

Computer Games as the Representation of Military Information Operations—A Philosophical Description of Cyborgizing of Propaganda Warfare

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Abstract The history of combat is primarily the history of radically changing fields of perception. In other words, war consists not so much of scoring territorial, economic or other material victories but of appropriating the immateriality of perceptual field. The function of the eye has become the function of the weapons[1]. To understand information age warfare we have to understand the concept of representation as a part of our process of violence. The idea of information warfare or an information operation is based on the process where the physical target is no longer destroyed with the kinetic systems, but the process where the non-kinetic systems, like information, scan the symbols-semiotics networks. Today, particularly the advanced mobile technology, the Internet and the entertainment industry immensely exploit the experiences from different wars and conflicts for example as ideas of computer games. In return the military industrial complex represents its own language for example in the concept of information operations with the help of applications particularly rising from the entertainment industry[2].

Keywords Computer Games, Decision Making, Information Operations, Propaganda, Representation

1. Introduction

According to Sun Tzu the acme of the *Art of War* is a victory without fighting. Chess can be considered as a game connected to the art or war, which follows a clear rational pattern, but the endless number of options makes it chaotic, creative, sudden and even tragic. In his classic piece the *Iliad* Homer describes, through the warriors Hector and Achilles, the two central roles of warfare: warfare controlled by duty and warfare controlled by emotion. This duality can be seen throughout the history of the western art of war, sometimes emphasizing the rational and normative nature of warfare (Hector) and sometimes the intuitive, subconscious and emotional nature of warfare (Achilles). As the science of a new age advanced Jomini developed geometric and mathematical models for warfare, whereas Clausewitz saw that war cannot be controlled rationally and it is always affected by chance or friction. Today, we can find this evolution of warfare, for example, in computer games[3].

War themed computer games also have the characteristics of real warfare planning[4]. In the games you can fight almost in a way that feels physically real, advancing block-by-block and by firing at targets, enemies or objects,

you can change weapons and ammunition according to the power you need. On the other hand, in the games you can also plan and simulate operations as in real military staffs. In the games you can lead and give tasks, switch operating environments and conditions. This is also done in real military operations[5]. The games also act as a recruiting channel as the young people have a natural command of gaming and the world of play. Game simulators placed in shopping malls give a realistic image of for example Afghanistan and under the guise of entertainment they get the young people interested in the military as an employer. In addition, the movie industry is using crime and war more and more as a frame of reference for the actual story[6].

War shapes society and society shapes the suppositions related to war[7]. War is rewriting its position as a part of western society, economy, politics and industry. The media, advertising and the Internet enable real-time data transfer where the interfaces of different actors (political, social, economic, military) blend into a one single information flow. The chance is born, that the society becomes permeated with security so that its actions can no longer be intervened in. Also the blending of weapons systems to become more and more like the regular IT systems, especially in the sphere of information warfare, makes the definitions of warfare, weapon and soldier to be relative. Clear norms related to violence drag behind the actual cases. A typical example of this is the information battle between Wikileaks and the Pentagon. The facts are missing and we depend on impressions[8].

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In this article I try to describe the postmodern complex networks of different kinds of actors of making war and security. The main argument is that all actors from a single poor young dropout to a high political level state member are part of the complex 'military-industrial-advertising systems'. The real combat for example in Afghanistan is connected to the high-technology industry and advertising market. For example, warfare of the information age is represented by computer games. There is also a possibility that the news of war and conflict are not real anymore, but a complex level represented and framed to a level that is familiar to our senses[9].

2. The Propaganda of War - Perception and its Representation

Charles S. Peirce is one of the creators of the concept of semiotics and representation. According to his theory, the moment before a person becomes conscious is preceded by a numerous series of perceptions of which we are unaware. In other words, according to him, we are never temporally directly simultaneously in contact with the object. The object is thus a hypothetical boundary, which can be approached but never touched as such. This assumption is based on the idea of the continuity of time[10]. Representation means two different kinds of phenomenon. The first one is to try returning the phenomena into this moment. The second one is to stand for the absent phenomena. The representation of the world is not real, because there is always something beyond the frame of representation. The increasing amount of information we receive by sight makes it impossible for us to filter all of it. This means that "the more you watch, the less you know"[11].

Thus, we are always looking at the world through some frame or other. When a journalist reports the news from Afghanistan or a producer of video games designs a war game, the attempt to say something about the actual activities is always limited and subjective. The point of view of the media is also always subjective. And even the best video game can do no more than provide a representation of actual warfare. Today, the reasons for war are justified in the narrative struggle between different viewpoints. The credibility of different stories is weighed through the media. With their opinions, people vote on whose story is the most credible. We can no longer speak of the truth. In relation to war there is no such thing, since the producer or author of a documentary or a piece of news is connected through different networks to the makers of war themselves. The salaries of those who photograph war are paid through war and its making. Correspondingly, video games need real soldiers who have experienced combat in order for them to be developed in a more authentic direction[12].

Propaganda is a social phenomenon rather than something that is made by certain people for certain purposes. Propaganda exists and thrives. Propaganda aims not only to change people's opinions, but tries to lead men into action.

Ellul sees propaganda in two forms: agitation propaganda and integration propaganda. Integration propaganda is an organic part of a technological society. Modern propaganda cannot also work without knowledge of technological science. Not only is propaganda itself a technique, it is also an indispensable condition for the development of technical progress and the establishment of a technical civilization. The propagandist is anyone who communicates his ideas with the intent of influencing his listener[13].

The so called "diffused audience"[14] means that everyone becomes an audience all the time and there are no possibilities to analyse beforehand who will be the target audience in the specific case. The decision-making is done through automated surveillance of both online and offline behaviour. These surveillance technologies "screen out" the normal but bring into focus the unusual behaviour[15]. Diffused war has the name of a new paradigm of war in which the mediatisation of war makes it possible to diffuse causal relations between action and effect more, creating a greater uncertainty for policymakers in the conduct of war[16]. Today both the sphere of policy and the sphere of business operate under the laws of marketing. Politicians cannot gain support without political advertising promoting them and their policies as trademarks. In the case of war, propaganda campaigns are crucial in order to gain public support[17].

The link between classical propaganda as the specific technological tool and today's concepts like strategic communications is not so far-fetched. Everything must also be utilized. A good propagandist must use not only all of the instruments, but also different forms of propaganda. The ground must be sociologically prepared before one can proceed to direct prompting. Propaganda tends to make the individual live in a separate world; he must not have outside points of reference. Nowadays, the Internet is based on the same idea, but upside down: there is no possibility to exist without communication. There are no lines between private and public life.

According to "NATO Military Concept for Strategic Communication"[18], executing a Strategic Communications process may require cultural or organisational change as it requires a network-centric approach and speed of decision making that may be at odds with more traditional, hierarchical military structures. It involves empowering the release of information at levels far below that of most current structures and an acceptance of greater risk in that information released quickly may not always be perfect and will require follow-up and refinement. It also requires the development of a strategic narrative that will shape NATO's actions and the manner in which those actions are communicated.

NATO policy defines NATO Strategic Communications as follows:

"The coordinated and appropriate use of NATO communications activities and capabilities—Public Diplomacy, Public Affairs (PA), Military Public Affairs, Information

Operations (Info Ops) and Psychological Operations (PsyOps), as appropriate – in support of Alliance policies, operations and activities, and in order to advance NATO’s aims”[19].

However, from a military perspective, the Strategic Communications process not only seeks to coordinate the work of the traditional communication functions of Public Diplomacy, PA, Info Ops and PsyOps, with each other, but also with the critical operational non-kinetic and kinetic elements which often convey far more meaning and have an immeasurably greater impact on people’s perceptions than words or imagery alone ever could.

3. Information and Decision Making in Three Different Worlds

In this chapter I describe the change in war through three different worlds as follows:(table1)

The model of three possible worlds does not mean it is a list from best to worst or an evolutionary process. The rational world is affecting our time just like the complex and the postmodern ones. For example, military traditions, traditions and routines are still formal by nature and even fanatically rational, sometimes almost to a religious extent. After all, the rational paradigm strives to control and rule the world by being meticulous and by eliminating errors. Asking too many questions is avoided and the chosen avenues to act are made more effective by planning. In western countries public administration is still a rational bureaucracy directed and prescribed by legal means. Meanwhile, networking and information technology are permeating the future operations

of organisations, through different innovation models, security and safety oriented thinking and strategic leadership thinking models. The idea of technology and systems thinking is that the world cannot be controlled from the outside by means of rational planning, but the control is exercised through practices that are formed by interconnected technology networks. At the same time with the rational and complex world, in the different flashpoints of the world there is a very large asymmetry between the crisis management machine of the West, the local inhabitants and the terrorists. The combination is conflicting in a postmodernway[20].

Information context has a much larger effect on our operation than facts do. A good example of this is a classic decision making experiment. The person arranging the experiment is auctioning a 100 dollar bill to a group of approximately 30 people. The biggest offer wins the bill, but the one with the second highest bid has to pay the amount of their own bid without getting anything in return. At first there are plenty of bids because everyone thinks that it is good to bid 20 or 30 dollars for a 100 dollar bill and drop out of the bidding in time. When the bidding nears the 100dollar bids, usually only two bidders remain and an authority competition develops between them. When the bids pass 100 dollars, the two competitors may continue high risk taking in order to avoid the dead end of the second best bid. The end result usually is that a 100 bill will cost the winner 200 dollars (of course the end net loss is 100 dollars) and the one with the second highest bid has to pay 195 dollars without getting anything in return.

Table 1. The way of war in three different worlds

	Rational world	Complex world	Postmodern world
Weapon(s)	- machine gun	-nuclear weapon	- Internet
The nature of knowledge	- rational knowledge	- information flow	- narrative stories
Society	- agrarian society	- industrial society	- information society
The name of wars	- World War I and II, Holocaust	- Blitzkrieg 1939-1941, Pearl Harbour 1941, WTC 2001	- civil wars, French Revolution, Communist Revolution, Vietnam, War Against Terror
Slogans	<i>We have to decide</i>	<i>We have to exploit every channel to communicate</i>	<i>Nothing is anything, everything is all</i>
The model of competition	- state versus state	- technology versus technology	- public actor versus private actor, human versus robot
The structure of organization	- linearity, bureaucracy, rules	- complexity, system	- mycelium, conflict
The key actors	- muscles, brains	- communications	- consume
The key thinking model	- first you plan, then you execute	- planing and execution parallel	- planing = execution
The authors	Max Weber, Frederick Taylor, “franchising”, Clausewitz, Jomini	Herbert Simon, James G. March, Peter Drucker “corporate governance”, “bounded rationality”, John Boyd, John Warden	Critical Management Studies CMS, “The Practice Turn”, Michel Foucault, Paul Virilio, SlavojZizek

This example demonstrates the social and contextual nature of our decision making. Usually people with a high competition drive take enormous risks while trying to maximize the winnings, no matter what the cost. In politics and warfare there are countless examples of this, that decision making is rarely a rational event, but is rather based on social and emotional relationships, expectations of our roles and the mental trap of risk taking[21].

However, war cannot change its nature. War is still organised violence. The question is if the new wave of warfare causes evolution or revolution. The change has happened in the character of wars and the manner in which wars were conducted. Like the first and second Iraq wars can show us, war is not about eliminating targets and dominating the enemy's military power. It is purposeful violence to achieve a political goal. Warfare may be becoming revolutionized, not the military affairs[22]. Still, most of the current military thinking on information operations (Info Ops) and strategic communications is based on the assumption that it is possible to take command and control (C2) of the battle space[23]. Info Ops is not about what you say but what you do. In a military organisation, its physical superiority and technological advantage work against it, because all through western military history, the key issue for victory has been "de-escalation". The state military must seek in every possible way to de-escalate, to resolve the situation without violence or with a minimum amount of violence[24]. The key idea of the new model of the science of war will be the so called "Joint Distributed Operations".

4. Computer Games as a Way of Communication in Three Different Worlds

This chapter introduces the computer game exercise held for the cadets in the Bachelor's degree programme in the Finnish National Defence University in the autumn of 2009.

During the course Introduction to Leadership, in 2009, three computer games were introduced, each representing their own genre. Modern games are increasingly combinations of different genres. During the course the three games of different genres tried to demonstrate the development of interaction between the game and the player.

The enormous technological development and the increased turnover mean the arcades and video game programming companies have been able to grow and develop new genres and platforms. Usually games are categorized based on their mechanics. This means that two games of the same genre may differ from each other in terms of narratives and visual properties. Many games exploit several game mechanics; for example 'party games', developed to be used by several people using the same console, and which typically consist of a range of 'mini games' and genres. A game may also consist of one genre only. An example of this would be a 'fighting game', which focuses on the close combat between the characters

controlled by the gamer and the adversary controlled by the programme.

4.1. The Games of the 'Rational World'

The logic of the 'rational world's' games is that the player or "cyber-soldier" actively controls the game, which passively reacts to the player's actions. The decision making process is based on an idea of a rational environment and communication relationships. This means that the player has to be precise and acts to be both quick and accurate. Communication is not dialogue between game and player. When the player makes mistakes, the game only becomes passive. The basic idea is that reality can be controlled immediately and there is no difference between the representation processes.

One of the first games to be introduced was *Super Mario Brothers*, which is a limited-range game where the character moves from a level to another. Typical for games of this type is that it presents the character from a side-view, and that the game advances in different 'worlds' or on different levels, where the character collects items, dodges objects, destroys enemies and solves different problems. In *Mario* the object is very clear: to save princess Peach from the evil Koopa turtle. In order to do this, the player has to pass several levels, at the end of which there are different opponents that test the player's skills and nerves. On the last level the player confronts the king of the Koopa turtles, and after defeating him the game is over. The player interacts with the game by controlling the motions and movements of the character with the buttons of the controller, and by aiming to advance onto the next level. The game does not allow the player to vary the game strategies, and the player has to 'pass' the game with a set trick and advance within the limits set by the game. The game gives feedback by notifying the players of the value of 'coins' collected during the game, and of the time left to complete the level. If the character fails to complete the task, the player loses a 'life', which gives the player new chances to try and complete the level.

Simple 'jump level' and adventure games are now mainly entertainment used on portable platforms while travelling or a game type for players who want to compete against the computer. There is also international competitiveness. For this game type, there are lists of high scoring gamers, which allow the competition against someone with a better score. This is typical for mobile phone games, as the spread of wireless networks allows the use of the Internet also while on the move.

4.2. The Games of the 'complex World'

In the games of the 'complex world' the player adopts a position in the game and the game gives feedback on the player's capability to understand the networks within the game. The player is the more dominant part of the game. The decision making process is based on the idea of a complex system-based environment and communication relationships. The basic idea of this level is that there are different kinds of representations processes but we can still control over them.

As an example of this genre, the shooting game *Half Life* and *Counter Life*, which is designed especially for online-gaming, can be introduced. It is an FPS (First Person Shooter) game, where the player controls a terrorist or a counter terrorist character, in first person, in a team based shooting game. The duty of the counter terrorists is to prevent the activation of a bomb or dismantle it, rescue hostages or protect VIPs. Respectively, the terrorists try to plant the bomb in its target, withhold the hostages, or stop the VIPs from entering the secure area. The game is played for certain lapses of time, during which either of the parties have to complete their mission. The goal of the team is to play a certain number of rounds, and the team winning most rounds also wins the game. A team may win either by completing their mission, or by eliminating the enemy team. A reward system is a crucial part of the game: victories, both team and personal, are rewarded with 'money', which can be spent on better arms and equipment.

The big change compared to jumping levels and a restricted game environment is the interactive impact of the players on each other. The game contains maps, which do not necessarily influence the player's actions, but create the aims and 'frames' for the players. Factors impacting the gaming are the cooperation between the team members and the impact caused by the enemy. Controlling the game is made simple, but succeeding in the game requires practice and several hours of experience in eye-mouse coordination. This is why FPS games are referred to as skill games, and there are several individual and team esports (electronics sports) tournaments both online and in LAN-happenings.

4.3. Games of the 'postmodern World'

In the games of the 'postmodern world' the game and the players are equals and the player has no authority over the course of the game. Communication is bidirectional. The games of the postmodern era are an analogy for the transition into social media, which, in a sense, are a simulation of postmodern computer games. The decision making process is based on the idea of a chaotic and non-rational environment and communication relationships. The basic idea is that there are different kinds of narratives and we have no one and only right representation process.

As the third game example we introduce an MMORPG (Massive Multiplayer Online Role-playing Game) *World of Warcraft*. Computer games are traditionally understood as games where the player creates and controls the character, the properties and skills it develops as the game advances. Role-playing games may be either serious, plotted games where the focus is on problem solving or on the development of the plot, or fast-paced combat games. In traditional table games, enacting the character is part of the game. This is a feature most computer games lack, but depending on the players, they may empathise with their characters. Especially in online role-games this option is available, and for example in *World of Warcraft* the players are offered special RP (role playing) servers, where the rules of the server demand devotion to the game character's role.

In *World of Warcraft* and in the genre it represents the player can utilise the features of traditional role playing games in creating and developing their character. Playing on the Internet with other players creates a social element in the game, where developing your own character and accomplishing missions together with the others, managing your wealth and the battles between the players are important aspects of the game. At the moment, *World of Warcraft* is the most successful online game of its genre, with almost 11 million players worldwide. Especially successful features of the game are its realization of the game 'world', the missions executed alone or as a team, and the development of the characters and their battle. An example of a well realized social aspect includes large guild networks, through which it is possible to organise guild cooperation, such as conquering caves and battling group against group. The possibility to play either alone or as part of a group makes MMORPGs highly interactive. A single player may witness a lot of content variation due to the other gamers' actions and due to the extensive game 'world'.

In modern MMORPG gaming culture also the financially substantial tournaments are essential. Usually tournaments focus on a certain aspect of the games, e.g. combat. The developing ESports-leagues advance competitive gaming and have created the subtype of professional gaming, especially in *World of Warcraft*, where the players combat each other "to the last man".

5. Conclusions - Eye as a Function of Weapons

In the western security understanding the function of the eye has become the function of weapons. Western culture has moved from living a physical life to sitting behind the computer screen. When you can see the target on your screen, you expect to influence or (in combat environment) destroy it. What is perceived is already lost. We cannot live without acting and communicating. Unlike weapons which have to be publicised if they are to have real deterrent effects, stealth equipment can only function if its existence is clouded with uncertainty. This is the so called "aesthetics of disappearance" [25].

The history of the games industry is heavily concentrated on the USA and Japan. The United Kingdom, South Korea and Canada are also very strong. In the USA 40% of gamers are female. There is an argument that the easy access to guns in the USA has more of an effect on gun violence than shooting games do [26]. A "rational-complex-mycelium chain" can be observed through the development of game mechanics. The older games, in the 1970's and 1980's, were all rational; only one correct solution and order in which to complete things. In the 1990's the free roaming or sandbox games became popular where the player defines the goal and there are many ways to reach it. These can be seen as complex games. A well-known example of a game like this is *Sim City* from 1989. We can also see the same trend for

evolution of western security needs and the military-industrial complex.

In this article I have tried to describe that the more electronic solutions we have created in a battle space, the more rational the art of war still remains. The Vietnam War became a testing ground for electronic warfare and automated command and sensor networks. Information warfare is also the reflection of all our fantasies, dreams and wishful thinking. Not the least of which, the dream of invisibility, is formalised by the possibility of acting in cyber(computer)space by masking our identity, by remaining elusive, untraceable and unidentifiable. Attackers use this capability. Absolute information control and dominance is based on the idea of understanding everything and seeing beyond the horizon without being seen.

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