikipedia article, "Philippe Pétain," captured March 5, 2019.
  - ✓ "On 11 November 1942, German forces invaded the unoccupied zone of Southern France in response to the Allies' Operation Torch landings in North Africa and Admiral François Darlan's agreement to support the Allies. Although the French government nominally remained in existence, civilian administration of almost all France being under it, Pétain became nothing more than a figurehead, as the Germans had negated the pretense of an 'independent' government at Vichy. Pétain however remained popular and engaged in a series of visits around France as late as 1944, when he arrived in Paris on 28 April in what Nazi propaganda newsreels described as a 'historic' moment for the city. Vast crowds cheered him in front of the Hôtel de Ville and in the streets." – from Wikipedia article, "Philippe Pétain," March 5, 2019.
- Wholistic History: This situation demonstrates relationship between parts; within the game, participants should not view the game in isolated parts, but rather as an interconnected dynamic continuity, a milieu, a macro-history.
- ✓ "Trevor [Dupuy] wrote, 'I was brought up by my father to be both a soldier and a military historian. To him the two were inseparable, and that is the way it has always been for me.'" – Susan Rich, biography page for Trevor N. Dupuy at The Dupuy Institute website (<http://www.dupuyinstitute.org/tndupuy.htm>).

This also represents the way I have come to view macro-history and macrosociology as being related and inseparable.<sup>10</sup>

- ✓ "Jan [van der Crabben] also had the idea that history was not linear (as it is taught in most school course books), but rather a very parallel type of story, where everything is interlinked." – from About page, Ancient History Encyclopedia, August 30, 2019.

Macro-history and to a lesser extent, macrosociology are like riding in the back of a military transport plane or helicopter which has a back ramp that is up: You cannot see the ground below or even what you just passed over by looking through the open gap at the top, but you can see in the distance what you passed over a while ago.

- **Universal Translation:** In the preceding discussion – in GGDM game terms – in the mid-19<sup>th</sup> Century, the military college was allowed to decline in favor of governmental stability, *status quo* maintenance, and reliance on superior logistics and technology (e.g., oceangoing ships, rail, industry) to hold together and expand colonial empires. The result was a series of embarrassing defeats of European regular military forces by technologically inferior (but well led and fanatical) native tribesmen, Prussian expansion, and a pointless and badly executed Continental War on the Crimean Peninsula. In each instance of colonial defeat, European powers were then required to amass huge forces to finally overcome native resistance (e.g., the Zulu War (1879), the Boer War (1899-1902)).

*“The years from 235 to 297 were given over to anarchy ruled by sword or dagger. Forty-six emperors or pretenders were slain or assassinated in strife that drew most of the legions away from their posts. With the border left undefended at vital points, the barbarians found an opportunity to add invasion to the horrors of civil war.”*

– Lynn Montross, War Through the Ages (3<sup>rd</sup> Ed., 1960), p. 87

**The Fog of Lützen:** Sixty-two years, forty-six emperors or pretenders slain. Step right up!

The separation of military command and political power – i.e. the sociopolitical installation of boundaries – had been in process for some time before the 20<sup>th</sup> Century and intensified after Napoleon’s final defeat in 1815, frankly, at some point, the ancient and medieval idea of monarchs personally commanding armies in battle passed from our culture (e.g., Richard I of England was a real knight with a reputation for bravery and combat prowess, rare even then for a king), which is what makes Independence Day’s (1996) final battle so outrageous. Legitimization of power by the Church, population growth, empiricism, and increasing complexity may have all contributed to this boundary intervention; trial by combat was no longer either justice or justification.

This is a favorite rallying cry of anti-war protestors, e.g., Black Sabbath’s “War Pigs” (1970): they (erroneously) assume that if political leaders had to ‘fight’ at the front, there would be no war, they assume that political leaders avoid military command and stay in the rear areas out of cowardice and ignorance – noting, however, that many political leaders of the highest levels have served in the military in their youth. Personal courage has been long separated from politics.

- ✓ During the War of the Sicilian Vespers (1282-1302), Charles I of Anjou (King of Naples) offered to settle the matter with Peter of Aragon in trial by personal combat, on June 1, 1283 in Bordeaux, with six knights on each side; Edward I of England refused to adjudicate the combat, which never happened (no one really seemed committed to the idea overall), the whole thing was probably a dilatory diplomatic ploy by Charles. Trial by personal combat over a city is a famous scene from the movie *El Cid* (1961).
- ✓ James IV of the House of Stuart, King of Scotland appears to be the last *English-isles* monarch killed in battle; he died fighting the English at the Battle of Flodden in 1513.
- ✓ Gustavus Adolphus of Sweden personally commanded his armies. He was killed at the Battle of Lutzen in 1632 while leading a cavalry charge, described by Montross as “The Fog of Lützen.” (War Through the Ages, p. 283). His successor was the highly educated, very unusual lady, Queen Christina, who abdicated in 1654, never married, and traveled throughout Europe, living much of the rest of her life in Rome.

- ✓ The Self-denying Ordinance of 1645, during the English Civil War, explicitly separated membership in Parliament from leadership of the Parliamentary Forces so that political disputes would not affect command of the army. It was critical to victory.
- ✓ George II was the last English monarch to personally command troops in battle, at the Battle of Dettingen in 1743 against the French in Bavaria. King George's horse panicked and he was rescued by an Ensign who was the son of Huguenot refugees who had fled France after the Edict of Fontainebleau (1685).
- ✓ Frederick the Great was personally commanding Prussian armies in the 1750s and possibly later. He wore a plain field uniform which was often stained with snuff, and lived a soldier's life with little regard for comfort. Because the Prussian state and army were so closely tied – some claim indistinguishable, political and military fortunes and considerations were similarly indistinguishable.
- ✓ In France, of course, Emperor Napoleon personally commanded French armies in battle until 1815 and Napoleon III infamously personally surrendered to the Prussians at Sedan in 1870 (though he didn't seem to be much in actual command). And that was his political end and the end of the Second Empire.
- ✓ Tsar Nicholas II personally assumed command of the Russian armies in September 1915: "This was a mistake, as the Tsar came to be personally associated with the continuing losses at the front. He was also away at the remote HQ at Mogilev, far from the direct governance of the empire, and when revolution broke out in Petrograd he was unable to halt it. In reality the move was largely symbolic, since all important military decisions were made by his chief-of-staff General Michael Alexeiev, and Nicholas did little more than review troops, inspect field hospitals, and preside over military luncheons. ...

Cut off from public opinion, Nicholas could not see that the dynasty was tottering. With Nicholas at the front, domestic issues and control of the capital were left with his wife Alexandra. However, Alexandra's relationship with Grigori Rasputin, and her German background, further discredited the dynasty's authority. ...

The Tsar's Cabinet begged Nicholas to return to the capital and offered to resign completely. The Tsar, 800 kilometres (500 mi) away, was misinformed by the Minister of the Interior, Alexander Protopopov, that the situation was under control, and he ordered that firm steps be taken against the demonstrators." – from Wikipedia article, "Nicholas II of Russia," captured April 30, 2019.

This encapsulates perfectly why personal military command has gradually separated from political power; military commanders can be promoted, blamed and dismissed, but if the political powerholder is in personal command of the armies, there is no one else to blame.

- ✓ Leopold I, Holy Roman Emperor, fled Vienna before the Ottoman Turks arrived in 1683. In the movie *The Day of the Siege* (2012), in a panic attack he states, "If Vienna falls, we can always reconquer it. But me? [whimpering] He will kill me and my two male sons. ... The dynasty will end." ("my two male sons?" – bad dialogue)
  - ✓ See also Lynn Montross' discussion of Moltke's reforms, 5 *Combat*, p.1008, *infra*.
- History or Space Opera?: However in science-fiction stories, at least earlier space-opera stories made to appeal to youth audiences, *the political leadership was often involved in combat and sometimes fittingly died*. Space-opera fiction, a parody of Earth history, has imagined

galactic empires forged by warrior kings and ‘barbarian’ invasions from the outside (echoed by the 2011 card game, Core Worlds). In Traveller RPG, an early period of the Third Imperium was marked by wars of dynastic succession in which a line of admirals, called the Flag Emperors, ascended the throne after defeating their rivals, then died shortly through assassination, misfortune, or in battle with the next challenger. This was clearly inspired by late Roman history, especially the Year of the Six Emperors (238 A.D., Crisis of the Third Century) and later Byzantine succession crisis – 12 Byzantine Emperors (13%) reigned for less than a year, 9 more for a year to 30 months, 23 Byzantine emperors died violently and only 6 of those were assassinated, source, <https://byzantium.gr/statrgrn.html>, April 30, 2019.

- ✓ Whether ‘natural experiments’ of *history or speculations of space-opera fiction* informs play of GGDM is up to the participants (both are featured copiously, alternately throughout, *current events* are history as soon as they are known, appear), but likely the participants will bring into the game the *leadership separation concept* of the current milieu. And again, the concept of individual leaders – political or military – in GGDM bumps up hard against the time scale of GGDM and the ‘no literary characters’ discussion in *A Story Without Characters*, 4 *The Streams of Time*, p. 102, *supra*.
  - “When I wrote the *Handmaid’s Tale*, *nothing went into it that had not happened in real life*, somewhere, at some time. The reason I made that rule is that I didn’t want anybody saying you certainly have an evil imagination, you made up all these bad things. I didn’t make them up.” – Margaret Atwood, Master Class video trailer (emphasis added).
- ✓ Most broad judgments by historical writers are valid points – as lessons drawn from historical facts – ‘natural experiments’: A fantasy setting could be constructed for each where the point would be just as validly drawn from the invented facts. Teachers (esp. law school professors), fiction writers do this regularly as a matter of course.

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*“Eurisko (Gr., I discover) is a discovery system written by Douglas Lenat in RLL-1, a representation language itself written in the Lisp programming language. A sequel to Automated Mathematician, it consists of heuristics, i.e. rules of thumb, including heuristics describing how to use and change its own heuristics. Lenat was frustrated by Automated Mathematician’s constraint to a single domain and so developed Eurisko; his frustration with the effort of encoding domain knowledge for Eurisko led to Lenat’s subsequent (and, as of 2019, continuing) development of Cyc. Lenat envisions ultimately coupling the Cyc knowledgebase with the Eurisko discovery engine.”*

– from Wikipedia article, “Eurisko,” captured August 31, 2019

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**Imperial Admiral Eurisko:** Eurisko was an AI program by Douglas B. Lenat that won the 1981 and 1982 Traveller RPG Trillion Credit Squadron Tournament. Similar processes are now used to predict the outcomes of professional sporting contests based on 10,000 simulated games; the difference is raw processing power, no human can or will sit and play through 10,000 simulations. It is rather amusing that Traveller players and designers were concerned or bothered about what Eurisko did: The high technology future is fun in fantasy, but is rather threatening face to face. Thus, the appeal of movies like Terminator, The Matrix and Wargames (1982).

- ✓ “Eurisko’s fleet was so obviously superior to those of its human opponents that most of them surrendered after the first few minutes of battle; one resigned without firing a

shot.... Eurisko was creating concepts on its own. It was distilling thousands of experiences into the judgmental, *almost intuitional*, knowledge that constitutes expertise – rules that can't always be proved logically, that can't guarantee a correct answer, but that are reliable guides to the way the world works, a means of cutting through complexity and chaos....

After weeks of experimentation, and some 10,000 two-to-thirty-minute battles, Eurisko came up with what would be the winning fleet. To the humans in the tournament, the program's solution to Traveller must have seemed bizarre. Most of the contestants squandered their trillion-credit budgets on fancy weaponry, designing agile fleets of about twenty lightly armored ships, each armed with one enormous gun and numerous beam weapons....

Eurisko, however, had judged that defense was more important than offense, that many cheap, invulnerable ships would outlast fleets consisting of a few high-priced, sophisticated vessels. There were ninety-six ships in Eurisko's fleet, most of which were slow and clumsy because of their heavy armor. Rather than arming them with a few big, expensive guns, Eurisko chose to use many small weapons. In any single exchange of gunfire, Eurisko would lose more ships than it destroyed, but it had plenty to spare....

Even if an enemy managed to sink all Eurisko's sitting ducks, the program had a secret weapon – a tiny, unarmed extremely agile vessel that was, Lenat wrote, 'literally unhittable by any reasonable enemy ship.' The usefulness of such a ship was discovered during a simulated battle in which a lifeboat remained ... round after round, even though the rest of the ships in the fleet had been destroyed. To counter opponents using the same strategy, Eurisko designed another ship equipped with sophisticated guidance computer and a giant accelerator weapon. Its only purpose was killing enemy lifeboats. After Eurisko prevailed so easily, the tournament's directors tried to ensure that the 1982 championship would be different." – George Johnson, "Eurisko, The Computer With A Mind Of Its Own" (1984), Alicia Patterson Foundation (emphasis added) (available free online, linked in Wikipedia article).

***Ready to close the circle?*** Eurisko is described above as having "the judgmental, almost intuitional, knowledge that constitutes expertise." A campaign against expertise – see Tom Nichols excerpt this section – is thus a campaign against "the judgmental, almost intuitional, knowledge that constitutes expertise" in humanity and in our current civilization.

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*"Your Majesty, so long as you have this present officer corps, you can do as you please.*

*But when this is no longer the case, it will be very different for you."*

– Otto von Bismarck to Emperor Wilhelm II

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#### Endnotes.

<sup>1</sup> Commentary: I have avoided in this quote mentioning the belligerent nation to which it refers as that is irrelevant and distracting to the purpose for which the quote is offered. Likewise, I have deliberately omitted citing the title of the article, as this is not an argument about what certain countries did or didn't do. You can look it up if you like.

<sup>2</sup> Commentary: I recall a criticism of leadership of the Union Army during the American Civil War which stated that West Point produced very fine military engineers, that pre-American Civil War cadet training at West Point focused heavily on engineering, but lacked in military history, rhetoric, and other education suitable for leading.

<sup>3</sup> Commentary: But my STEM oriented high school in the early 1980s still clung to the term ‘social studies’ and treated non-physical sciences as poor country cousins.

<sup>4</sup> Commentary: I couldn’t get through the first 10 minutes of the first episode of *Nobility* (2017). It was immediately obvious that it was Star Trekish at its worst; the character introduction process was hokey and clumsy, clichéd and uninteresting. Every movie and series now has to have idiosyncratic misfit main characters, no one in the future can be mature, normal, career competent. Misfit characters have become *droll nonsense* and their introduction, in the manner of *Nobility*, wastes screen time as opposed to normal, mature, competent characters doing their jobs.

- ✓ In the reviews I read afterward, everyone else seems to like the pilot episode even when they say pretty damning things in their reviews, for example, jeezzle wrote:
  - “Well here’s where it gets a little bit weird. The whole does not seem greater than the sum of its parts despite Aristotle’s best intentions here. Every character does a decent job acting. However, no one actually seems to get it right and it almost seems like no one really has any idea what they’re doing in this show.” (<https://steemit.com/life/@jeezzle/a-jeezzle-series-review-nobility>)

But in the end, he liked it, but no one else seems to be writing reviews after its debut in July 2017.

<sup>5</sup> Commentary & Citation: Deleenn is commanding a White Star fleet against a Drakh mothership and escorts; “skin dancing” is an artistic tactic developed by the Warrior Caste to hug the hull of enemy ships to avoid enemy fire:

- ✓ **Deleenn**: Lennier, have you ever seen the warrior caste training flights? **Lennier**: Yes. **Deleenn**: Have you ever seen them skin dancing? **Lennier**: I have. **Deleenn**: Can you do the same thing? **Lennier**: Not without approximately... five years of additional training. **Deleenn**: That would be no, then. **Lennier**: But I can program the parameters into the ship’s artificial intelligence matrix. **Deleenn**: And what do you do then? **Lennier**: Touch that button, and pray very, very fast. – Babylon 5, “Lines of Communication.”

<sup>6</sup> Citation: “Quantum field theory is notoriously complicated, built from mind-bendingly abstract mathematics. But could it be that the underlying rules that govern reality are really so far from human intuition or are physicists just showing off?” – Matt O’Dowd (City University of New York), “Quantum Theory’s Most Incredible Prediction,” PBS Space-Time Channel, August 15, 2018.

<sup>7</sup> Commentary: For those who are interested in military sciences, I recommend *reading about* Clausewitz’ Ten Principles of War. Clausewitz – a staff officer during the Napoleonic Wars – is one of those writers for whom it is better to initially read reliable secondary sources, such as Col. Harry Summer’s *On Strategy* (1981), because his *magnum opus*, *On War* (1832), is a tough slog (however, there are some educators who would argue against reading secondary sources first). For those interested in politics, diplomacy and early-modern European history, I recommend reading Machiavelli’s *The Prince* (1532). Find a good annotated English translation of the original work to read; *The Prince* is not a long book or difficult to follow, except that he makes constant references to small matters of his time. If you are interested in military history as well, you should have a copy of Dupuy & Dupuy’s *Encyclopedia of Military History* (2<sup>nd</sup> Revised Ed., 1986), *The West Point Military History Series: The Second World War* (50<sup>th</sup> Anniversary Commemorative Edition, 1989), and of course, Lynn Montross’ *War Through the Ages* (3<sup>rd</sup> Ed, 1960).

<sup>8</sup> Commentary & Citation: In science-fiction gaming:

- ✓ “Lucan had not evacuated or moved the research station, for he no longer had an officer corps that would bring controversial decisions to him. He had successfully purged the navy of this kind of honesty and courage by executing officers accused of ‘defeatism.’ What remained were officers who correctly divined what Lucan wanted to hear, and who kept one eye constantly over their shoulder and one hand on their necks.” – Dave Nilsen, “When Empires Fall II,” Challenge Magazine, Issue 69, February 1993.

<sup>9</sup> Commentary: This is not without controversy, there were others who may have been overshadowed by Ms. Nightingale’s fame, and as a famous figure, like all others, she becomes the lightning rod for whatever social issue or revisionist history dominates the day, with intellectuals constantly re-evaluating and poking at her legacy to make this or that point in support of their current agenda.

<sup>10</sup> Commentary: By extension, if I possessed a greater understanding, I might also include macroeconomics in a macro-triumvirate of human studies. I do not get the sense that this relationship is generally appreciated and perhaps that has been an impediment to the development of a general macro-understanding, with the exception of macroeconomics which is deemed to have desired and practical uses in the ‘real world.’