CHAPTER 2

Literature Review

2.1 Theoretical Frameworks

The theoretical frameworks employed in this study include 1) the Marxist theory by Karl Marx which explains the bipolar conflict caused by the class differences, 2) the relationship between capitalism and militarism described by Michael Mann, and 3) the triadic of sign and the sign types of Charles Sanders Peirce that help to connote and denote the meanings from the signs.

2.1.1 Marxist Theory

In order to study the relationship between the factions in the game from a Marxist perspective, it is vital to review Marxist theory on conflict between classes first and this is employed as the main theoretical framework. Karl Marx, the well-known German political theorist, proposed his ideology of the social class system in his book titled *Manifesto of the Communist Party* first published in 1848. Marx claimed that human society had long consisted of two opposing factions since the ancient period which are: 1) the "bourgeoisie," the ruling class who has superior social power and includes the pope, landlords, owners of industry and commerce, and kings, and 2) the "proletariat," the inferior working class under the control of the ruling classes and includes farmers and workers. The idea of this binary opposition continued its existence in the industrialization era as well, the period when capitalism started to overwhelm the global economy from the mid-19th to early 20th century as the capitalists became the modern ruling class and the workers became the inferior working class (Marx, "Manifesto" 5).

Due to the discovery of new technologies beginning in the later part of 18th century such as coal refining and steam power, the beginnings of industrialization took

root where the means of production changed from household production into mass manufacturing. Together, the labor power of workers and machines massively extended the capability of production and consequently created an economic system called "capitalism" that boosted the economy of the world (Montagna). Chris Jenks, a well-known former Vice-Chancellor Professor in Sociology at Brunel University, has defined the term capitalism in his book *Core Sociological Dichotomies* as an economic system which is focused on the profit from the production and sale of commodities in the market. In this economic system, the means of production create commodities to feed the markets of the manufacturers and the owners of businesses and the profit from this is created by the labor power of workers, who receive wages in return for their labor. Therefore, the manufacturer gains profits from the difference between market value and actual cost of his/her commodities (Jenks 383).

Karl Marx viewed the relationship between manufacturers and workers under capitalism as an antagonist relationship of "bourgeoisie" and "proletariat." In Marxist theory, the term bourgeoisie is used to refer to the superior social class which is in control of production, in other words, the owner of business. The bourgeoisie normally focuses on the value of property and how to maintain his/her capital in order to guarantee their economic supremacy in a society. On the other hand, the term proletariat refers to the other social class who does not own the business but produces the commodities for the bourgeoisie by selling their labor or services (Marx, "Manifesto" 14).

Since the bourgeois is the owner of the business, he/she has the opportunity to freely choose the method of production which has the lowest possible cost. Karl Marx then viewed the relationship between bourgeoisie and proletariat as a conflicting circumstance since the bourgeois always seeks for ways to decrease the production costs of his/her commodities while the proletarian, whose wages for his/her services is a part of the production cost too, always demand the wages to be as high as possible from the exchange for his/her labor. This leads accordingly to severe exploitation of the proletariat as Karl Marx has explained in his book *Capital: a Critic of Political Economy*.

Karl Marx pointed out that the workers are cheated by the so-called time-wage, the amount of salary or wages paid to workers depending on the length of time they are employed. In order to explain this claim, he presented the following three factors: 1) "price of labor," the value that Karl Marx used to evaluate the value of labor power, 2) "value of labor-power," the amount of wage that is paid to the workers in the specific duration of hiring, 3) "duration of working," by using the following equation: $Price\ of\ Labor = \frac{Value\ of\ labor-power}{Duration\ of\ Working}$. For example, if a manufacturer pays 3 shillings for 10 hours of working, the price of labor is equal to 0.3 shilling/hr. However, the price of labor falls to 0.25 shilling/hr. as soon as a worker extends their working hours to 12 hours in a single working day. On the other hand, if the value of labor-power is directly variable to working duration, for instance, the manufacturer pays the workers 3 shillings for 10 hours then the price of labor is equal to 0.3shilling/hr. Instead, if the workers extend their working hour to 12 hours and the manufacturer pays him/her a total of 3.6 shillings and the price of labor is still unchanged at 0.3 shilling/hr. Occasionally, the manufacturer additionally pays extra from the normal rate 0.5 up to 2 pennies for the over-time hours; however, this extra payment is very little in order to create a significant increase of the price of labor. The examples above demonstrate that the price of labor does not adequately increase in comparison with the bad effects that the workers receive caused by extended working hours and heavy workload. As a result, Karl Mark claimed that the falling back or remaining constant of this price of labor is a non-profitable situation for the workers since the manufacturer can produce a lot more commodities for sale from the extension of working hours of workers who have not received adequate payment compared with their sacrifices (Marx, "Capital" 378-383).

Instead of time-wages, the manufacturer sometimes pays a salary to the workers in the form of piece-wage, the pay that is calculated per piece of work. Karl Marx viewed this as an exploitation of the working class as well. In the same way as with time-wages, he explained that the workers have to put more "special" intensity into each piece of work in order to receive a full-paid wage per piece because the piece-wage is calculated from the quality of the work. This forces the workers to prolong their working hours in order to achieve the perfect piece of work, which consequently

reduces their "price of labor" automatically. Furthermore, piece-wage also creates exploitation among the working class itself as sometimes the manufacturer makes a contract with a middleman such as the chief of the workers; these chiefs of workers again force the workers under their command to keep up with the rate of production in order to satisfy the wage provider who in this case is the manufacturer (Marx, "Capital" 384-387).

In addition to the inequality in terms of wages, Marx additionally mentioned that bringing new technology and machinery into the production by the capitalists also decreased the value of the working class. Firstly, the machine power can be effectively and efficiently employed in the production process, and this tremendously decreases the requirement for human labor, thus creating more unemployed workers. Secondly, it makes the wages for labor power lower because the machine helps the manufacturers to be able to use lesser skilled workers thereby eliminating a great number of skilled workers at the same time, leading to the reduction of labor wages (Marx, "Capital" 283). Finally, massive production from the machinery leads to the over-production of commodities, the stage when the amounts of industrial products are greater than the demands of the market. This consequently created a "commercial crisis" where several industries had to cut their production costs by closing the factories creating unemployed workers (Marx, "Manifesto" 46).

As a result, this exploitation through wages and the use of machinery as analyzed by Karl Mark significantly increased the awareness of the working class. Firstly, the prolonged working hours disastrously reduced the price of labor making workers the victims of being taken advantage of by their employers. Secondly, the workers had to aggressively compete with each other in order to be hired due to an excess of available workers in the market. This provoked struggles by the workers as they had to sacrifice the intensity of work for the small amount of wages in exchange which were freely set by the manufacturers. Finally, bringing machines into the production process created difficulties for the workers as well since it replaced labor-power and created a commercial crisis due to the over-production of commodities and this consequently created unemployment for the working class.

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Due to the struggles of the working class, which was the majority of society under the capitalist economic system, Karl Marx suggested that it is necessary for the society to create a new social order in order to bring the equality to the society. Therefore, he introduced the theory of "communism" in his book titled *Manifesto of the Communist Party* to be the solution for social peace. Communism is an ideology that empowers the working class, the majority in the society, to take over the means of production from private parties, the capitalists, in order to instead distribute the benefits to the state. In this view, the state will then use the means of production to produce the commodities to match everyone's needs in society equally rather than for commercial purposes. Accordingly, Karl Marx believed that communism would help to eradicate the oppression by the capitalists and bring justice to the working class, which constitutes the majority of society (Marx, "Manifesto" 41-54).

2.1.2 Capitalism and Militarism

According to Marxist theory, the means of production are an important component that drives the capitalist economy; however, there is also another tool for capitalism to spread its power throughout the world. According to the U.S. Congressional Budget Office, U.S. Government spent approximately 700 billion US dollars on the Department of Defense, in 2011, which was second only to the spending on the social security program in 2011 (Schwabish). This large sum of money that invested in military power by the world's leading capitalist country (the United States of America) demonstrates the significant relationship between capitalism and militarism.

Michael Mann, a well-known British-American professor of Sociology at the University of California, Los Angeles, conceptually explains the relationship between capitalism and militarism in his book *States, War and Capitalism: Studies in Political Sociology*. He states that militarism has existed in human society for a long time, since the beginning of the ancient civilizations. Ancient Greece and Rome required the protection of the military for their citizens. Eventually, every state becomes larger which means it requires better protection as well. Unavoidably, there is the additional

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expense for the state to strengthen its military power, which forces the state to develop its economy accordingly. It is then suggested that capitalism is the answer for this solution since it can produce a largest amount of profits thus helping the state to develop its military capacity (Mann).

In the same way, a study by Tori Aarseth, *Private Military Companies: Assisting the Transnational Capitalist Class in Accumulation by Dispossession*, further supports the collaborative relationship between capitalism and militarism. After reviewing related literature, Aarseth concluded that nowadays the capitalist private sector, called the Transnational Capitalist Class (TCC), has vastly expanded its economic power by investing in many assets around the world. However, these overseas investments are considered by the indigenous people as hostile acts since they are aware that the capitalists are taking advantage of their homeland and creating conflicts which can compromise the TCC's assets. As a result, private military companies (PMCs) were set up to solve these problems because of their convenience and effectiveness. The TCC's are not the only ones that hire these PMCs, capitalist states sometimes also hire these mercenary units for their military operations as well. This is the case seen in Afghanistan and Iraq. There PMCs are viewed as more convenient to deploy in various operations than national military forces since the latter requires the approval from the state prior to deployment, which is always influenced by public opinion. As a result, capitalism and militarism have become counterparts and constantly support each other in order to guarantee the survival of capitalism in the world of a capitalist economy.

2.1.3 Peirce's Theory of Signs

Semiotics is a study of sign system, a system that delivers messages, how the signs are interpreted and used in order to convey their connotative meanings. Semiotics was originally introduced by the Swiss linguist Ferdinand de Saussure as a tool to understand language via the relationship between a "signifier" and its "signified." According to his *Course in General Linguistics*, the signifier or sign is a form of a word or phrase uttered to conceptually represent something called the signified (67). In

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addition, Saussure emphasized that these "linguistic signs" are naturally arbitrary since there is no inherent relation to their signified. For instance, the idea of "sister," the signified, is not related with the sound of this word, the signifier. However, Saussure stressed that "symbolic signs" are not wholly arbitrary because they have a "rational relationship" to their signified. For example, the word "bow-bow" is considered as a symbolic sign since it attempts to imitate its signified, the barking sound of dogs.
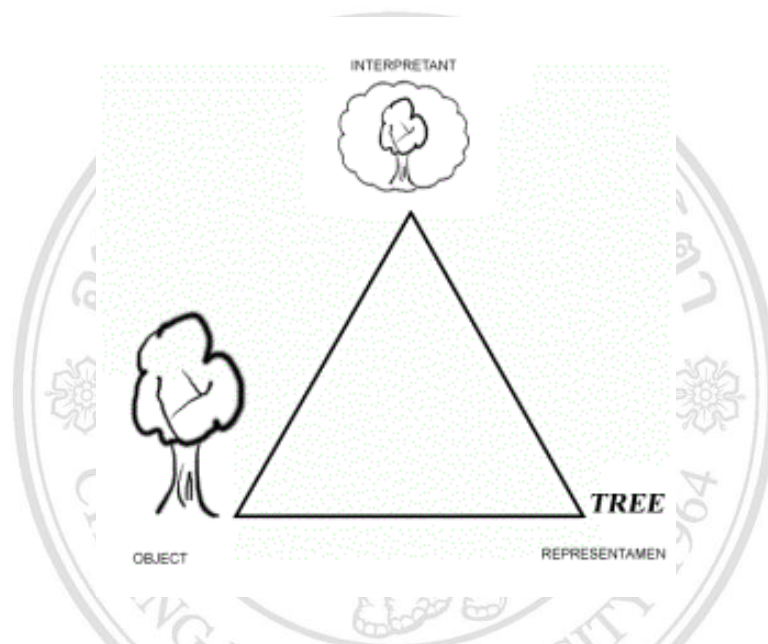

Fig. 2. Simulation and Semiotics from Gonzalo
Frasca's; *Peirce's Triadic Model of Sign*;
Ludology.org; April 2001; Web; 16 April
2014.

Later, Charles Sanders Peirce, a famous American philosopher, logician, mathematician, and scientist, suggested his own sign theory related to Saussure's called "Peirce's Theory of Signs." According to his sign theory in *Peirce on Signs: Writings on Semiotic*, Peirce termed a sign as anything whose meaning makes sense through our "subsequent thought" using clues from the "material qualities" of that sign, the characteristics which each sign must have in order to signify its meaning (141-143). Differently from the two-part sign of Saussure, Peirce introduced the "Triadic Model of Signs" as the mechanism that helps to interpret the meaning of each sign from the relation of "representamen" or "signifier," "object," "signified," and "interpretant." In

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Peirce's Triadic Model of Signs, the representamen is a representation of something which is related to its object, the meaning of the sign. Thus, Peirce introduced the thinking process of each person called interpretant as a tool to decode or interpret that "object" from the "material qualities" given by the representamen (7). For example (see fig. 2), a group of letters "T-R-E-E" is a representamen which can be interpreted by an interpretant, our perception and subsequent thinking process, which is relevant to the experience and knowledge of the viewers, in order to acquire its "object" or its meaning as the plant with a large high trunk with many leaves growing on its branches.

Table 2.1: Peirce's sign types

Sign type	Icon	Index	Symbol
semiotic mode	similarity	causal or natural relation	Convention
practical examples	photograph, painting, diagram, touch of silk, musical note, sweet smell	smoke for fire, symptom for disease, thermometer for heat, crash for falling log, feel of fur for cat tail, sour taste for lemon	word, insignia, Morse code, logical sign, algebraic sign
how to make and take them	feeling, sensation	perception, inference, action-reaction	learning by instruction and by doing

Source: Merrell, Floyd. "Table 2.1 Sign types." *The Routledge Companion to Semiotics and Linguistics*. 1st ed. Ed. Cobley, Paul. London and New York; Routledge, 2001. Web. 16 April 2014.

Also, Peirce classified signs into three types: icon, index, and symbol. First, an icon directly signifies what it refers to; in other words, it is somehow similar to the things or objects that it represents. For example, the shape of a heart becomes an icon of

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a heart. Second, an index is a sign that is related to its particular object. The indexical signs directly provide their meanings which are "causal" or "sequential." For instance, a large number of dark clouds in the sky is an indexical sign indicating that rain is coming. Finally, a symbol is different from the previous two signs because the meaning that is acquired from this type of sign is neither similar nor related to what it represents; but it is conventional according to the knowledge and culture of each society. For example, a picture of an equilibrium scale can be the symbol of justice. Thus, the conventional meaning of a symbol that makes this kind of sign is more arbitrary than the first two. Peirce also mentions that some signs can be more than just one type of sign depending on how they can be interpreted. For instance, the picture of footprints in the desert can be either an iconic or an indexical sign since the picture does not only show just the picture of footprints in the sand but it also indicates that there is some creature walking in the desert too. The table below is a summary of sign types.

2.1.4 *Metal Gear Solid 4: Guns of the Patriots*

For nearly two decades, the *Metal Gear* series has been popular for introducing the stealth action game genre which has various unique traits such as enjoyable cinematic cut scenes, a complex and intense storyline, offbeat humor, and fictional themes based on actual historical events. Each individual installment of the series, which has been published on a wide range of gaming platforms such as Nintendo, Playstation, XBOX, and PC, has received a tremendous amount of positive feedbacks and won several awards.

Metal Gear Solid 4: Guns of the Patriots has been considered the most successful sequel in the popular *Metal Gear Solid* saga with high review scores from several gaming institutes and the record sales of the game which has sold over 5 million copies worldwide ("MGS4 Total Sales Revealed, Best Selling Third Party PS3 Exclusive"). It was created by "Hideo Kojima" and developed and published by "Konami Computer Entertainment" in 2008. The game genre is a third-person stealth action in which the

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players play the game through the fictional character called "Solid Snake," who is a former US special forces member.

The story of *Metal Gear Solid 4: Guns of the Patriots* is set in the near future when advanced technology called the "Nano machine" is integrated with military units and PMCs, private military companies, all over the world in order to allow their owners to be able to totally control them. Thus, the artificial intelligence system called "the Patriots," which wants to control the world, secretly uses this opportunity to take over the control of the Nano-machined units around the world. Consequently, it allows "the Patriots" to be able to control all battlefields and extend the conflict throughout the world in order to gain the financial benefits from the war economy for itself. As a result, several resistance groups, including the protagonist, "Solid Snake," have to fight to destroy this artificial intelligence in order to set the world free (Kojima).

In this research, Marxist theory will be employed to explain the relationship between the superior and the inferior classes, which are the bourgeoisie and proletariat respectively, as it appears in the dialogue script of the video game *Metal Gear Solid 4: Guns of the Patriots*. Also, three sign types of Charles Peirce, icon, index, and symbol, will be used to analyze several elements such as action and characters appearing in the footages selected from the video game in order to portray the information that support a Marxist analysis.

2.2 Previous Studies

In this part, three previous studies related to Marxist analyses of literature and media are reviewed: Cameron M. Weed's "the Zombie Manifesto: the Marxist Revolutions in George A. Romero's *Land of the Dead*," conducted in 2009, Yong Tang's "*Avatar*: a Marxist Saga on the Far Distant Planet," conducted in 2011, and Steve Higham's "Ideology in *The Lord of the Rings*: a Marxist Analysis," conducted in 2012.

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In "The Zombie Manifesto: the Marxist revolutions in George A. Romero's *Land of the Dead*," Weed examined the representation of Marxist concepts in terms of the binary opposition between bourgeoisie and proletariat. As described in *Manifesto of the Communist Party* written by Karl Marx and Frederick Engels, this was done in order to explain the relationship between the "survivors of human race" and the "zombies" in the film *Land of the Dead*. The findings show that the taking over the world by the zombies referred to the revolution of the proletariat since it destroyed the worldwide capitalist economy structure. Furthermore, the research shows that there is no certain protagonist and antagonist in the film due to the fluid representation of interconnections between the survivors and zombies. In the film, the unifying of zombies against the human race can be viewed in terms of two aspects: 1) it can be viewed as an act of the proletariat if the zombies unite themselves in order to liberate themselves from human oppression, or 2) it can be viewed as an act of the bourgeoisie if the zombies unite themselves in order to dominate the human race.

Also, there are the representations of Marxist concepts in other well-known films such as those of James Cameron. In Tang's research "*Avatar*: a Marxist Saga on the Far Distant Planet," the objectives of the research were to examine the class struggle between the bourgeoisie and proletariat in *Avatar* and other major films of James Cameron, and also to study the worldwide impact from the film by using classical and current Marxist theory as the frameworks. Firstly, the study shows that most of James Cameron's movies, including *Avatar*, are filled with the sense of Marxist theory on the class struggle between the bourgeoisie and proletariat since the theme of his movies, such as *Avatar, Aliens, the Abyss, Terminator, Terminator II, and Titanic*, always involves the fight of the working class hero/heroine against the evil capitalists. Finally, the Marxist concept inside *Avatar* might not be the dominant theme of the movie for the viewers, but some groups of indigenous people in several countries, such as China, Palestine, and Brazil, view this underlying theme as their motivation to fight against their oppressors since the theme of the movie is similar to their real life situations.

Besides in the films, Marxist concepts can also be found in literature. In "Ideology in *The Lord of the Rings*: a Marxist Analysis," Higham discusses the idea of Marxism in

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his analysis of class relationships in *The Lord of the Rings* written by John Ronald Reuel Tolkien. Among the characters, Higham points out that the Marxist concepts can be used to analyze the hierarchical relationship between the high powered and the low powered. Examples of this include: 1) the high powered, that is, the kings, wizards, dark lord Saron, versus those with less power, 2) the foot soldiers versus the civilians, or even in 3) the relationship between Frodo, the wealthy hobbit, and Sam, his servant. In addition, Higham argues that the major battle in the story between the united factions consisting of humans, elves, wizard, hobbits, and dwarfs, and the army of the dark lord Saron can be considered as a social revolution according to Marxist theory as well.

For studies of signs in media, five previous related studies are reviewed. These are Gonzalo Frasca's "Video games of the Oppressed: Video games as a Means for Critical Thinking and Debate" conducted in 2001, David Leonard's " "Live in Your World, Play in Ours": Race, Video Games, and Consuming the Other" conducted in 2003, Alessandro Canossa's "Play-Persona: Modeling Player Behaviour in Computer Games" conducted in 2009, Shaleph John O'Neill's "Exploring a Semiotics of New Media" conducted in 2005, and Watsana Netprasart's "Representation of Power and Control in the Film *The Island*" conducted in 2012.

First, semiotics can be a tool to determine the relationship between video games and the players. In "Video games of the Oppressed: Video games as a Means for Critical Thinking and Debate," Frasca examines the question whether video games can model the critical thinking of their players through the interpretation of what players perceive from video games. In order to achieve the goal of study, Frasca used Charles Peirce's theory of signs in order to explain that people can understand and interpret the meanings in video games in their own ways through a "mental model" of each person and the idea that the users have of the game system based on their interaction experience with it; this is known as an "interpretant" in Peirce's theory of signs. As a result, the study shows that video games can powerfully influence the critical thinking of the players by the perception of mental models which the players interpret from the games.

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Secondly, semiotics can also determine the hidden meanings in video games. According to David Leonard's *"Live in Your World, Play in Ours": Race, Video Games, and Consuming the Other*, the objective of his study is to find the racial stereotypes portrayed in two famous video games, *Grand Theft Auto III* and *NBA Street*. A semiotics analysis is applied to leading characters from both games in order to perceive the hidden meanings which they try to convey to the players. The results of the study show that both video games are a powerful medium to deliver various ideologies to the players, for instance: the racial conflicts within each gang found in *Grand Theft Auto III* can simulate real-life conflicts among races in American society. In the second example, the black athletes in *NBA Street*, such as Shaquille O'Neal, can implant the stereotype in the thinking of video game players that blacks are strong and successful, which inspires the players to have to want to follow what the black protagonist in the game does.

Also, semiotics can be useful in video games design. In "Play-Persona: Modeling Player Behaviour in Computer Games," Canossa intends to search for the important elements that help the game designers successfully design the level of the games. In order to find that key element, Charles Peirce's trichotomy is employed in order to understand how the video game players understand levels of the game while playing. This is an important piece of information for the game designers. The key element that helps the game designers to correctly design the level of the game is the "play-persona," or the roles that the players can play in the game. For example, in *Farcry 2*, designing the theme of the game that will be the lone-wolf style whereby the developers have to create a suitable theme for this game in order to create the appropriate play-personas; these finally consisted of Sun Tzu, Rambo, and Fugitive. In order to deal with an enemy in the game: 1) Sun Tzu allows the players to strategically plan their attacks on the in-game enemies, 2) Rambo is the approach for close combat playing, and 3) Fugitive is the approach for the player to use to evade confrontation with the in-game enemy. As a result, these play-personas in *Farcry 2* have made the game successful in the gaming market.

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In addition, Peirce's theory of signs can explain several meanings of various symbols portrayed in the films. In "the Representation of Power and Control in the Film *The Island*" (2012), Netprasart examines whether the representation of power and control can be found through the visual elements of the film. Therefore, she uses Peirce's three kinds of signs: 1) icon, 2) index, and 3) symbol, to analyze camera angle, lighting, setting, sound, and characters from selected footages in order to portray the power and control in those images. As a result, the analysis based on Peirce's theory of signs indicates that these film elements can be employed as the tools to portray power and control in the film.

Lastly, since the technologies have evolved, various classic forms of media that people have used have developed into various types of interactive new media, such as novel virtual environments and applications on mobile phones and desktop computer. Accordingly, the study by O'Neill, "Exploring a Semiotics of New Media," aims to understand how people make sense of the sign systems in these new interactive media through the perspective of semiotic frameworks of well-known theorists, e.g. Ferdinand de Saussure and Charles Sanders Peirce. The findings showed that several relevant criteria, such as codes, denotation, connotation, metaphor, rhetoric, syntagmatic structuring, and sign types, adequately explain the creation of the new media. Also, these criteria can be used as semiotic models to explain the perception by the users of the new media.

The researcher also reviewed the relationship between capitalism and militarism in two related previous studies: Eric Royal Lybeck's "Modernity, Capitalism, and War: Toward a Sociology of War in the Nineteenth Century, 1815-1914" conducted in 2010 and Tori Aarseth's "Private Military Companies: Assisting the Transnational Capitalist Class in Accumulation by Dispossession" conducted in 2012. In "Modernity, Capitalism, and War: Toward a Sociology of War in the Nineteenth Century, 1815-1914," Lybeck aimed to understand war and its relationship with modern society during the nineteenth century, that is, from 1815 to 1914, from the end of the Napoleonic Wars to the beginning of the First World War, by discussing the perspective of Marxist, liberal, and realist theories. Accordingly, the study shows that industrialization played a

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major role during the nineteenth century and made the focus of societies during this period time mainly on commodity production; this consequently transformed societies in the era of "capitalism." Although several wars during this period could possibly have been caused by others reasons, such as religious, political, ideological, and other concerns, the researcher found out that most of the wars were related to the requirements of the economic expansion of each country.

In the same way, Tori Aarseth's research, "Private Military Companies: Assisting the Transnational Capitalist Class in Accumulation by Dispossession," also confirms that military activities have a significantly supportive relationship with capitalism. The findings show that PMCs, "Private Military Companies," are preferably hired by national militaries and the TCC, "Transnational Capitalist Class" in order to protect their overseas investments and domination, which require special security, for their employers since they are more effective than ordinary military units. In addition, PMCs are easier to be deployed in several operations at once than normal military which requires a higher degree of support from the public to be deployed in such operations. Therefore, it can be concluded that the military power of PMCs significantly benefits worldwide expansion of capitalism.

For studies on video games, there are three related studies: Mary Jo Dondlinger's "Educational Video Game Design: A Review of the Literature" conducted in 2007, Jakub Majewski's "Theorising Video Game Narrative" conducted in 2003, and Veronica Lorena Zammitto's "Gamers' Personality and Their Gaming Preference" conducted in 2010.

Since video games have the ability to attract the attention of the players for a lengthy period of time this creates the assumption that video games can be learning material for their players too. Therefore, Dondlinger's study, "Educational Video Game Design: A Review of the Literature," studied the design elements, theories in game design, and the outcomes of educational game by reviewing the literature related to educational games. This reviewing of several works showed that various design elements such as narrative context, rules, goals, rewards, multisensory cues, and

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interactivity are the key factors that encourage the desired learning outcomes. Also, the results showed that several theories related to cognitive processes while playing games have been developed in order to enhance educational game design as well.

A narrative is one of the game elements which helps various games to be successful; however, there are also various successful games in the market which are non-narrative games. Therefore, this argument leads to Majewski's "Theorising Video Game Narrative" which tries to answer questions on the following three main criteria: the importance of narrative in games, the suitability of narrative as a video game medium, and the most appropriate model of narrative in video games. The study shows the results for each topic as follows. First, it is controversial to judge whether video games should have a narrative in the first place because narrative and non-narrative games are part of the diversity of video games and it is not appropriate to claim that one group is better than the other. Secondly, the results show that the amount of narration in video games is less than in movie or theater because of the interactivity of the game which makes the narration in games far more difficult. Finally, the findings show that the most popular narrative structure found in video games is that of classical structures. However, classical structures do not appear throughout the entire video game narration as in other media; a minimalist structure or the anti-structure occurs in video game narration at some point.

Nowadays, there are various genres of video games in the market; each genre is favored by a specific group of players. Zammitto did her study on "Gamers' Personality and Their Gaming Preference" in order to identify gamers' preferences. In order to conduct the research, 545 participants' responses were analyzed through a Gaming Preference Questionnaire which is specifically designed to identify gamers' preferences. According to the results of 545 questionnaires, eight significant genres were statistically found: action shooting, action but no shooting, action fighting, sports, simulated vehicles, simulated artificial intelligence, adventures, puzzles, and online. Also, the results suggest that the players' real-life characteristics significantly cause them to prefer playing each specific genre.

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According to a review of previous studies on Marxism in literature and media, studies of signs in media, capitalism and militarism, and video game, Marxist analysis can be applied to any kind of media to explain certain situations which involve the difference between groups. Secondly, the previous studies related with the study of signs in media also show the application of several theories of signs including Charles S. Peirce's for interpreting the meaning of signs in movies and video games. Furthermore, the studies of the relationship between capitalism and militarism also provide beneficial data for this research to explain how the capitalist class is related to militarism in the game *Metal Gear Solid 4: Guns of the Patriots*. Finally, the previous studies relevant to video games also show that the narrative and other components of video games are worthwhile as objects of study. Accordingly this research will focus on an analysis based on Marxist concepts in terms of both the dialogue and the in-game footage in the game *Metal Gear Solid 4: Guns of the Patriots*.

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