

Research Ethics and U.S. Military Videogame Play: A Research Proposal for Studying the Visual Discourse of U.S. Military Videogames

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PROBLEM DESCRIPTION

The U.S. Military and its commercial partners in the entertainment industry have discovered a "gold-mine" in the development of video games. Video games promise virtual, psychological companionship and provide a means of learning and maneuvering within virtual worlds¹. Video games are in great demand by men and women of all ages, and as a medium of communication they appear to be extremely capable of influencing players ideologically by incorporating values and belief systems into the simulated worlds of video game play (Brand, Knight, & Majewski, 2003; Lowenstein, 2006; Stockwell & Muir, 2003). In creating training and cultural indoctrination video games, the U.S. Military adopts a very popular means of electronic communication, learning, and recreation to reach their target audience - members of the Internet Generation². While the powerful affects of video game immersion are widely studied, there is minimal research regarding the analysis of ideology and persuasion within gaming environments (Brand, Knight, & Majewski, 2003; Ermi & Mayra, 2003). Similarly, there is nominal research regarding online research ethics due to the novelty of online games (otherwise known as MMORPG's or Massive Multi-Player Online Role Playing Games). Online gaming surfaced with the advent of the Internet, and today scholars struggle to define the heuristics of the online gaming world. The ultimate goal of my research is to explore how military ideology, persuasion and recruitment strategies combine within the Visual Discourse of videogames. For the purposes of this paper, I explore the research ethics of applied qualitative and quantitative methods in the study of online videogame players as they participate in the following games:

- "America's Army" sponsored by the U.S. Army
- "Jane's Fleet Command" sponsored by the U.S. Navy
- "Air Force Delta Storm" sponsored by the U.S. Airforce
- "Medal of Honor" sponsored by the U.S. Marines

In the Association of Teachers of Technical Writing "Code of Ethics", a core principle is "to recognize the power of language to shape thoughts, values and actions and to accept responsibility for the likely consequences of our language" (Breuch et al, ____). I believe it is possible to demonstrate the link between language and the shaping of thoughts through the application of both qualitative and quantitative methods of analysis which are described as follows:

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According to Faust and Yoo in "Haptic Feedback in Pervasive Games", the social Interactional aspects of virtual gaming "can compensate for the missing physical proximity between players" (1).

² The Internet became mainstream in the mid-to-late 1990's within the United States; therefore children born after 1990 are referred to as the Internet Generation. Due to continuous exposure to the Internet, many of these children cannot conceive of life without e-mail, instant messaging, and Google searches. This paper does not address the Digital Divide, where children from poorer communities have limited Internet access. Within the context of this paper, the Internet Generation refers to those children excluded from the effects of the Digital Divide.

Qualitative Methods

- Interviewing one-on-one in-person videogame players

- Interviewing online videogame players
- Applying projection techniques (defined in greater detail shortly) during the in-person and online interviews with videogame players
- Collecting and Interpreting the subjective, individual experiences of videogame players from the in-person and online interviews
- Analyzing the positive and negative benefits of the qualitative methodology
- Addressing any challenges encountered through the application of qualitative methodology

Quantitative Methods

- Administering questionnaires related to the videogamer's online experiences during in-person and online interviews
- Collecting and Interpreting the data results of the in-person and online interviews
- Analyzing the positive and negative benefits of the quantitative methodology
- Addressing any challenges encountered through the application of quantitative methodology

To reiterate, the ultimate goal in using these methods is to collect and analyze data representative of the military's ideological digital discourses, so as to explore how videogames are capable of shaping the minds and attitudes of game players. The selection of these specific methods are investigated in the discussion section of this paper. However, it is premature to delve directly into the research methods of this study without first defining the foundation of U.S. Military video games and the entertainment and business industries contribution to their development³. It is also essential to define the compositional elements of video games, assuming the audience is unfamiliar with video games as a medium of communication. Once these basic tenets are established, I explore the theoretical approaches of traditional research ethics in comparison to the emerging research ethics of online technologies and videogame research. Finally, I explore the ethical problems associated with my select qualitative and quantitative methods of analysis in terms of their influence upon future videogame studies in the realm of Visual Discourse.

VIDEO GAMES: HISTORICAL DEVELOPMENTS

Video Games and the U.S. Military

The etiology of U.S. Military video games is traceable to computer simulations created by the United States Air Force in the early 1950's. Training pilots was prohibitively expensive (both in lives and money); consequently, the U.S. Air Force began to explore less expensive alternatives. Analog computers were initially developed and used to test airplanes' directional stability, and gradually digital computers with Boolean-logic capabilities were developed for more complex cockpit simulations (Waltman, 2000). As advancements in simulation hardware and software occurred, other branches of the U.S. Military (Army, Navy, Marines) began to utilize computer wargaming simulations in order to calculate offensive and defensive logistics maneuvers in the battlefield.

According to the Entertainment Software Association report "Video Games: Serious Business For America's Economy" by R. Crandall and J. Sidak, business industries are defined as those associated with the complementary product markets of video games such as processors, content, devices and broadband Internet access. These complementary product markets add \$7.8 billion annually to the U.S. economy (3).

The technology behind wargame simulations spilled over into the commercial sector during the mid 1970's and early 1980's. Video games were created and successfully marketed to youth in the United States. Arcade games such as Pac-Man and Q*bert were played in pizza parlors, bowling alleys and mall arcades. Home game playing consoles created by Atari and Nintendo extended the appeal of video games as mediums of entertainment. Because commercial game developers had the ability to quickly innovate and modify applications through gaming community collaboration, the military found it difficult to compete against the commercial sectors' extensive resources (Herz & Macedonia, 2002).

Video Games and the Military-Entertainment-Industrial Complex

In order to maintain their technological edge, the military formed an alliance with academia, the entertainment and business industries, creating the military-entertainment-industrial complex (Crogan, 2006). The military provides funding, the entertainment and academia industries provide the tools and experience, and the business industry generates the supply and demand for technological products. The U.S. military and entertainment industry have a history of collaboration, dating back to World War II. In order to gain support for Allied forces, the U.S. military combined its psychological operations team with Hollywood's proficient marketing abilities to produce movies and radio broadcasts sympathetic to the U.S. military. During the second Gulf War, the military-entertainment-industrial complex combined again so as to control the release of information to the American public and thereby shape opinions of the war. This triangular complex has become so successful at defining reality (publicists refer to this as 'spin control') that Stockwell and Muir declare "resistance [to the reality managed by the U.S. military] is futile" (8).

From the perspective of the Academic community (referred to as Academia throughout the remainder of this paper), collaboration between the military and game industry offers extraordinary possibilities, in part because video games are capable of "improve[ing] training, efficiency, productivity and innovation" (Lowenstein, 2006). The Federation of American Scientists elaborate upon the topic of video games and learning in a 2006 report which suggests that "complex video games assist players in developing higher-order thinking skills such as strategic thinking, interpretive analysis, problem solving, plan formulation and execution, and adaptation to rapid change" (*Harnessing the Power of Video Games for Learning*, 2005).

From the viewpoint of the Business Industry, the production and distribution of video games (including the various hardware and software accessories associated with these games) is an enormous source of capital, affecting economies worldwide. According to a Price Waterhouse Coopers Global Entertainment and Media Outlook report, entertainment software spending for the year 2004 was approximately \$25.4 billion internationally. In addition to the economic benefits of video games, the Business Industry profits from the technological transfer occurring in both the public and private sectors due to research and development (See *Figure 1* in reference to military simulations converging with commercial off-the-shelf video games).

While the ethical implications of the military-entertainment-industrial complex are not explored in this paper, it is interesting to note that these three arenas are bound to one another for mutual benefit.

VIDEO GAMES: COMPOSITIONAL ELEMENTS

To realize the visual persuasiveness of video games, it is important to familiarize ourselves with the compositional elements of video games including stereo sound, point of perception, dimensions and play options. Each compositional element is defined as follows:

Stereo sound – Auditory elements contribute to immersion, whether one is watching a movie or playing a video game⁴. Within video games, there are two types of stereo sounds: diegetic or non-diegetic. Diegetic sound effects refer to those sounds produced by a player as they proceed through the various levels (or parts) of the video game. For instance, if you are shooting at an object, the sound of the gun is referred to as a diegetic sound effect. Non-diegetic sound effects refers to background music, the type of music effectively used within movies to suggest a scary event is about to occur. Non-diegetic sound effects create a mood or atmosphere, and these effects are capable of manipulating the emotions of the hearer. For example, the horror movie Halloween carries a very distinct piano score that hints at something evil or wicked nearby.

Figure 1. Convergence of Military Simulation and Off-the-Shelf (COTS) Games. From "The Convergence of Military Simulation and Off-the-Shelf (COTS) Games to Military Simulation," Proceedings of the ACM SIGGRAPH International Conference on Military and Security Applications of Graphics and Reality continuum and its applications, Singapore, p. 269.

Figure 2. First-Person Perspective. From America's Army, 2005. SEALs, 2005.

Figure 3. Third-Person Perspective. From SOCOM II: Navy

Point of perception – Point of perception refers to how the player sees himself or herself while participating in the game play (Squire and Jenkins, 2002). When watching a movie through the eyes of a character, that is defined as first-person perspective. This first-person perspective in video games is very popular because it contributes to the player's immersive experience (see *Figure 2*). A third-person experience is when a video game player sees their character (also known as avatar) and views events over the shoulder or position of their character (see *Figure 3*).

Dimensions – Video games have two-dimensional and three-dimensional environments. Two-dimensional environments include images that may appear three-dimensional, but are ultimately limited in their ability to maneuver amongst flat video screens (see *Figure 4*).

Three-dimensional environments involve objects or models that are manipulated in three-dimensional space, thereby contributing to a more realistic, immersive environment (see *Figure 5*). Three-dimensional environments are considered the gold standard in terms of optimized gaming experiences.⁵



Figure 4. Two-dimensional Video Game
(Space Invaders video game, created by Toshihiro
Nishikado in 1978). From
<http://spaceinvadersgl.sourceforge.net/>.

Play Options – There are currently four different options for video game play: games played on personal computers⁶, games played online⁷, games played on individual game consoles⁸, and games played on various electronic devices through wireless connections⁹.

THEORY OF RESEARCH ETHICS – PAST AND PRESENT

Within the realm of social scientific research, researchers must adopt appropriate methods of analysis in order to produce valid and reliable results (Kastman & Gurak, 1999). Within the Western tradition of Empiricism, the quantitative approach to problem solving has dominated all branches of science up to and including the Modernist Era (scholars vary on the dates framing Modernity; therefore I am approximating the Modernist time frame from 1910 to 1970). Qualities associated with Empiricism include categorization, classification, standardization, sequentialism – all of which represent a template of sorts that heavily relies upon visual data, accompanied by the common expression “seeing is believing” (insert reference). Postmodernism (dates approximate to 1970 to current times) marks a distinct philosophical shift in what is qualified as authoritative, scientific, and representative of a larger population. Empirical standards of the past become irrelevant as relativist methods of research surface, inclusively incorporating pluralistic viewpoints from traditionally marginalized and silenced sections

⁵ Dimensions as defined by Michael Morrison, author of “Teach Yourself Game Programming in 24 hours” (176).

⁶ PC games are installed on computers, similar to software such as Microsoft Office.

⁷ Online games are accessed via the Internet and are often referred to as Massive Multi-Player Online Games (MMOGs). MMOGs facilitate the synchronous, real-time play of hundreds of gamers online. It is not unusual for a player living in the United States to work virtually in unison with a soldier who is physically based in Australia.

⁸ Console games are played on individual home consoles such as the Sony PlayStation or the Microsoft X Box.

⁹ Wireless games are played on portable devices such as PDA’s (Personal Digital Assistants) and include both individual and group games.

of research populations (insert reference here). A shift has occurred from an expert centered research approach to a user centered, participatory research approach that fully educates participants in their contribution to, and the results of the study (Mauthner et al, 2002; Naples, 2003; Salvo, 2001; Winsor, 1996).

This philosophical shift from Modernism to Postmodernism has highly influenced Research Ethics, and as technological advances continue to occur scholars are finding gray, undefined areas within which they must operate, with no clear guidelines demonstrating how to avoid ethical dilemmas. But how did ethics become an issue in research studies to begin with? When did the academic and scientific community determine precise guidelines must be established?

The need for ethical research guidelines surfaced as a result of the atrocities committed by German Nazis leading up to and during World War II. According to an excerpt from *The Nuremberg Code* (1948):

"In every single instance appearing in the record, subjects were used who did not consent to the experiments; indeed, as to some of the experiments, it is not even contended by the defendants that the subjects occupied the status of volunteers. In no case was the experimental subject at liberty of his own free choice to withdraw from any experiment. In many cases experiments were performed by unqualified persons; were conducted at random for no adequate scientific reason, and under revolting physical conditions. All of the experiments were conducted with unnecessary suffering and injury and but very little, if any, precautions were taken to protect or safeguard the human subjects from the possibilities of injury, disability, or death. In every one of the experiments the subjects experienced extreme pain or torture, and in most of them they suffered permanent injury, mutilation, or death, either as a direct result of the experiments or because of lack of adequate follow-up care.

Obviously all of these experiments involving brutalities, tortures, disabling injury, and death were performed in complete disregard of international conventions, the laws and customs of war, the general principles of criminal law as derived from the criminal laws of all civilized nations, and Control Council Law No. 10. Manifestly human experiments under such conditions are contrary to "the principles of the law of nations as they result from the usages established among civilized peoples, from the laws of humanity, and from the dictates of public conscience."

The World Medical Association created the *Declaration of Helsinki* in 1964, which expanded upon the ideas within *The Nuremberg Code*, in order to provide general guidelines for physicians and their medical research participants. While *The Nuremberg Code* were the first International Guidelines established to insure research participants were given informed consent prior to voluntarily partaking in studies, the first equivalent act within the United States occurred in 1974 and was called *The National Research Act*. This act was instigated as a result of the egregious experiments conducted upon African Americans in the Tuskegee Syphilis Study where participants were not informed of the true nature of the study nor were they given curative medicine¹⁰.

The National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research, also established in 1974, were given the mission of identifying and

¹⁰ Sponsored by the U.S. Public Health Service

establishing specific guidelines for biomedical / behavioral research involving human subjects within the United States (Kennedy Institute of Ethics, 1992). In 1979 they produced *The Belmont Report*, which lists the following basic ethical principles and their practical applications¹¹:

Basic Ethical Principles	Practical Application of Ethical Principles
<ul style="list-style-type: none"> • Respect for Persons - Respect for persons incorporates at least two ethical convictions: first, that individuals should be treated as autonomous agents, and second, that persons with diminished autonomy are entitled to protection. The principle of respect for persons thus divides into two separate moral requirements: the requirement to acknowledge autonomy and the requirement to protect those with diminished autonomy (4). 	<ul style="list-style-type: none"> • Informed Consent - Respect for persons requires that subjects, to the degree that they are capable, be given the opportunity to choose what shall or shall not happen to them. This opportunity is provided when adequate standards for informed consent are satisfied (6).
<ul style="list-style-type: none"> • Beneficence - Persons are treated in an ethical manner not only by respecting their decisions and protecting them from harm, but also by making efforts to secure their well-being. Such treatment falls under the principle of beneficence. The term "beneficence" is often understood to cover acts of kindness or charity that go beyond strict obligation. In this document, beneficence is understood in a stronger sense, as an obligation. Two general rules have been formulated as complementary expressions of beneficent actions in this sense: (1) do not harm and (2) maximize possible benefits and minimize possible harms (4-5). 	<ul style="list-style-type: none"> • Assessment of Risks & Benefits - The assessment of risks and benefits requires a careful arrayal of relevant data, including, in some cases, alternative ways of obtaining the benefits sought in the research. Thus, the assessment presents both an opportunity and a responsibility to gather systematic and comprehensive information about proposed research. For the investigator, it is a means to examine whether the proposed research is properly designed. For a review committee, it is a method for determining whether the risks that will be presented to subjects are justified. For prospective subjects, the assessment will assist the determination whether or not to participate (8).

¹¹ See **Appendix 1** for *The Belmont Report* in full

<ul style="list-style-type: none">• Justice - Who ought to receive the benefits of research and bear its burdens? This is a question of justice, in the sense of "fairness in distribution" or "what is deserved." An injustice occurs when some benefit to which a person is entitled is denied without good reason or when some burden is imposed unduly. Another way of conceiving the principle of justice is that equals ought to be treated equally. However, this statement requires explication. Who is equal and who is unequal? What considerations justify departure from equal distribution? Almost all commentators allow that distinctions based on experience, age, deprivation, competence, merit and position do sometimes constitute criteria justifying differential treatment for certain purposes. It is necessary, then, to explain in what respects people should be treated equally. There are several widely accepted formulations of just ways to distribute burdens and benefits. Each formulation mentions some relevant property on the basis of which burdens and benefits should be distributed. These formulations are (1) to each person an equal share, (2) to each person according to individual need, (3) to each person according to individual effort, (4) to each person according to societal contribution, and (5) to each person according to merit (5).	<ul style="list-style-type: none">• Selection of Subjects - Just as the principle of respect for persons finds expression in the requirements for consent, and the principle of beneficence in risk/benefit assessment, the principle of justice gives rise to moral requirements that there be fair procedures and outcomes in the selection of research subjects (9).
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The Belmont Report is quite thorough in its specifications and limitations related to human participant research, but without a mechanism of enforcement the report is worth no more than words on a piece of paper. Therefore, as required by the *National Research Act*, any institution and / or university performing biomedical and / or behavioral research MUST establish an IRB, or Institutional Review Board to review research proposals and their ethical implications PRIOR to the commencement of such research.

Each institution and university has a distinct set of IRB criteria and forms dedicated to their institution's research specialties, and East Carolina University is no exception. East Carolina's University and Medical Center Institutional Review Board

(UMCIRB) lists six primary documents for users to download, if they intend to perform human subjects' research and these documents are as follows:¹²

- Investigator Checklist for New Behavioral / Social Sciences UMCIRB Submissions
- Deadline and Submission Information Sheet
- 8 Essential Elements of Informed Consent
- Expedited and Exempt Categories
- Criteria for IRB Approval of Research
- UMCIRB Fast Fact Sheet

Of particular interest within the above documents are the eight elements of Informed Consent, which cover in detail how Informed Consent is administered to research participants. The document states that research participants must receive an explanation of research purposes, an approximation of the duration of study, and a list of potential benefits, risks, discomforts, and compensation in the event of participant injury. Participants are reassured of the confidentiality of their records, and are provided contact information in the event that questions related to the study surface before, during or after research is completed. Finally, research participants are given the option to discontinue participation in the study at anytime without fearing "penalty or loss of benefit to which the subject is otherwise entitled" (UMCIRB, 2007).

From a historical perspective the most recent code of ethics to surface as a result of the Internet Age is the Association of Internet Researchers Code of Ethics (focus upon four aspects of the America's Army and SOCOM II: Navy SEALs video games: the video game sponsor, the video game's targeted audience, selected compositional elements of the video game (as briefly introduced above), and the popularity of the video game.¹³ Due to the introductory nature of this paper, elements of analysis are limited in scope, thereby providing future opportunities for in-depth exploration of military sponsored video games.

Sponsor - The sponsorship of a video game and the sponsor's motivations are extremely relevant when exploring the game's implicit and explicit ideological components.

Figure 5. Three-dimensional Video Game. From America's Army, 2005.

Important considerations include how ideology is inserted into entertainment software and why the video game is considered an appropriate venue for ideological inculcation (Fairclough, 2003; Allen, 1999).

Target Audience - Video games have official and unofficial audiences. Official audiences are composed of target groups who are age appropriate and represent a desired population. Unofficial target audiences are desired populations that remain unspecified for a number of reasons. Often video game sponsors will not explicitly identify their intended audience due to ethical implications

¹² See Appendices 2 through 7 to view each document in its entirety

¹³ Popularity is defined in the America's Army video game via statistics retrieved from online servers hosting the video game. It is a massive multi-player online game that users around the world may access at any time. SOCOM II: Navy SEALs game statistics are retrieved through registered sales of the SOCOM II video game, since the game is only available for play via PlayStation 2 home consoles.

and negative public reactions.¹⁴

Level of Realism - Video game developers aim for a certain amount of realism in gaming environments, and their ultimate goal is immersion. The combination of a game's sound effects, graphics, and narrative plot all contribute to a player's complete absorption into a fabricated, three-dimensional digital world. Ermi and Mayra refer to this occurrence as the power of persistence, where players experience immersion and continuity every time they play a video game (238). It is all about "the immersion into the imaginary game worlds that offered the possibilities to be free from real life restrictions" (243). A low level of realism might refer to a two-dimensional video game, whose graphics are unsophisticated and whose sound effects and overall special effects limit the player's ability to become fully absorbed into the gaming environment (see *Figure 4*). A high level of realism equates to a three-dimensional virtual world, where the video game player is given multiple playing options through his character or avatar (see *Figure 5*). The graphics and sound effects are very refined and contribute to a deeper immersive experience for players. Plot scenarios are more developed in high-level realism video games, and the level of investment by the video game's sponsors is unequivocally higher in comparison to low-level realism video games.¹⁵

Popularity of Video Game - Methods vary in terms of determining video games' popularity. Online games such as America's Army are sponsored on government and non-government controlled servers.¹⁶ These servers provide statistics related to website visits and the number of newly registered game players every month. The popularity of console video games such as SOCOM II: Navy SEALs is determined by the number of game cartridges purchased for playing with the PlayStation 2 console. While figures from each video game do not translate unequivocally to relative popularity, they are suggestive of each game's popularity within the community of video game players.

RESULTS

Elements of Analysis	America's Army	SOCOM II: U.S. Navy SEALs
Sponsor	U.S. Army, DARPA (Defense Advanced Research Projects Agency)	Sony Computer Entertainment & Naval Special Warfare Command
Target Audience	Officially those meeting recruitment requirements in terms of age limits	Young Men of recruiting age (Snider, USA Today)
Level of Realism	Excellent realism, except there are no pools of blood or dismemberment; Exceptional in-game sound effects	Excellent realism in relation to actual SEAL missions; Music sounds like it is from an action movie according to SOCOM II producer Inon Zur (Bedigian, 2004)

¹⁴ In the 1990's RJ Reynolds implemented a cigarette campaign featuring Joe Cool, a cartoon camel character that was meant to attract children to this particular cigarette brand. RJ Reynolds later acknowledged the inappropriateness of their ad campaign and withdrew the advertisements as a retroactive response to intense negative publicity related to the marketing fiasco (Di Franza et al, 266).

¹⁵ Level of investment refers to the amount of money and man-power a company is willing to invest in the video game end-product. The higher the expectations and / or deliverables for the video game, the higher the need for larger numbers of programmers, artists, project managers, and marketing specialists.

¹⁶ Servers are super-computers that host software for massive multi-player online gaming. The U.S. Army actively monitors the America's Army video game servers.

Popularity of Video Game	Six million registered accounts as of 2005; an average of 3k – 5k players online at one time	Nine months after SOCOM II's official launch, 30,000 registered users per day played the online game (Altizer, 2004)
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Figure 6. Comparative Analysis Chart

The results of the comparative analysis display (see *Figure 6*) demonstrable similarities and differences amongst shared elements of the America's Army video game and SOCOM II: U.S. Navy SEALs. Both video games were sponsored by separate development teams – one game was sponsored completely by U.S. government sources (the Department of Defense, and their subset – the U.S. Army), and the other game was sponsored by U.S. government sources (Naval Special Warfare Command) and a commercial partner (Sony Computer Entertainment). Both video games share the same target audience, consisting of young, impressionable, intelligent boys and men of recruitable age (many of whom have yet to decide what they want to be when they grow up). In terms of Level of Realism, both video games offer sophisticated three-dimensional game environments, with realistic action sequences, high quality graphics, and sophisticated sound effects representative of authentic battlefield weapons (see *Figures 7 and 8*).



Figure 7. From America's Army, 2005.



Figure 8. From SOCOM II: Navy SEALs, 2005.

Both U.S. sponsored military games are extremely popular, with various tabulations and figures released daily, estimating the number of players online, the number of players purchasing the video games, and the captured demographic of each game as measured by independent scholars and marketing specialists. It is difficult to provide an unambiguous measurement of game popularity between America's Army and SOCOM II: Navy SEALs due to the differences in marketing and the mediums in which the video games are played. America's Army video game is free and played with other online video game players. SOCOM II: Navy SEALs must be purchased in stores or through Sony's website and the video game can only be used in unison with a PlayStation 2 game console.

DISCUSSION

Video games are a powerful ideological tool, capable of inculcating values, ideals and belief systems into their players. The U.S. Army and the U.S. Navy have recognized the inherent value of these video games. Through partnering with commercial interests, the U.S. military now has the ability to produce sophisticated forms of indoctrination, all in the guise of a technology that is very popular with the Internet Generation of today.

The Comparative Analysis Results of America's Army and SOCOM II: Navy SEALs reveals tangible persuasive elements in terms of the Level of Realism category. For example, *Figure 9* offers a screenshot of America's Army Special Forces Blizzard mission, whose operation is to "assault a remote enemy compound."¹⁷

The player is part of a Resistant Fire Team, and in the process of taking control of a power station. Lighting, perspective and electrical equipment details are extremely realistic, and this realism contributes to the immersive qualities of the video game. The physical positioning of the team directly reflects authentic tactical approaches adopted by U.S. Army soldiers. The player (who is viewing the game from a first-person perspective) has squatted down and turned around to confirm all team members are in position. The visual images of this virtual world are proportionate to real world objects, again contributing to the video game's power of persistence. From a psychological perspective, the soldiers in *Figure 9* are working together as a tight unit, reflective of U.S. Army indoctrination. Characteristics such as loyalty, duty, respect, selfless service, honor, integrity and personal courage are drilled into the character development of each player.

Figure 9. From America's Army, 2005.

Within the SOCOM II: Navy SEALs video game (see *Figure 10*), the U.S. soldier is positioned to attack enemy combatants concealed in a nearby building. It appears that the Navy SEAL is responding to the assault on a U.S. military tank, and the explosive elements (with tank parts flying into the air) contribute to the plausible scenario of urban combat. The building across from the SEALs target is on fire, and dark plumes of smoke add to the atmospheric effects within the game. The palm trees and unusual design of the architecture suggest the player is fighting somewhere in the Middle East, and the scene is similar to current U.S. military combat scenarios encountered during incursions into Iraq. The sophisticated design of the graphics and the fluidity in which the players are allowed to move within these video games introduce levels of realism that ten years ago were technically impossible. While only one soldier is visible in *Figure 10*, presumably additional SEALs are nearby, providing backup (the U.S. Navy and U.S. Army operate upon the premise of group cooperation and defense). The player of this game is viewing the scene from a third-person perspective, which means the figure in **Figure 9** represents the player. The difference between first person and third person perspective lies in the fact that first person perspective "feels" more real, more "immersive" than the

Figure 10. From SOCOM II: Navy SEALs, 2005.

third person perspective. From a third person perspective, the player is always looking over the shoulder of their character (avatar) which gives a sense of disassociation from the overall game experience. Ultimately game players have their own preferences, so video game developers continue to offer both perspectives within video games. Additional examples of Levels of Realism include screenshots listed as *Figure 11* and *12*. *Figure 11* shows U.S. Army soldiers responding to urban snipers, reflecting defensive, combat positions. The buildings surrounding the soldiers are modeled naturalistically, with detailed shading suggestive of realistic building proportions. The weapons and uniforms worn by the soldiers are standard issue for urban squads, and the darker background buildings hint at potential danger.

Figure 11. From *America's Army*, 2005. Figure 12. From *SOCOM II: Navy SEALs*, 2005.

Figure 12 demonstrates a single Navy SEAL¹⁸ preparing to shoot a missile launcher. The landscape and background architecture exemplifies an anonymous Middle Eastern location, and the extraordinarily detailed colors of the sky contribute to the scene's lifelike depiction. The scene suggests the SEAL is protecting crated ammunition sheltered under a makeshift tent, and the absence of locals indicates the U.S. military has established this section of the city as a temporary, yet secured operational base. The scene's details go so far as to reveal the taut arm muscles of the SEAL as he is aiming the missile launcher, and to produce such detail requires numerous digital artists who specialize in three-dimensional renditioning of light. Both *America's Army* and *SOCOM II: Navy SEALs* invest great amounts of manpower and dollars into the graphics of these games so that their targeted audience experiences high levels of immersion. It is, after all, their primary means of persuasion in attempting to reach potential U.S. military recruits.

A primary element yet to be addressed related to realism in *Figures 9, 10, 11, and 12* is special auditory sound effects. Within each of these scenes, diegetic and non-diegetic sounds occur. Game players receive immediate auditory feedback when they fire weapons (as introduced earlier, diegetic sounds are the result of actions by the player in the video game). While auditory stimulus related to player actions occurs, non-diegetic sounds are simultaneously

Figure 13. From *America's Army*, 2005.

¹⁸ The *SOCOM II: U.S. Navy SEALs Instruction Manual* defines a Navy SEAL as "well-trained, tactically intelligent students of warfare, masters of hand-to-hand combat, and experts with any weapon from knives to heavy machine guns." Navy SEAL teams are defined as "small, highly lethal attack squads of stealthy soldiers" (2).

playing in America's Army and SOCOM II: Navy Seals video games. These non-diegetic sounds set the scene's mood, foreshadowing a potential threat, or signifying a successfully completed military operation. Both diegetic and non-diegetic sounds are hyper-relevant because they provide context to the game player's situation and increase the immersiveness of the video game environment.

In concluding the discussion section related to Levels of Realism, there is a significant difference between America's Army and SOCOM II: Navy SEALs video games. This difference lies in the manner in which military personnel are

Figure 14. From America's Army, 2005.

injured during the games. The game developers of America's Army purposely minimize the amount of gore (blood and guts) associated with U.S. soldier injuries. Injuries that might be

lethal and gruesome are not unequivocally replicated as actual battlefield injuries. *Figures 13 and 14* demonstrate injured (or possibly dead) soldiers. The wounds and accompanying blood that would typically appear when seeing a wounded soldier are not available for viewer analysis. Perhaps it is safe to assume injuries are de-emphasized because these video games are used as recruitment tools. Video game players are more likely to enlist in the military if the benefits and excitement of battle are emphasized over potential negative repercussions of military enlistment, such as being maimed or killed in the line of duty.

Figure 15. From SOCOM II: Navy SEALs, 2005.

In

Figure 16. From SOCOM II: Navy SEALs, 2005.

contrast to the reticence of America's Army game developers to show injured troops or blood, SOCOM II: Navy SEALs does not demonstrate as much restraint in their video game. *Figure 15* reveals blood flowing down the arm of a marine. *Figure 16* clearly shows blood seeping from the enemy combatant's wounds, where no attempt is made to sanitize the scene. The revelation of the difference between these two military games begs the question – why would America's Army avoid realistic scenes of

violence while SOCOM II: Navy SEALs does not, although both video games are

leveraged as recruiting tools? The answer to this question leads us to the next element of comparative analysis – the video game sponsors.

Both America's Army and SOCOM II: Navy SEALs are sponsored by the Department of Defense. America's Army is sponsored by the U.S. Army and SOCOM II: Navy SEALs is sponsored by Naval Special Warfare Command.¹⁹ But SOCOM II: Navy SEALs partnered with a commercial entity, Sony Computer Entertainment, to produce their video game in part to utilize the company's video gaming programmers, developers, artists, as well as their marketing specialists.²⁰ Recognizing the SOCOM II: Navy SEALs game includes more realistic violence, is it possible the additional violence is linked to Sony Computer Entertainment because blood and guts sell more video games? Without access to game development meetings and confidential military papers, it is impossible to deduce exactly why more violence is found in SOCOM II: Navy SEALs versus America's Army. However, the issue does suggest this is a ripe area for future exploration.

Both the U.S. Army and the U.S. Navy utilize video games as recruitment tools for similar reasons. They recognize a new culture of learning that has accompanied technological advancements within the past 30 years. In the book *Growing up Digital: the Rise of the Net Generation*, Tapscott describes the Internet Generation as being completely immersed in a digital culture of learning, playing, and communicating (1).

Figure 17. Elements required of a Game Development Team. From Summit on Educational Gaming 2006 by the Federation of American Scientists, p. 29.

This Internet Generation has a high comfort level with

computers and every facet of their lives is mediated online through the use of file sharing programs, instant messaging systems, massively multi-player online role-playing games, etc. Multi-tasking is the norm, and the ability to process interactive information very quickly is one glaring characteristic that distinguishes the baby boomers from their offspring. This has not escaped the notice of the Department of Defense. Many studies have shown that playing video games increases a users ability to manipulate objects, improves hand-eye coordination, mental representation, memory and general cognitive skills in terms of exploration and advancement (Macedonia, 35; 158; Tapscott, 6; Ermi and Mayra, 235; Looms, 6). *Figure 18* demonstrates a typical SOCOM II: Navy SEALs player screen, where the following information is given simultaneously: on the right side of the screen, Weapon Data appears including volume, accuracy, range, fire rate and fire modes. On the left side of the screen a list of available weaponry is provided, including weapon tips for the player. *Figure 19* demonstrates an even more information intensive diagram of the video game player's positions, goals, potential targets and topography surrounding the players' virtual environment. From a cognitive perspective, video game players become acclimatized to these information screens offering multiple

Figure 19. Complicated visual information from Army, 2005.

¹⁹ The Naval Special Warfare Command controls all U.S. Navy Special Operations. USSOCOM was formed by the Department of Defense, Congress, and Ronald Reagan in 1987, as a direct result of the failed 1980 rescue attempt to free American hostages in Iran (http://www.specialoperations.com/History/SOCOM_History/Default.htm.)

²⁰ Graphic extracted from the Federation of American Scientists report "Harnessing the power of video games for learning" (29).

data, which in turn speeds up their reaction times.

The cognitive benefits of utilizing video games as recruitment tools have been introduced, but how exactly do video games assist the military's recruitment efforts? Both America's Army and Socom II's mission goals and activities serve as vehicles of indoctrination by inserting the video game player into a pre-defined world of military rules and regulations. Characteristics such as loyalty, duty, respect, selfless service,

Figure 20. From America's Army, 2005. Figure 21. From America's Army, 2005. Figure 22. From America's Army, 2005.

honor, integrity and personal courage are drilled into the character development of each player (Li, 49). *Figures 20, 21, and 22* provide visual examples of the Army's emphasis upon teamwork. The sniper in *Figure 20* is essential to the mission, and the virtual soldier playing the game learns quickly what cultural and social aspects of the team are relevant. *Figure 21* demonstrates three Special Forces soldiers protecting an entire team as they complete their mission. Each member of the team is dependent upon the other in terms of surviving a military assignment. *Figure 22* demonstrates two Special Forces soldiers offering cover fire for their team members as the team extracts itself from a completed mission. All three of these images with textual comments appear on the America's Army website, as well as during normal video game play. The SOCOM II: Navy SEALs screenshots from *Figures 23, 24 and 25* demonstrate that "stealth and lethal teamwork" are required for a four man SEAL fireteam to neutralize terror threats (SOCOM II: U.S. Navy SEALs Instruction Manual, 3). The physical proximity maintained

Figure 23. From SOCOM II: Navy SEALs, 2005. Figure 24. From SOCOM II: Navy SEALs, 2005. Figure 25. From SOCOM II: Navy SEALs, 2005.

by the SEALs reinforces the teamwork ethic drilled into soldiers as they join the U.S. Navy. The SOCOM II: U.S. Navy SEALs Instruction Manual informs players to "Use your team for cooperative engagements. The more you use your teammates during the course of a mission, the higher your Teamwork rating will be" (24). The facilitation of team play in these games functions as an attractant; later, gameplay reinforces this and directs it toward sponsored-desired goals. In addition to emphasizing teamwork, the game developers build into the video game and Instruction Manual a US Navy SEALs ethos of indestructible, highly lethal soldiers, trained to defeat terrorists in any scenario (2). The last paragraph in Chapter One of the Instruction Manual notes that: "Terrorism is a threat to freedom all over the world and the unconventional tactics of U.S. Navy SEALs are needed. This is the time. When they picked a fight, they never planned on fighting these guys" (3).

Reading the above paragraph, the video game player is made to feel privileged to be part of this elitist virtual world of unconventional warfare and teamwork. According to Robert Greene in "The Art of Seduction", "No seduction can proceed without creating illusion, the sense of a world that is real but separate from reality" (307). The illusive yet real world of the video game seduces and persuades video game players whether these gamers are playing commercial off-the-shelf games or U.S. military sponsored games. Freud discusses persuasion from a removed perspective that is completely applicable to video games and their players:

"What distinguishes a suggestion from other kinds of psychical influence, such as a command or the giving of a piece of information or instruction, is that in the case of a suggestion an idea is grounded in another person's brain which is not examined in regard to its origin but is accepted just as though it had arisen spontaneously in that brain – Sigmund Freud (Greene, 213)

Translating this quote in terms of the topic of this paper, the ideas encountered within video games are perhaps absorbed by players without giving any detailed consideration to the whys and wherefores, simply because the immersive nature of the medium demands the player's full attention.

The America's Army video game provides much more material to analyze in terms of military indoctrination in comparison to SOCOM II: Navy SEALs, as the following examples illustrate in *Figures 26-30*.

Figure 26. From America's Army, 2005. The caption accompanying this screenshot says, "Good job Soldier, you scored 85%!" From a psychological perspective, the video game player is offered positive reinforcement.

Figure 27. From America's Army, 2005. The caption accompanying this screenshot says, "Don't endanger the lives of your fellow soldiers." This ties into the primary tenets of the U.S. Military which include competence, loyalty, self-control, courage and a strong sense of duty" (Sweeney, 255).

The game developers of America's Army have shrewdly chosen an effective communication device (video games) that reflects other important elements of persuasion such as "credibility, understanding of the audience, and a solid argument" (HBS Press, 2006). Or to present this in a more traditional manner, "the Greek notion of Kairos [which equates to] right timing and due measure" is a notion the U.S. military has firmly grasped in communicating to their next generation of recruits via the medium of video games (Kinneavy and Eskin, 2000).

Recognizing the potential communication and inculcation of the U.S. military ideologies through the medium of video games, why might this be problematic? The problem with these ideological insertions into video games is succinctly identified by Barry Atkins in *More than a Game*:

"Computer video games offer a 'clean' representation of warfare. The armchair general faced with a computer does not have to concern himself with questions of right or wrong" (4).

Questions of right or wrong are issues that video game players are not given the opportunity to question while they are inserted into and reacting within immersive environments. The average age of tactical shooter video game players further complicates matters because how discerning are pre-teen and teenage children in terms of the entertainment content they are exposed to?

Persuasion within video games occurs on many levels: visual, textual, and contextual. According to Norman Fairclough in *Analyzing Discourse*:

"Language influences perceptions, thought and potentially behavior. Categories provided by a language may make it easier to draw certain conceptual distinctions, and may favor certain ways of perceiving 'reality' or the 'world'" (324).

Language in this instance does not necessarily refer to spoken or textual words, but in my interpretation it is representative of all forms of communication. The context of what is communicated is crucial (a nod here towards social semiotics), and the visual and auditory elements within video games are extremely powerful in their ability to influence players. The ethos pertaining to new technologies cannot be ignored either, and especially within the *Socom II* video game, the "cool" factor related to the latest and greatest in weaponry is fully exploited by the game's developers.²¹

Figure 28. From America's Army, 2005. The accompanying text says, "Helping your teammates is the honorable thing to do." This text reflects additional U.S. military tenets such as "mak[ing] decisions, build[ing] teams, & promote the development of subordinates" (O'Neil et al, 125).

Figure 29. From America's Army, 2005. The accompanying text says, "Let's take out enemy targets!" This encourages a group approach where "the conditions that constitute success of a mission [are] clearly outlined" (O'Neil et al, 125).

Figure 30. From America's Army, 2005. The accompanying text says, "Learning new skills is important to your team's success." Again, emphasis is placed here on teamwork, trust and leadership. According to Platoon Sergeant in the 101st Airborne Division, Tall Afar, Iraq, May 2003, "If you lead me, you, they will follow you into any situation" (Swain, 252).

²¹ According to the official PlayStation of Australia website (http://au.playstation.com/ng/socom_2.jhtml), "more than 15 new weapons [are] include[d] [such as] the AT-4 Light Armored Weapon (LAWs), Rocket Propelled Grenades (RPGs), handguns, assault rifles, sniper rifles, shotguns, sub-machine guns, machine guns, grenades, laser designators, explosives, anti-personnel mines and a new night vision interface. Weapons are realistic in their accuracy and are affected by movement and weapon recoil."

In terms of mission goals within America's Army and Socom II, both video games are utilitarian in approach, emphasizing the value of actions benefiting the community as a whole. The call to military duty equates to doing not what an individual believes is morally correct, but in doing what is necessary for the benefit of the military unit as a whole.²² The participatory simulation aspects of both video games psychologically contributes to and justifies this utilitarian approach. *Figures 20 -22* demonstrate this utilitarian approach, where portions of the team expose themselves to higher risks for the greater good of the group. Coupled soldiers serving as sniper look-outs to provide coverage to the rest of the team as it attempts to evacuate a war zone. A level of immediacy is introduced, with the emphasis placed upon team work; and this simply cannot be communicated through traditional recruiting materials such as pamphlets or T.V. commercials because they lack levels of immersion and interaction that video games provide. *Figures 10 and 11* provide examples of immediate, required feedback where the player must respond to threats to the team as a whole and to him / her as an individual. If shots are not fired at the enemy in a timely manner, an entire squad can be killed off.

A primary criticism of both America's Army and Socom II's video games is the minimizing of the effects of violence. In *Unsettling the Military Entertainment Complex: Video Games and a Pedagogy of Peace*, David Leonard addresses Virilio's²³ thoughts on video games and hegemonic powers:

"Video games are part of the hegemony of new technology, contributing to "fin-de-siècle infantilization", where our consumption, understanding and vision of battle has been reduced to a series of images on screen, further demarcating the ambiguous division between the virtual (warfare) and the real (warfare)" (3).

According to some critics, video games might help train soldiers in the use of weapons and military culture, but they also serve as a medium for desensitization towards matters pertaining to politics, warfare, and the use of technology simply because it exists. Other critics respond by declaring that man will always shape his or her world, regardless of the numerous technological advancements introduced because man's psyche has *a priori* tendencies of self-destruction and self-aggrandizement. In terms of the Targeted Audience as an element of analysis, the U.S. Army offers the clearest definition of who they are trying to reach²⁴, and Major Christopher Chambers²⁵ notes that "29% of young Americans ages 16-24 reported that America's Army video game is one of their leading sources of positive awareness about the Army" (Wood, Summer 2005). Master Chief Dennis Amon, a Naval Science Instructor at Clayton High School in North Carolina, explains that "They play the militaristic games because it gives them a feel for what it is like under combat situations; my cadets range in age from 14 to 18" (Woods, Summer 2005). Recruiters who actively use America's Army as a conscription tool "can get a feel for their [kids] psyche and even their aptitude for

²² One might suggest that U.S. military soldiers make moral decisions in advance, by placing their faith and trust in their chain-of-command, thereby excluding the necessity of making individual moral decisions on the battlefield.

²³ Paul Virilio is known for his book "War and Cinema" published in 1984. The content of this book addresses information, images and how these relate to periods of war.

²⁴ The Stated goal of the America's Army Video Game is that it is "designed to provide young adults with virtual insights into entry-level soldier training and operations to show users what the Army is like" (Woods, *More Than a Game*).

²⁵ U.S. Army retired, Deputy Project Director for America's Army Video Game.

dealing with certain combat type situations" turning the "gamers of today into the soldiers of tomorrow" (Wood, Summer 2005).

While Targeted Audience information related to SOCOM II was difficult to identify, a Report of the Defense Science Board Task Force on The Creation and Dissemination of All Forms of Psychological Operations (PSYOP) in Time of Military Conflict reports that video games are "widely popular" and that media such as these are required to "enhance the creation and dissemination of PSYOP products" (Department of Defense, 2000).²⁶ The U.S. Navy falls within the jurisdiction of the Department of Defense, therefore this assertion is applicable to U.S. Navy recruitment attempts via the SOCOM II video game. The ethical implications of utilizing inculcation devices (such as video games) to reach kids under the age of 18 is not addressed within this paper. Needless to say the ground here is fertile for further research, exploration and debate regarding this topic.

The final element of analysis to review is the popularity of both U.S. military sponsored games. According to the Entertainment Software Association 2006 Expo, "...the total economic impact of the game industry on the U.S. economy is \$18 billion." Why is it relevant to link video games' economic impact with their levels of popularity? Primarily because the economic impact offers an empirical measurement, qualifying in numbers the popularity of the video game. The Federation of American Scientists released a 2006 report on Video Games and Education, concluding that:

"The success of complex video games demonstrates that games can teach higher order thinking skills such as strategic thinking, interpretive analysis, problem solving, plan formulation and execution, and adaptation to rapid change".

The economics sector and learning sectors of society reflect why video games are popular, and measure their popularity in hard currency. In terms of economics, America's Army is completely different from Socom II in the sense that the video game is freely available for download online. Socom II is a game associated with Sony PlayStation II, and therefore has a measurable economic element that America's Army does not have. SOCOM II registered 22,000 simultaneous players online within 48 hours of the game's release in stores and the original SOCOM video game sold two million copies.²⁷ SOCOM II now is listed on Sony's "Best Sellers List of All Times" in terms of video games. America's Army video game, as a free software download, currently reports a total of 7,627,972 registered players, of which 4,262,548 have completed online basic training. As of November 22, 2006, 106,752 new users have registered for the month of November 2006.²⁸

²⁶ A Primary recommendation of the report follows that: "The Task Force recommends that the Office of the Secretary of Defense (OSD) work with the Department of State to fund, position, exercise, and maintain suitable distribution channels and brand identities, insofar as these can be reasonably anticipated for future PSYOP requirements. Policies with respect to the use of new and emerging transnational media need to be developed or refined. Liberal reliance on recognized professionals and the generous use of highly qualified commercial entities are highly recommended. Buying good content on which the messages will "ride" is a necessary and desirable expenditure. The Task Force estimates this investment to be approximately \$10 million per year" (9).

²⁷ Game News: SOCOM II: U.S. Navy SEALs Breaks Online Console Penetration Records by Chairman Steve (<http://gamenews.pcvconsole.com/view.php?news=2216>)

To assure the popularity of the above video games, the U.S. military has in effect thrown \$2 Billion in 2005 towards their development as recruitment tools; in part due to a 2003 Military Recruiting – Trends, Outlooks, and Implications report. The report indicated that the Department of Defense's recruiting ability of high-quality youth²⁹ was hampered by "chang[ing] attitudes towards the military and changes in recruiting processes and resource allocation" (2). The above figures indicate the Department of Defense has achieved their primary goals. According to "How to Win in Iraq" by Krepinevich, Jr., "Both the U.S. Army and the U.S. Marine Corps are exceeding their reenlistment rates."

What might the combination of information related to sponsors, target audience, levels of realism, and popularity of U.S. military video games imply for future cultures and societies? Positive implications for society include focusing more on multimedia learning environments, as studies have shown users learn more efficiently through these multi-modal environments of seeing, hearing, and doing. Negative implications for society include the transparent communication of ideologies to portions of the population who are vulnerable and highly impressionable (e.g. children). Technology in itself is not inherently bad. Rather, it is the means in which it is used and those by whom it is manipulated that becomes somewhat problematic.

CONCLUSIONS

Video games are a powerful ideological tool, capable of inculcating values, ideals and belief systems into its players. The Department of Defense, of which the U.S. Army and the U.S. Navy are members, has finally recognized the inherent value of these video games. Through partnering with commercial interests, the U.S. military now has the ability to produce sophisticated forms of indoctrination, utilizing a popular technology of the Internet Generation. While studies traditionally have focused on video games, kids and violence, it might be more beneficial if society as a whole recognized how new mediums of communication are being used by governments to manipulate and indoctrinate the most vulnerable members of the population – our kids.

²⁹ High-quality youth are defined as those with high I. Q's and a minimum of a high school diploma.

APPENDIX 1 – THE BELMONT REPORT ETHICAL PRINCIPLES AND GUIDELINES FOR THE PROTECTION OF HUMAN SUBJECTS OF RESEARCH

The National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research April 18, 1979

SUMMARY: On July 12, 1974, the National Research Act (Pub. L. 93-348) was signed into law, there-by creating the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research. One of the charges to the Commission was to identify the basic ethical principles that should underlie the conduct of biomedical and behavioral research involving human subjects and to develop guidelines which should be followed to assure that such research is conducted in accordance with those principles. In carrying out the above, the Commission was directed to consider: **(i)** the boundaries between biomedical and behavioral research and the accepted and routine practice of medicine, **(ii)** the role of assessment of risk-benefit criteria in the determination of the appropriateness of research involving human subjects, **(iii)** appropriate guidelines for the selection of human subjects for participation in such research and **(iv)** the nature and definition of informed consent in various research settings. The Belmont Report attempts to summarize the basic ethical principles identified by the Commission in the course of its deliberations. It is the outgrowth of an intensive four-day period of discussions that were held in February 1976 at the Smithsonian Institution's Belmont Conference Center supplemented by the monthly deliberations of the Commission that were held over a period of nearly four years. It is a statement of basic ethical principles and guidelines that should assist in resolving the ethical problems that surround the conduct of research with human subjects. By publishing the Report in the Federal Register, and providing reprints upon request, the Secretary intends that it may be made readily available to scientists, members of Institutional Review Boards, and Federal employees. The two-volume Appendix, containing the lengthy reports of experts and specialists who assisted the Commission in fulfilling this part of its charge, is available as DHEW Publication No. (OS) 78-0013 and No. (OS) 78-0014, for sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Unlike most other reports of the Commission, the Belmont Report does not make specific recommendations for administrative action by the Secretary of Health, Education, and Welfare. Rather, the Commission recommended that the Belmont Report be adopted in its entirety, as a statement of the Department's policy.

NATIONAL COMMISSION FOR THE PROTECTION OF HUMAN SUBJECTS OF BIOMEDICAL AND BEHAVIORAL RESEARCH MEMBERS OF THE COMMISSION

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Research Ethics and U.S. Military Videogame Play:
A Research Proposal for Studying the Visual Discourse of U.S. Military Videogames

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TABLE OF CONTENTS Ethical Principles and Guidelines for Research Involving Human Subjects A. Boundaries Between Practice and Research B. Basic Ethical Principles

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ETHICAL PRINCIPLES & GUIDELINES FOR RESEARCH INVOLVING HUMAN SUBJECTS Scientific research has produced substantial social benefits. It has also posed some troubling ethical questions. Public attention was drawn to these questions by reported abuses of human subjects in biomedical experiments, especially during the Second World War. During the Nuremberg War Crime Trials, the Nuremberg code was drafted as a set of standards for judging physicians and scientists who had conducted biomedical experiments on concentration camp prisoners. This code became the prototype of many later codes **(1)** intended to assure that research involving human subjects would be carried out in an ethical manner.

The codes consist of rules, some general, others specific that guide the investigators or the reviewers of research in their work. Such rules often are inadequate to cover complex situations; at times they come into conflict, and they are frequently difficult to interpret or apply. Broader ethical principles will provide a basis on which specific rules may be formulated, criticized and interpreted. Three principles, or general prescriptive judgments, that are relevant to research involving human subjects are identified in this statement. Other principles may also be relevant. These three are comprehensive, however, and are stated at a level of generalization that should assist scientists, subjects, reviewers and interested citizens to understand the ethical issues inherent in research involving human subjects. These principles cannot always be applied so as to resolve beyond dispute particular ethical problems. The objective is to provide an analytical framework that will guide the resolution of ethical problems arising from research involving human subjects. This statement consists of a distinction between research and practice, a discussion of the three basic ethical principles, and remarks about the application of these principles.

PART A: BOUNDARIES BETWEEN PRACTICE & RESEARCH

A. BOUNDARIES BETWEEN PRACTICE AND RESEARCH It is important to distinguish between biomedical and behavioral research, on the one hand, and the practice of accepted therapy on the other, in order to know what activities ought to undergo review for the protection of human subjects of research. The distinction between research and practice is blurred partly because both often occur together

(as in research designed to evaluate a therapy) and partly because notable departures from standard practice are often called "experimental" when the terms "experimental" and "research" are not carefully defined. For the most part, the term "practice" refers to interventions that are designed solely to enhance the well-being of an individual patient or client and that have a reasonable expectation of success. The purpose of medical or behavioral practice is to provide diagnosis, preventive treatment or therapy to particular individuals. **(2)** By contrast, the term "research" designates an activity designed to test an hypothesis, permit conclusions to be drawn, and thereby to develop or contribute to generalizable knowledge (expressed, for example, in theories, principles, and statements of relationships). Research is usually described in a formal protocol that sets forth an objective and a set of procedures designed to reach that objective. When a clinician departs in a significant way from standard or accepted practice, the innovation does not, in and of itself, constitute research. The fact that a procedure is "experimental," in the sense of new, untested or different, does not automatically place it in the category of research. Radically new procedures of this description should, however, be made the object of formal research at an early stage in order to determine whether they are safe and effective. Thus, it is the responsibility of medical practice committees, for example, to insist that a major innovation be incorporated into a formal research project. **(3)** Research and practice may be carried on together when research is designed to evaluate the safety and efficacy of a therapy. This need not cause any confusion regarding whether or not the activity requires review; the general rule is that if there is any element of research in an activity, that activity should undergo review for the protection of human subjects.

PART B: BASIC ETHICAL PRINCIPLES

B. BASIC ETHICAL PRINCIPLES The expression "basic ethical principles" refers to those general judgments that serve as a basic justification for the many particular ethical prescriptions and evaluations of human actions. Three basic principles, among those generally accepted in our cultural tradition, are particularly relevant to the ethics of research involving human subjects: the principles of respect of persons, beneficence and justice. **1. Respect for Persons.** -- Respect for persons incorporates at least two ethical convictions: first, that individuals should be treated as autonomous agents, and second, that persons with diminished autonomy are entitled to protection. The principle of respect for persons thus divides into two separate moral requirements: the requirement to acknowledge autonomy and the requirement to protect those with diminished autonomy. An autonomous person is an individual capable of deliberation about personal goals and of acting under the direction of such deliberation. To respect autonomy is to give weight to autonomous persons' considered opinions and choices while refraining from obstructing their actions unless they are clearly detrimental to others. To show lack of respect for an autonomous agent is to repudiate that person's considered judgments, to deny an individual the freedom to act on those considered judgments, or to withhold information necessary to make a considered judgment, when there are no compelling reasons to do so. However, not every human being is capable of self-determination. The capacity for self-determination matures during an individual's

life, and some individuals lose this capacity wholly or in part because of illness, mental disability, or circumstances that severely restrict liberty. Respect for the immature and the incapacitated may require protecting them as they mature or while they are incapacitated. Some persons are in need of extensive protection, even to the point of excluding them from activities which may harm them; other persons require little protection beyond making sure they undertake activities freely and with awareness of possible adverse consequence. The extent of protection afforded should depend upon the risk of harm and the likelihood of benefit. The judgment that any individual lacks autonomy should be periodically reevaluated and will vary in different situations. In most cases of research involving human subjects, respect for persons demands that subjects enter into the research voluntarily and with adequate information. In some situations, however, application of the principle is not obvious. The involvement of prisoners as subjects of research provides an instructive example. On the one hand, it would seem that the principle of respect for persons requires that prisoners not be deprived of the opportunity to volunteer for research. On the other hand, under prison conditions they may be subtly coerced or unduly influenced to engage in research activities for which they would not otherwise volunteer. Respect for persons would then dictate that prisoners be protected. Whether to allow prisoners to "volunteer" or to "protect" them presents a dilemma. Respecting persons, in most hard cases, is often a matter of balancing competing claims urged by the principle of respect itself.

2. Beneficence. -- Persons are treated in an ethical manner not only by respecting their decisions and protecting them from harm, but also by making efforts to secure their well-being. Such treatment falls under the principle of beneficence. The term "beneficence" is often understood to cover acts of kindness or charity that go beyond strict obligation. In this document, beneficence is understood in a stronger sense, as an obligation. Two general rules have been formulated as complementary expressions of beneficent actions in this sense: **(1)** do not harm and **(2)** maximize possible benefits and minimize possible harms. The Hippocratic maxim "do no harm" has long been a fundamental principle of medical ethics. Claude Bernard extended it to the realm of research, saying that one should not injure one person regardless of the benefits that might come to others. However, even avoiding harm requires learning what is harmful; and, in the process of obtaining this information, persons may be exposed to risk of harm. Further, the Hippocratic Oath requires physicians to benefit their patients "according to their best judgment." Learning what will in fact benefit may require exposing persons to risk. The problem posed by these imperatives is to decide when it is justifiable to seek certain benefits despite the risks involved, and when the benefits should be foregone because of the risks. The obligations of beneficence affect both individual investigators and society at large, because they extend both to particular research projects and to the entire enterprise of research. In the case of particular projects, investigators and members of their institutions are obliged to give forethought to the maximization of benefits and the reduction of risk that might occur from the research investigation. In the case of scientific research in general, members of the larger society are obliged to recognize the longer term benefits and risks that may result from the improvement of knowledge and from the development of novel medical, psychotherapeutic, and social procedures. The principle of beneficence often occupies a well-defined justifying role in many areas of

research involving human subjects. An example is found in research involving children. Effective ways of treating childhood diseases and fostering healthy development are benefits that serve to justify research involving children -- even when individual research subjects are not direct beneficiaries. Research also makes it possible to avoid the harm that may result from the application of previously accepted routine practices that on closer investigation turn out to be dangerous. But the role of the principle of beneficence is not always so unambiguous. A difficult ethical problem remains, for example, about research that presents more than minimal risk without immediate prospect of direct benefit to the children involved. Some have argued that such research is inadmissible, while others have pointed out that this limit would rule out much research promising great benefit to children in the future. Here again, as with all hard cases, the different claims covered by the principle of beneficence may come into conflict and force difficult choices. **3.**

Justice. -- Who ought to receive the benefits of research and bear its burdens? This is a question of justice, in the sense of "fairness in distribution" or "what is deserved." An injustice occurs when some benefit to which a person is entitled is denied without good reason or when some burden is imposed unduly. Another way of conceiving the principle of justice is that equals ought to be treated equally. However, this statement requires explication. Who is equal and who is unequal? What considerations justify departure from equal distribution? Almost all commentators allow that distinctions based on experience, age, deprivation, competence, merit and position do sometimes constitute criteria justifying differential treatment for certain purposes. It is necessary, then, to explain in what respects people should be treated equally. There are several widely accepted formulations of just ways to distribute burdens and benefits. Each formulation mentions some relevant property on the basis of which burdens and benefits should be distributed. These formulations are **(1)** to each person an equal share, **(2)** to each person according to individual need, **(3)** to each person according to individual effort, **(4)** to each person according to societal contribution, and **(5)** to each person according to merit. Questions of justice have long been associated with social practices such as punishment, taxation and political representation. Until recently these questions have not generally been associated with scientific research. However, they are foreshadowed even in the earliest reflections on the ethics of research involving human subjects. For example, during the 19th and early 20th centuries the burdens of serving as research subjects fell largely upon poor ward patients, while the benefits of improved medical care flowed primarily to private patients. Subsequently, the exploitation of unwilling prisoners as research subjects in Nazi concentration camps was condemned as a particularly flagrant injustice. In this country, in the 1940's, the Tuskegee syphilis study used disadvantaged, rural black men to study the untreated course of a disease that is by no means confined to that population. These subjects were deprived of demonstrably effective treatment in order not to interrupt the project, long after such treatment became generally available. Against this historical background, it can be seen how conceptions of justice are relevant to research involving human subjects. For example, the selection of research subjects needs to be scrutinized in order to determine whether some classes (e.g., welfare patients, particular racial and ethnic minorities, or persons confined to institutions) are being systematically selected simply because of their

easy availability, their compromised position, or their manipulability, rather than for reasons directly related to the problem being studied. Finally, whenever research supported by public funds leads to the development of therapeutic devices and procedures, justice demands both that these not provide advantages only to those who can afford them and that such research should not unduly involve persons from groups unlikely to be among the beneficiaries of subsequent applications of the research.

PART C: APPLICATIONS

C. APPLICATIONS Applications of the general principles to the conduct of research leads to consideration of the following requirements: informed consent, risk/benefit assessment, and the selection of subjects of research. **1. Informed Consent.** -- Respect for persons requires that subjects, to the degree that they are capable, be given the opportunity to choose what shall or shall not happen to them. This opportunity is provided when adequate standards for informed consent are satisfied. While the importance of informed consent is unquestioned, controversy prevails over the nature and possibility of an informed consent. Nonetheless, there is widespread agreement that the consent process can be analyzed as containing three elements: information, comprehension and voluntariness. **Information.** Most codes of research establish specific items for disclosure intended to assure that subjects are given sufficient information. These items generally include: the research procedure, their purposes, risks and anticipated benefits, alternative procedures (where therapy is involved), and a statement offering the subject the opportunity to ask questions and to withdraw at any time from the research. Additional items have been proposed, including how subjects are selected, the person responsible for the research, etc. However, a simple listing of items does not answer the question of what the standard should be for judging how much and what sort of information should be provided. One standard frequently invoked in medical practice, namely the information commonly provided by practitioners in the field or in the locale, is inadequate since research takes place precisely when a common understanding does not exist. Another standard, currently popular in malpractice law, requires the practitioner to reveal the information that reasonable persons would wish to know in order to make a decision regarding their care. This, too, seems insufficient since the research subject, being in essence a volunteer, may wish to know considerably more about risks gratuitously undertaken than do patients who deliver themselves into the hand of a clinician for needed care. It may be that a standard of "the reasonable volunteer" should be proposed: the extent and nature of information should be such that persons, knowing that the procedure is neither necessary for their care nor perhaps fully understood, can decide whether they wish to participate in the furthering of knowledge. Even when some direct benefit to them is anticipated, the subjects should understand clearly the range of risk and the voluntary nature of participation. A special problem of consent arises where informing subjects of some pertinent aspect of the research is likely to impair the validity of the research. In many cases, it is sufficient to indicate to subjects that they are being invited to participate in research of which some features will not be revealed until the research is concluded. In all cases of research involving incomplete disclosure, such research

is justified only if it is clear that **(1)** incomplete disclosure is truly necessary to accomplish the goals of the research, **(2)** there are no undisclosed risks to subjects that are more than minimal, and **(3)** there is an adequate plan for debriefing subjects, when appropriate, and for dissemination of research results to them. Information about risks should never be withheld for the purpose of eliciting the cooperation of subjects, and truthful answers should always be given to direct questions about the research. Care should be taken to distinguish cases in which disclosure would destroy or invalidate the research from cases in which disclosure would simply inconvenience the investigator. **Comprehension.** The manner and context in which information is conveyed is as important as the information itself. For example, presenting information in a disorganized and rapid fashion, allowing too little time for consideration or curtailing opportunities for questioning, all may adversely affect a subject's ability to make an informed choice. Because the subject's ability to understand is a function of intelligence, rationality, maturity and language, it is necessary to adapt the presentation of the information to the subject's capacities. Investigators are responsible for ascertaining that the subject has comprehended the information. While there is always an obligation to ascertain that the information about risk to subjects is complete and adequately comprehended, when the risks are more serious, that obligation increases. On occasion, it may be suitable to give some oral or written tests of comprehension. Special provision may need to be made when comprehension is severely limited -- for example, by conditions of immaturity or mental disability. Each class of subjects that one might consider as incompetent (e.g., infants and young children, mentally disable patients, the terminally ill and the comatose) should be considered on its own terms. Even for these persons, however, respect requires giving them the opportunity to choose to the extent they are able, whether or not to participate in research. The objections of these subjects to involvement should be honored, unless the research entails providing them a therapy unavailable elsewhere. Respect for persons also requires seeking the permission of other parties in order to protect the subjects from harm. Such persons are thus respected both by acknowledging their own wishes and by the use of third parties to protect them from harm. The third parties chosen should be those who are most likely to understand the incompetent subject's situation and to act in that person's best interest. The person authorized to act on behalf of the subject should be given an opportunity to observe the research as it proceeds in order to be able to withdraw the subject from the research, if such action appears in the subject's best interest. **Voluntariness.** An agreement to participate in research constitutes a valid consent only if voluntarily given. This element of informed consent requires conditions free of coercion and undue influence. Coercion occurs when an overt threat of harm is intentionally presented by one person to another in order to obtain compliance. Undue influence, by contrast, occurs through an offer of an excessive, unwarranted, inappropriate or improper reward or other overture in order to obtain compliance. Also, inducements that would ordinarily be acceptable may become undue influences if the subject is especially vulnerable. Unjustifiable pressures usually occur when persons in positions of authority or commanding influence -- especially where possible sanctions are involved -- urge a course of action for a subject. A continuum of such influencing factors exists, however, and it is impossible to state precisely where justifiable persuasion ends and undue influence

begins. But undue influence would include actions such as manipulating a person's choice through the controlling influence of a close relative and threatening to withdraw health services to which an individual would otherwise be entitled. **2. Assessment of Risks and Benefits.** -- The assessment of risks and benefits requires a careful array of relevant data, including, in some cases, alternative ways of obtaining the benefits sought in the research. Thus, the assessment presents both an opportunity and a responsibility to gather systematic and comprehensive information about proposed research. For the investigator, it is a means to examine whether the proposed research is properly designed. For a review committee, it is a method for determining whether the risks that will be presented to subjects are justified. For prospective subjects, the assessment will assist the determination whether or not to participate. **The Nature and Scope of Risks and Benefits.** The requirement that research be justified on the basis of a favorable risk/benefit assessment bears a close relation to the principle of beneficence, just as the moral requirement that informed consent be obtained is derived primarily from the principle of respect for persons. The term "risk" refers to a possibility that harm may occur. However, when expressions such as "small risk" or "high risk" are used, they usually refer (often ambiguously) both to the chance (probability) of experiencing a harm and the severity (magnitude) of the envisioned harm. The term "benefit" is used in the research context to refer to something of positive value related to health or welfare. Unlike, "risk," "benefit" is not a term that expresses probabilities. Risk is properly contrasted to probability of benefits, and benefits are properly contrasted with harms rather than risks of harm. Accordingly, so-called risk/benefit assessments are concerned with the probabilities and magnitudes of possible harm and anticipated benefits. Many kinds of possible harms and benefits need to be taken into account. There are, for example, risks of psychological harm, physical harm, legal harm, social harm and economic harm and the corresponding benefits. While the most likely types of harms to research subjects are those of psychological or physical pain or injury, other possible kinds should not be overlooked. Risks and benefits of research may affect the individual subjects, the families of the individual subjects, and society at large (or special groups of subjects in society). Previous codes and Federal regulations have required that risks to subjects be outweighed by the sum of both the anticipated benefit to the subject, if any, and the anticipated benefit to society in the form of knowledge to be gained from the research. In balancing these different elements, the risks and benefits affecting the immediate research subject will normally carry special weight. On the other hand, interests other than those of the subject may on some occasions be sufficient by themselves to justify the risks involved in the research, so long as the subjects' rights have been protected. Beneficence thus requires that we protect against risk of harm to subjects and also that we be concerned about the loss of the substantial benefits that might be gained from research. **The Systematic Assessment of Risks and Benefits.** It is commonly said that benefits and risks must be "balanced" and shown to be "in a favorable ratio." The metaphorical character of these terms draws attention to the difficulty of making precise judgments. Only on rare occasions will quantitative techniques be available for the scrutiny of research protocols. However, the idea of systematic, nonarbitrary analysis of risks and benefits should be emulated insofar as possible. This ideal requires those making decisions about the justifiability of

research to be thorough in the accumulation and assessment of information about all aspects of the research, and to consider alternatives systematically. This procedure renders the assessment of research more rigorous and precise, while making communication between review board members and investigators less subject to misinterpretation, misinformation and conflicting judgments. Thus, there should first be a determination of the validity of the presuppositions of the research; then the nature, probability and magnitude of risk should be distinguished with as much clarity as possible. The method of ascertaining risks should be explicit, especially where there is no alternative to the use of such vague categories as small or slight risk. It should also be determined whether an investigator's estimates of the probability of harm or benefits are reasonable, as judged by known facts or other available studies. Finally, assessment of the justifiability of research should reflect at least the following considerations: **(i)** Brutal or inhumane treatment of human subjects is never morally justified. **(ii)** Risks should be reduced to those necessary to achieve the research objective. It should be determined whether it is in fact necessary to use human subjects at all. Risk can perhaps never be entirely eliminated, but it can often be reduced by careful attention to alternative procedures. **(iii)** When research involves significant risk of serious impairment, review committees should be extraordinarily insistent on the justification of the risk (looking usually to the likelihood of benefit to the subject -- or, in some rare cases, to the manifest voluntariness of the participation). **(iv)** When vulnerable populations are involved in research, the appropriateness of involving them should itself be demonstrated. A number of variables go into such judgments, including the nature and degree of risk, the condition of the particular population involved, and the nature and level of the anticipated benefits. **(v)** Relevant risks and benefits must be thoroughly arrayed in documents and procedures used in the informed consent process.

3. Selection of Subjects. -- Just as the principle of respect for persons finds expression in the requirements for consent, and the principle of beneficence in risk/benefit assessment, the principle of justice gives rise to moral requirements that there be fair procedures and outcomes in the selection of research subjects. Justice is relevant to the selection of subjects of research at two levels: the social and the individual. Individual justice in the selection of subjects would require that researchers exhibit fairness: thus, they should not offer potentially beneficial research only to some patients who are in their favor or select only "undesirable" persons for risky research. Social justice requires that distinction be drawn between classes of subjects that ought, and ought not, to participate in any particular kind of research, based on the ability of members of that class to bear burdens and on the appropriateness of placing further burdens on already burdened persons. Thus, it can be considered a matter of social justice that there is an order of preference in the selection of classes of subjects (e.g., adults before children) and that some classes of potential subjects (e.g., the institutionalized mentally infirm or prisoners) may be involved as research subjects, if at all, only on certain conditions. Injustice may appear in the selection of subjects, even if individual subjects are selected fairly by investigators and treated fairly in the course of research. Thus injustice arises from social, racial, sexual and cultural biases institutionalized in society. Thus, even if individual researchers are treating their research subjects fairly, and even if IRBs are taking care to assure that subjects are selected fairly within a particular

institution, unjust social patterns may nevertheless appear in the overall distribution of the burdens and benefits of research. Although individual institutions or investigators may not be able to resolve a problem that is pervasive in their social setting, they can consider distributive justice in selecting research subjects. Some populations, especially institutionalized ones, are already burdened in many ways by their infirmities and environments. When research is proposed that involves risks and does not include a therapeutic component, other less burdened classes of persons should be called upon first to accept these risks of research, except where the research is directly related to the specific conditions of the class involved. Also, even though public funds for research may often flow in the same directions as public funds for health care, it seems unfair that populations dependent on public health care constitute a pool of preferred research subjects if more advantaged populations are likely to be the recipients of the benefits. One special instance of injustice results from the involvement of vulnerable subjects. Certain groups, such as racial minorities, the economically disadvantaged, the very sick, and the institutionalized may continually be sought as research subjects, owing to their ready availability in settings where research is conducted. Given their dependent status and their frequently compromised capacity for free consent, they should be protected against the danger of being involved in research solely for administrative convenience, or because they are easy to manipulate as a result of their illness or socioeconomic condition.

(1) Since 1945, various codes for the proper and responsible conduct of human experimentation in medical research have been adopted by different organizations. The best known of these codes are the Nuremberg Code of 1947, the Helsinki Declaration of 1964 (revised in 1975), and the 1971 Guidelines (codified into Federal Regulations in 1974) issued by the U.S. Department of Health, Education, and Welfare. Codes for the conduct of social and behavioral research have also been adopted, the best known being that of the American Psychological Association, published in 1973. (2) Although practice usually involves interventions designed solely to enhance the well-being of a particular individual, interventions are sometimes applied to one individual for the enhancement of the well-being of another (e.g., blood donation, skin grafts, organ transplants) or an intervention may have the dual purpose of enhancing the well-being of a particular individual, and, at the same time, providing some benefit to others (e.g., vaccination, which protects both the person who is vaccinated and society generally). The fact that some forms of practice have elements other than immediate benefit to the individual receiving an intervention, however, should not confuse the general distinction between research and practice. Even when a procedure applied in practice may benefit some other person, it remains an intervention designed to enhance the well-being of a particular individual or groups of individuals; thus, it is practice and need not be reviewed as research. (3) Because the problems related to social experimentation may differ substantially from those of biomedical and behavioral research, the Commission specifically declines to make any policy determination regarding such research at this time. Rather, the Commission believes that the problem ought to be addressed by one of its successor bodies.

Research Ethics and U.S. Military Videogame Play:
A Research Proposal for Studying the Visual Discourse of U.S. Military Videogames
