

THE GAME OF WAR. ADVANTAGES AND LIMITS OF CONFLICT SIMULATION

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Abstract: This paper aims at outlining the main advantages and, also, the main limits of conflict simulation (consim)/wargaming. From weiqi/go, chess and other similar games, through the von Reisswitz's "Kriegsspiel" to contemporary wargames, there is a rich history in attempting to capture the essence of human (armed) conflict(s), in other words, to create working models of different kinds of wars, so as to better understand the past, to shine a comprehensive light on the present, and to have a form of control over the future. There is a fundamental issue with establishing apodictically the criteria by which a simulation is a model of reality, which is, basically, in our opinion, the most important limitation in conflict simulation.

Keywords: conflict simulation, war, wargaming, philosophy of war, philosophy of history

Paraphrasing Chuck Palahniuk's *Fight Club*, "on a long enough timeline the rate of avoidance of war drops to zero". War seems inevitable. It certainly seemed that way to Sun Tzu, Vegetius, Clausewitz, to name but a few military thinkers and writers. The importance of war, based on its impact on the life of the state, the cost in human lives and resources, to name only few factors, as well as its relative inevitability made people seek patterns, principles and laws -or in want of a better blanket term, "models", founded on "theories" – that would allow some grasp over this destructive phenomenon. In this view, war games (or "wargames") strive to be these models, these theories (in the scientific sense) put to work in these models of particular conflicts, pertaining to particular conditions, or to conflicts of increasing generality, culminating to general frameworks general types of conflicts (maybe to the extent of conflicts, in general).

"Game-ifying" war is not far-fetched at all. Since the beginning of reflection upon war, the similarities between the two undertakings, game and war, have been evident. "Ever since words existed for fighting and playing, men have been wont to call war a game...Fighting, as a cultural function, always presupposes limiting rules, and it requires, to a certain extent anyway, the recognition of its play-quality"¹ From an ethological point of view, one could draw a parallel between the "games" the young in predatorial species play in order to train for the hunt (a form of conflict) and the games played by humans (young or not so young) in martial or martial influenced games and arts.

Clausewitz famously draws a comparison of war with a game, in his work, *On War*: "If we now take a look at the *subjective nature* of war, that is to say, at those conditions under which it is carried on, it will appear to us still more like a game. Primarily the element in which the operations of war are carried on is danger; but which of all the moral qualities is the first in danger? *Courage*. Now certainly courage is quite compatible with prudent calculation but still they are things of quite different kind, essentially different qualities of the mind; on the other hand, daring reliance on good fortune, boldness, rashness, are only expressions of courage, and all these propensities of the mind

¹ Johan Huizinga, *Homo ludens*, 1970, p. 110 apud Philip Sabin, *Simulating War*, Bloomsbury, 2014, p. xv-xvi.

look for the fortuitous (or accidental), because it is their element.”² Clausewitz further compares war with a game of chance: “We see therefore, how, from the commencement, the absolute, the mathematical as it is called, nowhere finds any sure basis in the calculations in the art of war; and that from the outset here is a play of possibilities, probabilities, good and bad luck, which spreads about with all the coarse and fine threads of its web, makes war of all branches of human activity the most like a gambling game.”³

Philip Sabin notes the long relationship between war and games: in Europe, the Ancient Greeks have a cult for athletics and “their endemic internecine wars”, Rome have a similar obsession with gladiatorial games, staging, in latter times, grandiose *naumachiae*, naval battles recreated in flooded arenas; in medieval times there are the *melées*, sometimes indistinguishable from “real” combat.⁴ As board games with military focus, in China, we find *Wei Hai/Wei Qi* (China), “the game of the pieces that encircle each other”, ancestor of *Go*; in India, we have *Chaturanga*, the ancestor of *chess*.⁵ These are not *stricto sensu* simulations or working models of war, but board games with military theme which, however, illustrate some key concepts in warfare: the difference of importance of different units, the importance of maneuver for encirclement, etc. all the while ignoring others: the importance of terrain for movement and combat, the importance of chance, the gradients of attrition, the indetermination caused by “fog of war” and “friction”, etc. This shows models of war are inextricable linked to certain theories of war. Henry Kissinger emphasizes the strong link between *wei qi* and Sun Tzu’s view of the perfect strategy in war being that which wins through maneuver alone, without bloodshed⁶. This is a thing which to Clausewitz is impossible, because, in his own words: „As the use of physical power to the utmost extent by no means excludes the co-operation of the intelligence, it follows that he who uses force unsparingly, without reference to the bloodshed involved, must obtain a superiority if his adversary uses less vigour in its application. The former then dictates the law to the latter, and both proceed to extremities to which the only limitations are those imposed by the amount of counteracting force on each side”.⁷

The first modern wargame used for practical military ends was Baron Georg Leopold von Reisswitz’s *Kriegsspiel* (“War Game”) first created in 1811. *Kriegsspiel* simulated military operations not using a grid lined board, but using a sand table with model of terrain, over which military units represented by wooden blocks were maneuvered. Von Reisswitz’s son, Georg Heinrich Rudolf Johan von Reisswitz, later developed the game further with his brother officers (introducing topographical maps and umpires, among other), and published the rules in 1824⁸. “Soon afterwards, General von Muffling (who had been Wellington’s Prussian liaison officer at Waterloo a decade earlier, and was now Chief of the General Staff) watched a demonstration. Although initially sceptical, the General famously exclaimed at the end, “This is not a game! This is training for war! I must recommend it to the whole army.”⁹

Through their shared characteristics war and games lead naturally to the fortuitous union for play and hypothesis testing (in strategic planning, operational and tactical warfare and scientific study of history) alike, which is the realm of wargaming. As Tim Cornell puts it - “(...) the various manifestations of ritualized war lie at different points on a continuum between the extremes of pure games and all-out war”¹⁰ Various points along this continuum are different stages of abstractization

²Carl von Clausewitz, *On War*, Wordsworth Editions Limited, 1997, p. 19.

³*Ibidem*, p. 19-20.

⁴ Cf. Philip Sabin, *Simulating War*, ed. cit., p. xv.

⁵*Ibidem*.

⁶ Henry Kissinger, *Despre China*, Ed. comunicare.ro, București, 2012, pp. 30-32.

⁷Carl von Clausewitz, *On War*, ed. cit., p. 6.

⁸ cf. Philips Sabin, *Simulating War*, ed. cit. p. xvii.

⁹*Ibidem*.

¹⁰ Tim Cornell and T.B. Allen, (eds.), *War and Games*, Boydell, Rochester, NY, 2002, p. 12 apud Sabin, *Simulating War*, ed. cit., p. xvi.

of the real life conflict. The historical scientific hypotheses testing is emphasized by wargame designer legend James Dunnigan: “A wargame is an attempt to get a jump on the future by obtaining a better understanding of the past”¹¹

Concepts appropriated from science enter the philosophy of war and *consim* (conflict simulation): “friction” and “centre of gravity” at Clausewitz, “nonlinearity” and “chaos theory” at Culham and Kagan.¹² Philip Sabin emphasizes: “although it might at first be that these notions of complexity and nonlinearity preclude any meaningful quantitative modeling of ancient battles, this is not in fact the case any more than the chaotic nature of individual weather systems precludes statistical generalizations about the climate in particular places and seasons. As Clausewitz insightfully recognized, certain kinds of games incorporate random elements that simply and quite effectively simulate the many unpredictable elements inherent in traumatic confrontations between thousands of individual combatants, without making the overall outcome a complete lottery independent of broader situational determinants such as numbers, morale and generalship of the opposing armies.”¹³ Moreover, as Sabin puts it: “Purpose-designed conflict simulations are particularly good at capturing this blend of chaos and predictability, with the results obtained in individual trials varying very significantly due to differences in luck and player decisions, but with the overall pattern across a number of trials corresponding more closely to the designer’s reasoned scholarly judgement of what factors most affected victory and defeat in the real engagement.”¹⁴

Wargames, or “military simulation games” lie at the intersection of military affairs, gaming and simulation. “They are based on the military capabilities of some past or present antagonists, and entail a degree of research to ascertain the key characteristics involved. They attempt to simulate aspects of a real or imaginary armed conflict involving such military forces, and to do so with at least some concern for accuracy or “realism”. Finally, they do this in the form of a game, which players can win or lose by making decisions which need not be the same as those of the actual commanders.”¹⁵

Wargames, thus, are working models of military conflicts, whether on a tactical, operational or strategic scale, which means that they are simulations in which parameters such as the decisions of commanders, the disposition of forces, luck etc. or other inputs can be changed so as to ascertain the change in output (battle/operation/campaign/war results). These things can be achieved without bloodshed, human losses, material destruction, etc., which is, again, a significant advantage over actually waging war. This, Philips Sabin cannot emphasize enough when he reiterates that wargames are –“means of simulating in a safe and controlled environment some of the dynamics of armed conflict”.¹⁶ This model is made of a series of sub-models: a model for the terrain (geomorphic or abstract map in board games, model terrain in miniature games or either type in computer wargames) or a lack thereof – the map can fully be abstracted, but this would add more cumbersomeness to the system; a model for movement, for morale, for combat and attrition (wargames could simulate battle results and attrition through casualties, step losses, cohesion hits, etc.), for morale, etc. The wargame as model represents a system synergistically integrating these (or similar) sub-models.

Two of the main criteria for evaluating wargames are the verisimilitude of the model they represent and the smooth interaction between its elements. But the verisimilitude of a model, its ability to reflect the context and inner workings of a conflict is the one who, potentially, raises the most philosophical questions. In order for it to be a *working* model, it need not be a strict and absolute simulation; that is, it should leave room for different outcomes than the historical one,

¹¹ James Dunnigan, *The Complete Wargames Handbook*, 1997, 2005, p. 13, (online), <http://professionalwargaming.co.uk/Complete-Wargames-Handbook-Dunnigan.pdf>, accessed 07.05.2017, 16.45.

¹² Cf. Philip Sabin, *Lost Battles. Reconstructing the Great Clashes of the Ancient World*, Hambledon Continuum, 2007, p. xvii.

¹³ Philip Sabin, *Lost Battles. Reconstructing the Great Clashes of the Ancient World*, Hambledon Continuum, 2007, p. xvii.

¹⁴ *Ibidem*, p. xvii-xviii.

¹⁵ Philip Sabin, *Simulating War*, ed. cit, p. 4.

¹⁶ *Ibidem*, p. xvii.

assuming it is a historical wargame. If it is not, as is Mark Herman's *Plan Orange. Pacific War 1932-1935*¹⁷, simulating a *what if?* situation in which the United States and the Japanese Empire would have waged war nine years before the time they actually did, there is a significant leeway in envisaging the possible outcomes, but not beyond some reasonable (yet rather hard to predict) boundaries. This is also true to the other end of historical wargaming: where does one draw a line for the liberties one could take from a strict and absolute simulation?

These limits are, in fact, the limits of the wargame's designer's philosophy of history and philosophy of war, the limits of that which is necessary and that which is contingent, of what can be done and what cannot. For example, some simulations of the US segment of the Vietnam War assume, *ab initio*, that the Vietnam War is unwinnable (e.g. David Kershaw's *Vietnam Solitaire*¹⁸), and many wargames of Vietnam prohibit the entrance of US regular units into Laos and Cambodia, which makes some sense on a tactical or operational level, but limits somehow the true exploration of the *what if* question related to the winnability of said war. This poses some problems because of the nonlinearity and paradoxical nature of (military) strategy. As Edward Luttwak puts it: "only in the conflictual realm of strategy would the choice (the more difficult, the worse, etc. n.n) arise at all, for it is only if combat is possible that a bad road can be good *precisely because it is bad* and may therefore be less strongly held or even left unguarded by the enemy"¹⁹.

Even though wargames forever lie in the realm of the possible, at the most - of the probable, and never in the realm of the necessary, they are useful tools in mapping the likelihood of victory or defeat, the scale of losses and destructions. Their role as perfect Cassandras is almost never auto-assumed, but, even without many iterations aided by statistical analysis, they can paint a satisfactory picture of the future (and, of course, of the past, and of the present). But all these hold only if those who use this tool are ready to accept outcomes which are contrary to (or flat out contradict) their own preconceptions regarding plans, decisions, orders of battle, dispositions, etc.

A famous example of bias in rejecting outcomes in a wargame is the case surrounding the planning of Japanese Operation MI (the naval battle around and invasion of the Midway Islands) in the Second World War. The string of successes in the first operational phase of the war for the Japanese from December 1941 to March 1942, coupled with the belief in the indefatigability and invincibility of the Japanese (warrior) spirit – *Nihon Seishin*, a spirit that would lead them to victory and reaching the position destined for the nation, which is *Sekai Dai Ichi* (first in the world), lead to a morbid overconfidence, which authors like Mark Healy, among others, named "victory disease"²⁰. As Healy puts it: "directly arising from this, and affecting the highest echelons of the Navy, including Yamamoto himself, was the *idée fixe* that the Japanese possessed the undoubted initiative in the forthcoming operation. In consequence, it was presumed, to the point that it became an article of faith, that the US Fleet would put to sea only subsequent to the invasion and occupation of Midway. The notion that their carriers might be at sea awaiting the Japanese Fleet, although recognised as a possibility was broached during the Midway war games held on the *Yamato* between 1-4 May to explore the coming battle, the consequences of such an eventuality were dismissed in a remarkably cavalier fashion."²¹ Yamamoto and his chief planners dismissed the idea that Chester W. Nimitz, the commander in chief of the Pacific Ocean Areas, would know of their plan to invade Midway and thus draw the US Pacific Fleet in a decisive battle (as per their doctrine of *Kantai Kessen*). But Nimitz did know of this, due to some exquisite intelligence work²², and was

¹⁷ Mark Herman, *Plan Orange. Pacific War 1932-1935*, RBM Studio, 2016.

¹⁸ David Kershaw, *Vietnam Solitaire*, DK Simulations, 2006 (reimplemented by Chris Hansen, David Kershaw, Steve Kling, *Vietnam Solitaire Special Edition*, White Dog Games, 2013).

¹⁹ Edward Luttwak, *Strategy: The Logic of War and Peace*, Harvard University Press, Cambridge, MA, 1987, pp. 4-5, apud Philip Sabin, *Simulating War*, ed. cit., p. xvi.

²⁰ Mark Healy, *Midway 1942. Turning-point in the Pacific*, Osprey Publishing, 2000, p. 14.

²¹ *Ibidem*.

²² See John Keegan, *Intelligence in War. The value-and limitations of what the military can learn about the enemy*, Vintage Books, 2004, pp. 184-220.

able to place his vital carrier task forces at the right place and at the right time. Not only this, but the Japanese Navy high command found issue with the idea that they could lose carriers during the execution of operation MI. As Healy emphasizes: “Although Rear Admiral Ugaki remonstrated over the matter, he nevertheless revealed his own inner certainty of victory when, later in the games, he arbitrarily overturned the decision of the umpire who had ruled that the carriers *Kaga* and *Akagi* were sunk, so that only the former was dispatched while the latter emerged from battle with only light damage. Furthermore, as the games led on to explore the post-Midway operations, *Kaga* was miraculously resurrected from its watery grave!”²³ In summary, the wargame played aboard the battleship *Yamato* between the 1st and the 4th of May, 1942 explored the possibility that the US Navy would intercept the Japanese forces before the actual invasion (which, in the end, actually happened), but this idea was dismissed, and led to the idea that (at least) the aircraft carriers *Akagi*, flagship of the 1st *Kido Butai* – “Strike Force/Mobile Force”, and *Kaga*, its sistership in the Japanese Carrier Division 1, would be lost (which, also, in the end actually happened, alongside the loss of the the *Hiryu* and the *Soryu*, the aircraft carriers of the Japanese Carrier Division 2), which was also dismissed. The self-indulgence bias and the bias fueled by *hybris* (and perhaps some skepticism regarding unsavory outcomes in wargames) led the Japanese Navy high command to disregard some ominous signs that, in the end, spelled disaster.

Another relevant example is the disregard of the outcomes of wargame SIGMA I-64, held between the 6th and the 9th of April, 1964 by the Joint Chiefs of Staff, U.S. Department of Defense, in regard of the decisions to be taken vis-à-vis the Vietnam War. Secretary of Defense Robert McNamara advised for a doctrine of “gradual pressure” on the North Vietnamese government, consisting of limited military pressure, built around a tit-for-tat response paradigm, which, in his view, would have prevented the escalation of conflict (which would have led the US on a dangerous path to nuclear war), but which would have convinced the North Vietnamese of the U.S. resoluteness to defend South Vietnam²⁴. The Joint Chiefs of Staff held these views to be wrong, and conducted the SIGMA I-64 wargame “to examine “what might be produced” if the Republic of Vietnam and the United States undertook a program of gradually increasing pressures against North Vietnam. Military officers were assigned political and military roles and “played” the United States, North Vietnam, and such third countries as China and the Soviet Union.”²⁵ The outcome of the game was, according to H.R. McMaster, “eerily prophetic”. As McMaster puts it: “in response to U.S. military action, North Vietnam and the Viet Cong raised the tempo of attacks in the South and conducted terrorist attacks on U.S. installations and personnel. The game’s final report concluded that <a small expenditure of iron bombs> led the United States to commit sizable forces and funds to defeat the North, while the war in the South continued with less attention and fewer resources. The paper warned that the U.S. public and Congress would not support a strategy based on graduated pressure. In fact, the officers who played the role of the North Vietnamese leaders in the game “banked on [a lack of] American resolve” to see their effort to fruition. The vast majority of the participants voiced grave doubts that air power would end North Vietnamese support for the Viet Cong.”²⁶ The fundamental flaws of the “graduated pressure”, which were exposed through the wargame were: the possibility (even the high probability) that the North Vietnamese would intensify ground operations in response to US escalation and the underestimation of the North Vietnamese resolve regarding the war²⁷. The solutions found by the participants to the wargame were two-fold: either withdrawal, or an initial overwhelming use of conventional forces that would weaken the resolve of the North Vietnamese and instill in them the idea that the US would

²³ Mark Healy, *Midway 1942. Turning-point in the Pacific*, Osprey Publishing, 2000, p. 14-15.

²⁴ Cf. H.R. McMaster, *Dereliction of Duty. Lyndon Johnson, Robert McNamara, the Joint Chiefs of Staff, and the Lies That Led to Vietnam*, Harper Collins e-books, Epub edition, 2010.

²⁵ H.R. McMaster, *op. cit.*, pp. 114-115.

²⁶ *Ibidem*, p. 115.

²⁷ *Ibidem*.

prosecute the war to the (victorious) end. “The test found that graduated pressure would lead to a protracted military commitment with little hope of success, as LeMay (Air Force Chief of Staff, n.n.) had originally predicted.”²⁸ The US President, Lyndon B. Johnson, did not see the results of the wargame and the war was prosecuted according to McNamara’s “graduated pressure”, which indeed led to a protracted, costly (both in human lives and in material losses) and in an ultimately political defeat for the United States and a military and political one for South Vietnam²⁹.

One of the latest (as of the writing of this paper) wargames to be used as a way of probing the future for strategic and geopolitical gains is the one realized by the Rand Corporation in between 2014 and 2015³⁰, which questioned the potential outcome of a Russian invasion (surprise attack) of the Baltic states (similar to the Russian invasion of Crimea in 2014). The games’ conclusions, according to Shlapak and Johnson are “unambiguous: As currently postured, NATO cannot successfully defend the territory of its most exposed members. Across multiple games using a wide range of expert participants in and out of uniform playing both sides, the longest it has taken Russian forces to reach the outskirts of the Estonian and/or Latvian capitals of Tallinn and Riga, respectively, is 60 hours. Such a rapid defeat would leave NATO with a limited number of options, all bad: a bloody counteroffensive, fraught with escalatory risk, to liberate the Baltics; to escalate itself, as it threatened to do to avert defeat during the Cold War; or to concede at least temporary defeat, with uncertain but predictably disastrous consequences for the Alliance and, not incidentally, the people of the Baltics.”³¹

Such a *fait accompli* from the Russian side could lead even to nuclear war between national agents, a threat thought gone after the end of Cold War. The wargame showed the potential to deter or, in the worst case, to delay the quick fall of the Baltic states by positioning at least three brand new Armored Brigade Combat Teams in the area, which is the main policy advice of the paper which summarizes the outcome of said wargame³².

Wargames, when adeptly and realistically crafted, are useful teaching tools for the teacher of history, and good experimental instruments for the political or military leader, for historian, for the philosopher who delves in history and war. Wargames, however little should they abstract from war itself, will never be a substitute for war, because they are (mainly) intellectual constructs, and war is never merely intellectual, it is first and foremost a clash of wills, a whirl of irrational forces and energies which seek an outlet and a target. Even if will and forces can, themselves, be abstracted in wargames, their interplay must wear out on the battlefield. Wargames abstract death and destruction, the loss of blood, lives and property, anguish, terror and despair, which is both their strength and their weakness. Strength, because it’s safer, calmer and more rational. Weakness, because it can make leaders who use them oblivious of the same death and destruction, of the loss of blood, lives and property, of the anguish, terror and despair, making real war desirable. Beyond these risks, wargames are mere limited tools for study and play, but which could avoid *some* wars or make others less costly.

BIBLIOGRAPHY

Clausewitz, Carl von, *On War*, Wordsworth Editions Limited, 1997.

²⁸ *Ibidem*.

²⁹ *Ibidem*.

³⁰ See David A. Shlapak and Michael W. Johnson, *Reinforcing Deterrence on NATO’s Eastern Flank. Wargaming the Defense of the Baltics*, (online) https://www.rand.org/content/dam/rand/pubs/research_reports/RR1200/RR1253/RAND_RR1253.pdf, latest access 08.05.2017, 12.23.

³¹ David A. Shlapak and Michael W. Johnson, op. cit., p. 1.

³² *Ibidem*, p. 11.

**Iulian BOLDEA, Cornel Sigmirean (Editors), *DEBATING GLOBALIZATION. Identity, Nation and Dialogue*
Section: Social Sciences**

- Dunnigan, James, *The Complete Wargames Handbook*, 1997, 2005, (online),
<http://professionalwargaming.co.uk/Complete-Wargames-Handbook-Dunnigan.pdf>.
- Healy, Mark, *Midway 1942. Turning-point in the Pacific*, Osprey Publishing Ltd., 2000 (reprint).
- Herman, Mark, *Plan Orange. Pacific War 1932-1935*, RBM Studio, 2016
- Keegan, John, *Intelligence in War. The value-and limitations of what the military can learn about the enemy*,
Vintage Books, 2004.
- Kershaw, David, *Vietnam Solitaire*, DK Simulations, 2006 (reimplemented by Chris Hansen, David
Kershaw, Steve Kling, *Vietnam Solitaire Special Edition*, White Dog Games, 2013).
- Kissinger, Henry, *Despre China*, Ed. comunicare.ro, București, 2012.
- McMaster, H.R., *Dereliction of Duty. Lyndon Johnson, Robert McNamara, the Joint Chiefs of Staff, and the
Lies That Led to Vietnam*, Harper Collins e-books, Epub edition, 2010.
- Sabin, Philip, *Lost Battles. Reconstructing the Great Clashes of the Ancient World*, Hambledon Continuum,
2007.
- Sabin, Philip, *Simulating War*, Bloomsbury, 2014.
- Shlapak, David A. and Johnson, Michael W., *Reinforcing Deterrence on NATO's Eastern Flank.
Wargaming the Defense of the Baltics*, (online)
https://www.rand.org/content/dam/rand/pubs/research_reports/RR1200/RR1253/RAND_RR1253.pdf.
- Stille, Mark, *Midway 1942. Turning Point in the Pacific*, Osprey Publishing Ltd., 2010.