AESTHETICS AND THE INTERNET:
SHIFTING DEFINITIONS OF REALITY

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by
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ABSTRACT

This study involves an in-depth philosophical inquiry into how the aesthetics of the more recent technological environment of the Internet are capable of altering the viewers’ perception of reality and, as a result, of changing the definitions of reality. Review of related literature is used in an attempt to analyze the role which aesthetics play in the current merger of art and technology and their effect on reality. Aesthetic theory of the past does not correctly correspond to or cannot fully explain the relation between aesthetics and the newer computer-mediated art medium. The Internet with its strong imagery and virtual reality capabilities instead requires an updated aesthetic paradigm that emphasizes reality as a major component.

This thesis focuses on a new aesthetic paradigm that will lead toward a better understanding of computer mediated art and its connection to reality. This aesthetic paradigm is developed in response to the continual conveyance of reality transmitted through
representational imagery on the Internet. The beauty of the imagery and the realities which it represents form a joint and powerful form of communication. Trying to keep beauty and truth separate in the attempt to define the aesthetics, such as Kant and others have done, is not going to enhance today's audience understanding. Art and truth, seen as working together, can convey the meaning of the realities of the new technology. Every new medium brings with it questions and uncertainty. A new aesthetic paradigm, which includes beauty or taste as well as cognition, would help create definitions capable of explaining computer-mediated art. The new definitions lead to a greater understanding of the art and thus the total experience of it.

In this study, I have shown that forming a new aesthetic paradigm requires a progressive and theoretical path. This path will lead to an aesthetic paradigm capable of addressing and explaining the shifting definitions of reality conveyed to us through the computer. The new merger of art, aesthetics, and technology will convey idea and imagery to the masses in the most beneficial manner.
Dedicated to my family
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CHAPTER 1
INTRODUCTION

The Problem

Background to the Problem

The computer and digital technologies are increasingly becoming powerful and influential tools of expression in the world. As the twentieth century draws to a climax, the emergence of the virtual machine becomes an appropriate symbol for a century of tumultuous change ignited by the industrial revolution of the previous age. Art is intimately linked to the zeitgeist, meaning spirit or trend of thought of an age, as it gives expression to, or reflection of those deep cultural currents that shape every age. “As such, art cannot be isolated from technology, but must embrace it and offer perspective to, as well as expression of, the digital milieu” (Porett, 1994, p. 32).

This opinion stresses the fact that there is a need for a careful examination of the ongoing and intensified merger of art and technology in today's world. This merger implies that art and
technology are applied jointly to produce visual imagery that is confronting society extensively and on a daily basis through such technological environments as the Internet and World Wide Web. On a global scale, this merger of art and technology is vastly expanding and changing rapidly. Globally, this zeitgeist emphasizes the prominent role technology plays in our lives. Increasingly, our daily environments are filled with new and more advanced technological devices, including computers and their various technological environments. Every new technological device that has been introduced to society has gone through an evaluation period before total acceptance. After the proper evaluation period, these new technologies are then less likely to be regarded as some exotic device and the chance is also greater that they will be incorporated as other objects that have previously surrounded us (Porett, 1994). Many new mediums have also brought forth certain physical locations, for example the telephone is installed and used in the telephone booth; film is screened in the cinema; and a television is placed and viewed in the living room (Leopoldseder & Schopf, 1996). “Likewise, the introduction of the new technological devices of this new age will lead to the creative use of physical locations which
best suit the particular technology and which most effectively incorporate the technology into our daily lives” (Leopoldseder & Schopf, 1996, p. 15). All of this technology and its interrelationship with art, mediates our daily interaction with the world.

“The segregation of art within culture as only an aesthetic phenomenon, unlike human activities that are guided by practical needs, objective reality and natural laws, will become obsolete entirely” (Kagan, 1994, p. 409). Instead, art and technology will form a merger that leads us into the next century. The power of this merger needs careful analysis.

As an individual immersed in the technological culture, I realize the need for a careful analysis of the interaction, and of the reintegration of art, technology and culture. I believe, that art educators should examine the aesthetic values raised. The educational values of the merger and their corresponding influence on society also need to be investigated. Any new technology occupies a foreign space in society that is overflowing with ethical and aesthetic questions and each new development encounters new problems (Lucas, 1993). “It is difficult for people to orient themselves in a rapidly transforming field and this is especially
true when we consider the challenge that technology presents to the traditional and contemporary assumptions about the transforming powers of art” (Lucas, 1993, p. 335). Perhaps art education can assist people to orient themselves, at least towards those areas of technological change resulting from the art-technology reintegration.

**Statement of the Problem/Research Questions**

The reintegration of art and technology involves various technological environments which are capable of relaying information. One of the most influential conveyors of visual imagery is the Internet and World Wide Web. This widely used technological environment is a powerful conveyor of visual imagery and it has a great potential to confront the viewer with an interpretation of reality, one that is subjective. A fantasy or free play of creative imagination has been applied to a subject, by way of visual imagery, and the viewer is the recipient of the alteration. The viewer is receiving material in a second-hand nature. The viewer is also conveyed a message. My research explores the widespread marketing of visual imagery and the resulting altered state of reality which is created and exemplified in the use of the Internet. The term
marketing of visual imagery emphasizes the commercialization of visual art and its corresponding aesthetics, via the Internet, to create an interpretive work for the viewer. In fact, the word "interpret" is defined as representing by means of art or to bring to realization by performance. Those persons creating work for the Internet are, by means of art and aesthetics, creating a visual performance for the viewer. This public presentation or exhibition has the ability to enhance and alter the viewer's perception of what is real. Reality has become the key issue to the creator, educator, and viewer in the analysis of this particular technological environment and its influence in society.

The Internet, the technological environment which I have chosen, is being carried out in various applications and there is much analysis being done on them. This analysis is of a theoretical nature and is one which looks not only at how the current technology is applied and is influencing society, but also how earlier technology was regarded in society. Various technologies which were introduced to society earlier, such as photography, television, and advertising, prove to be insightful conceptual comparisons to the newer technology. One such example is that of Edward Steichen and
his use of photography for advertising purposes, combining the commercial and fine arts together, resulting in an alteration of reality and a creation of a fantasy effect. Another such important comparison is that of the German based design school and movement, the Bauhaus, which was striving to create a union of art and technology in society. These examples point out "that art is no longer confined to the realms of aesthetics and edification, but it has instead become a nutrient of the consumer economy fed to us by art's commercial offspring, product and graphic design, advertising art, architecture, and now computer technology" (Allen, 1983, p. 3). There is a consumer revolution that is rapidly increasing in society and it relies on aesthetics. The ethics regarding technology in society also surfaces in all of the analysis. "It is important that the producers, educators, and users of technology be aware of the question of values" (Russell, 1994, p. 170). My investigation centers on the theoretical nature of some specific applications as well as theoretical research done by others on these issues.

Art education is a central theme which is emphasized in all phases of this literary analysis of available literature, from looking at the creation, marketing, aesthetic interpretation, to ethical
decisions. The art educator with a sound knowledge of aesthetics and technology is most capable of a careful and proper analysis of the issue of reality. The goal of this study is therefore to emphasize and prove the valuable role which an art educator may have in defining technological applications of a commercial nature aimed at a range of audiences. The underlying reason for writing about the rapid increase in the commercialization of the visual arts is due to the accelerated usage of the interactive technology of the Internet and its strong imaging capabilities. My question, then is how the aesthetics of this technological environment are capable of altering the viewer's sense of reality and changing the definitions of reality.

Theoretical Framework

Review of Related Literature

Since the area of Internet is a more recent one, the corresponding literature resource will rely heavily on current periodicals that deal with various aspects of the relationship between art and technology. Some insightful books about the new technology though are starting to be published and they too will be used. I will also use to some extent, periodicals and books that explore dealings with comparable technologies and how they were
theorized about and applied. Researchers are investigating this powerful medium from a variety of different approaches and have consequently documented their findings in articles in several categories of technology and art based periodicals and books. Current journals are indispensable in discovering and documenting these new findings. These journals are ones such as The Journal of Aesthetics and Art Criticism, Leonardo, Studies in Art Education, British Journal of Educational Technology, Art Journal, and C-Theory. Several articles in these journals discuss “the design of information systems for private, public, or mixed use and deal with unresolved questions about artistic, political, economic, and social implications of integrated media” (Jones, 1991, p. 153). “Potential effects of this technology are extensive for the arts, humanities, sciences, and social sciences as well as the applied fields such as education” (p.153). “To best examine the form, content, and conceptual basis of this new technology it should be examined from the standpoint of contemporary scientific, theoretical, aesthetic, and critical theories” (p. 153). Such contemporary theory is dealt with in these resources and will be used for analysis in this thesis.

Chris Jenks' book "Visual Culture" (1995) examines the
theoretical and sociological impact of art based technology from a visual standpoint. “The problem of theorizing vision as a social practice begins when we investigate our ways of understanding things within modern Western culture” (p. 2). This theoretical and sociological analysis of modern Western culture, emphasizing technology, can clarify how art and technology can function in this modern society. Art and technology will form our visual culture and therefore it is necessary to understand their role in modern society. These literary comparative investigations will emphasize how this merger in modern society is creating a consumer revolution that relies on aesthetics.

Another insightful literature resource is the work of Gregory L. Ulmer entitled, "Heuretics: the Logic of Invention." Ulmer (1994) is investigating computer multimedia “not just as a technology but as an academic form of writing on a screen” (p. 17). Ulmer compares this electronic writing to drama performance in regard to “the ability to produce the ‘reality effect’ for an audience” (p. 115). Both theatre and computer technology are presenting a production to an audience and in return the audience is left to interpret and question what is real and what is not. Ulmer's work can be used to emphasize
the effect which the Internet, an electronic writing medium, is having on society's perception of reality.

Jean Baudrillard is another individual who is involved in investigating how computer technology is related to the changing societal definition of reality. Baudrillard regards the acceleration of technology as a factor in the liberation from the real and from history. Everything we need to know is being fed to us via the computer and the result is a global fantasy. Baudrillard is emphasizing how powerful this technology can be in influencing society's view towards reality and historical reference (Baudrillard, 1993).

The aspect of computer visual imagery and its forms of representation in society is investigated by Timothy Druckrey in "Culture on the Brink: Ideologies of Technology." Druckrey (1994) emphasizes how digital-imaging technologies are capable of processing information in a manner that dramatizes the content. In addition, Druckrey stresses "because technology is being so heavily incorporated within the forms of everyday life, society should therefore be informed of how this dramatization will influence them" (p. 12). The nature of reality, once again is the key issue in
regard to how the technology will be presented and interpreted.

In her book, "From Idolatry to Advertising: Visual Art and Contemporary Culture," Susan Josephson (1996) takes a theoretical look at the way in which art combined with technology has obtained more power in culture than ever before. She goes on to point out how society is obtaining new values and lifestyles from this combination. Josephson, also describes the distinction between different types of art forms and then investigates the types which are being generated by the emerging technology. "This emerging technology with its powerful imagery is becoming an idol to society, an external mind which we rely on to give us our interpretation of reality" (p. 223).

All of the mentioned literature sources as well as additional ones will be gathered for analysis in an effort to stress the ongoing merger of art and technology and its effect on society's perception of reality. This educational synthesis of shared knowledge is a necessary means of bringing understanding to an emerging field that is altering daily functioning in the world.

Purpose of the Study

In collecting such literary material from journals, books, and
the Internet and analyzing it, I will thereby enhance my understanding of the role which the newer technology is playing in society. As with any emerging technology, the more that is written about it, the better are the chances to understand it and to realize its potential. I am dealing with an emerging technology and therefore my research question will rely heavily on research that is currently being done and recorded by others in the current periodic literature. At the same time I will also investigate, to some extent, books that deal with the societal and theoretical aspect of the incorporation of technology. The opportunity to explore a new field from different perspectives is very insightful. All researchers, including myself, are exploring and are supplementing each others findings, in turn building an unchartered pool of knowledge for future researchers. These current finds along with comparison of previous technological issues will provide a pool of knowledge that will aid in the cultural development of the technology. I am not solely interested in the outcome of the application, but I am instead equally as interested in the role which aesthetics and culture play in the creation, analysis, and application of this technological format. Art educators, such as myself, by doing a theoretical analysis gain
insight into the theoretical perspective of this particular issue and not just the technical. They therefore gain a more fully rounded insight into the importance of their role in the creation of these technologies and the use of visual art. There is an increased awareness of how images function in society and the corresponding effect of the aesthetic impact on the viewer's thought process.

Relationship to Art Education

My research is associated with and supports art education because it focuses on both the importance of the visual and the conceptual. These are two elements which art education emphasizes. It is not enough to merely observe or to create the visual but there must also be a knowledge of the theoretical basis for the visual. Art education with its careful analysis of both these elements, provides a better understanding and appreciation of visual imagery in a highly technological society. Visual imagery surrounds us, but we have the principles of art education to help us theorize and bring meaning to this new age.

Methodology

Design of the Study

I plan to deal with the Internet as a particular cultural
product, its sociological impact, and the interpretation of the themes contained in it. The Internet's incorporation of the visual and the technological and the resulting effect on reality will be examined. The methodology chosen for this study will be philosophical inquiry.

Popper's (1993) claim "that different kinds of art forms converging into high-technology share a certain coherence between them, both on technical and aesthetic levels," will be examined in relation to the Internet (p. 67). This interplay of technical and aesthetic factors will be investigated. Philosophical inquiry will be used to investigate the balancing interplay between technology and art. This conceptual analysis will be conducted primarily from literary resources.

**Methods of Data Analysis**

The data will be collected from the various literary resources which have examined art and technology from different perspectives. Reading and critiquing of these materials will be done in search of central themes and concepts. The combined findings will undergo conceptual analysis and will be documented in an effort to arrive at a new meaning and understanding. My research will be one that
throughout heavily stresses the theoretical and aesthetic aspects.

Significance of the Study

The main objective of this research is to focus in on the fact that society is being influenced globally by a powerful new medium, the computer, which is gradually changing the way in which we receive information. The Internet, with its aesthetic qualities, can be used in both the marketing of information and in the instruction of information. "This technology enables learners actively to engage more of their senses in the learning process and at the same time helps them develop their information searching skills and strategies" (Perzylo, 1993, p. 191). But in order to make this merger of art and technology most beneficial, careful analysis must take place. Analysis is the key to understanding. The participants, including the artist, the educator, and the viewer, must be informed in order to deal with the shifting definiton of reality. The art educator through the analysis of and the incorporation of both the technical and the theoretical is capable of creating the much needed foundation of knowledge for current research and future research, a foundation that needs to be established for the understanding and application of any new medium.
CHAPTER 2

ART AND THE AESTHETIC EXPERIENCE

Regarding Art

Art has been a strong influence in society throughout the world’s history, from the earliest cave drawings to its current involvement with computer technology. Art, throughout this history has been a power that has influenced individuals as well as groups of people in both their thoughts and actions. Josephson (1996) points out that “[e]ach cultural niche is built around some small set of art powers” (p. 39). These powers may take on many forms, but all work in the cycle of thought, to communication, to action. In other words, they direct our existence in the world. These “[p]owers are the abilities that art has to promote various mental orientations, and shape how we live and who we think we are” (p. 39). Art is a language that forces us to action in our individual cultures and it even has the power to form those cultures. It is a language that is expressive in many tongues (Dewey, 1958). In addition, “each medium says something that cannot be uttered as well or as
completely in any other tongue” (Dewey, 1958, p. 106). Art provides a knowledge through its communicative abilities which causes us to reflect on our existence and the reality of this existence.

This language of art is so strong because it incorporates not only our thought but the incorporation of our senses. Graham (1997) acknowledges the fact that “[t]he life of the human should not be construed as consisting only in thought; the activity of the senses is as much mental as is intellectual reflection” (pp. 52-53). Graham (1997) is stressing the idea that our senses as well as our cognitive capacities are working together to experience art and to gain meaning from it. He states that “my mind is made up of visual, auditory, tactile, and other sensations as well as the intelligible” (pp. 52-53). Individuals become involved with the potential of the language of art through this interplay of the thought process and the senses. No matter which cultural form the art takes, individuals can take part in this “sensual” experience. It is there to be regarded as an influential and engaging part of all our lives and it always has been. The experience of art “as an aspect of mind is not a matter of passive seeing and hearing but of active looking and listening” (p. 52-53). Therefore, all those in society must regard art for the force
which it is and then engage themselves totally, thought and senses, into experiencing it.

Meaning of the Aesthetic Experience

In addition to the aspect of initially regarding art as powerful language, as it should be, there is the area that deals with the experience of art. This is an area which has occupied countless philosophers throughout the history of the world and one which is still as intense today. All involved want to gain theoretical insight into the matter of the language of art and its ability to bring forth reaction in humans. Dewey (1958) points out that there is some connection between the actual “art product” and the “work” of art. Dewey explains the first as being “the physical and potential [and] the latter [as being] active and experienced. It is what the product does, its working” (p.162). In the world there are physical things, the “art product” with which humans interact and which in return have an effect upon them. The effect is the “work” of art, or for clearer understanding, the “working” of art. It is this interaction which provides an experience for the participants. Dewey (1958) also points out that” [e]xperience is a matter of the interaction of organism with its environment, an environment that is human as
well as physical, that includes the materials of tradition and
institutions as well as local surroundings” (p. 246). Dewey in all of
his analysis emphasizes the importance of the interaction between
humans and their physical subjects. “Because every experience is
constituted by interaction between ‘subject’ and ‘object,’ between a
self and its world, it is not itself either merely physical nor merely
mental, no matter how much one factor or the other predominates”
(Dewey, 1958, p. 246). In fact, it is this interaction which defines
the experience. This interaction could possibly take place in any
situation from patrons viewing art in the gallery to persons
“surfing” the Internet on their home computer. It is not the persons
or the object, but the interaction which provides for the experience.
In fact, Dewey (1958) states that “the creature operating may be a
thinker in his study and the environment with which he interacts
may consist of ideas instead of a stone” (p.44). What matters is the
fact that all elements are major components to the whole
experience, with the interaction bringing perception to the total.
Dewey stresses his conviction about this when stating “interaction
of the two constitutes the total experience that is had, and the close
which completes it is the institution of a felt harmony” (p. 44).
Harmony is created in the experience due to pattern and structure brought about by the relationships of all the elements (Dewey, 1958). The language of art is conveyed through the experience which provides a harmonious relationship and thus attributes to perception and meaning. In fact, “[t]he action and its consequences must be joined in perception. This relationship is what gives meaning” (Dewey, 1958, p. 44).

Now that the aspect of experience has been defined, an explanation is required in regard to the terminology of aesthetic experience. Philosophers and others also apply the term aesthetics to experience when discussing experience in art. There is reference to participating in art as being an aesthetic experience. Bernstein (1992) states that “aesthetics’ in its narrow sense refers to the understanding of an art as an object of taste outside truth and morality ...” (p.3). The understanding of art and beauty is a major focus in aesthetics and of the aesthetic experience. Also, the attempt to understand why art and its language abilities has the power to evoke experience in humans is a feature of aesthetics. Understanding, then, is the key issue to be addressed in the analysis of the aesthetic experience.
Along with understanding and taste, emotion also is used to define the aesthetic experience. Dewey (1958) makes the observation that "[t]he miracle of mind is that something similar takes place in experience without physical transport and assembling. Emotion is the moving and cementing force" (p. 42). Dewey adds one final element to the list of essential elements that make up the aesthetic experience and that is unity, which is brought about because of emotion. Dewey states in his illustrative way that "[emotion] selects what is congruous and dyes what is selected with its color, thereby giving qualitative unity to materials externally disparate and dissimilar" (p. 42). Thus, the aesthetic experience then takes place between persons and art when all elements, understanding, taste, emotion, and unity combine.

In addition to these elements, is ethics, an element which has been overlooked by many philosophers. Gigliotti (1995) has emphasized the importance of ethics in much of her research. Gigliotti points out that "[d]ecisions about what is right or wrong are inextricably linked to a grasp of what is real and what is true. We approach an understanding of reality and truth through a variety of means" (p. 289). I, too agree with Gigliotti, in that ethics is an
essential element required to round out components of the aesthetic experience.

I would like to carry further the perspective of truth, which surfaces in the discussion of the elements of aesthetic experience. As just mentioned, Gigliotti (1995) claims truth brought about by the incorporation of ethics is essential to a total aesthetic experience. Bernstein (1992) reinforces the idea that truth associated with ethics should be considered part of the aesthetic experience when he addresses the definition "... understanding of art as an object of taste outside truth and morality ..." as being too narrow (p. 3). Yet, many philosophers have kept truth out of art in their attempts to define aesthetics. I believe, it is time to compare the different opinions on this matter and to thereby realize the shift towards the support of the union of art and truth.

First of all, this separation of art from truth has stemmed from the philosophy of Immanuel Kant. "This latter separation received its most perspicuous representation in the Kantian dictum that works of art are purposeful in themselves, while lacking any positive, practical (moral) end over and above their internal complexion" (Bernstein, 1992, p. 2-3). That is to say that Kant
wanted to regard the art object simply for its beauty and not for any attachment to truth or reality. Dickie (1988) observes that "... [t]he result is the view that a beautiful object is experientially cut off from everything else" (p. 29). Kant keeps aesthetic experience of art outside of real existence in that he claims that real existence must be made up of a series of actual or possible experiences and these experiences are associated through time. Kant believes "experiences which lack these relations are illusory" (p. 28). So for Kant art is merely appreciated for its beauty and it does not have connections to anything else. This is known as Kant's "disinterestedness of beauty" (p. 29). "[T]he disinterestedness of beauty is achieved by isolating the experience of beauty from any anticipated future benefit, and in doing this the beautiful object is isolated from everything else it stands in relation to, including anything it might represent" (p. 29). This disinterestedness theory then totally isolates truth and reality from the experiencing of art.

It in turn isolates the knowledge of right and wrong, in other words, ethics. As Gigliotti (1995) acknowledges “[d]ecisions about what is right or wrong are inextricably linked to a grasp of what is real and what is true” (p. 289). Kant's philosophy is very limited and
therefore I believe it is not capable of defining the aesthetic experience in total to the art audience. In fact, Dickie (1988) regards Kant's definition as being an explanation of a "disinterested experience" and being like an illusory experience. Illusory deals with the production of illusion and its meaning to mislead or deceive. Kant fails to bring a connection to truth into his definition and therefore misleads people by this incomplete definition.

Josephson (1996) strives to connect truth to art in her statement that "[one] way that the stream of art from a particular niche might affect our mentality is by reinforcing some particular mental orientation through repetition of a certain approach to art" (p. 39). Unlike Kant, Josephson instead says that an aesthetics approach involving the recognition of the power of our cognitive skills of awareness and judgement make for a more meaningful relation to art of different types. "These powers all work by requiring a certain posture of the viewers when they approach art, which is then carried back into life" (p. 39). I too, believe that we need an updated aesthetic definition which incorporates all essential elements or powers and thereby brings art into our lives but with a deep mental facility for understanding the art. We need to
move beyond Kantian type definitions and strive to analyze art from all angles. Bernstein (1992) makes an effort to do this in his study which has a purpose "... to interrogate and underwrite the aesthetic critique of truth-only cognition, and demonstrate how that critique results in a critique of enlightened modernity" (pp. 2-3). It is time to reflect on our current or modern period of history and the art being produced in it. Today, there are too many types or niches of art being produced simultaneously for such narrow Kantian definitions to do them justice. If we want any of these art forms to come into peoples lives in a beneficial way we must broaden our concept of aesthetics.

The term modernity is something that expresses our current history very well. It refers to the idea that people and especially artists should take advantage of all the technology and new information which is possible in their current environment and express themselves through it (Mora, 1998). It stems from Charles Baudelaire's mid-nineteenth century definition in regards to the bourgeois industrial society or modern world. He defines this society as one comprised of artists who are undertaking a new field of action (Mora, 1998). This definition very much reflects our
society today with its increasing industrial art-based technology waiting to be put to good use.

As I have stated earlier, though, to deal with art most effectively today, aesthetics must be congruent with modernity. This involves a willingness to take the open-minded approach of acknowledging the relationship between art, truth, and the new technology. The challenge of modernity in regard to the perspective of art and aesthetics is then to go beyond the outdated theoretical constraints that define it as standing outside truth (Bernstein, 1992). As computers increasingly filtrate daily life functions, a sign of modernity, people yearn for explanations of the impact. Large numbers of people, including artists and art educators, are deeply involved in using the new technology and they want these explanations in the form of aesthetics which go beyond simple beauty and ones which take on the truth in their daily lives.
CHAPTER 3

ART, AESTHETICS, AND TECHNOLOGY

Computers in Art

To expand on the fact that technology, in the form of the computer, is penetrating daily life, is to say that computer usage is a reflection of our current culture. All sorts of undertakings are using the computer to its fullest potential. Of these undertakings, computer-mediated art, or art made with the computer, is a wide and expanding field. Art, with its members, has always been a vanguard field with a pioneering spirit. Artists and art educators have taken a lead in using technology and in the process are changing the culture we live in. Fisher (1996) sums this fact up by stating “[a]rt will always reflect the culture in which it is created, and art in the twenty-first century undoubtedly will reflect the highly technical, digital world of information exchange” (p. 15). Art is being created and then transferred through technology to reach people and places which it previously would not have connected with or even would have attempted to. There is a globalization of technology
going on and the incorporation of art has formed this into a creative production (Druckrey, 1994). Druckrey (1994) makes the observation that “[n]ever before has there been such an integrated transformation of culture” (p. 2). In fact, many companies in their attempt to draw in more people to purchase and use technology are using tempting ads which appeal even to the skeptic. These ads incorporate sophisticated art layouts. People see these adds and start to feel they must get involved in the technology in order to “join the group in the know.” As a result, computers are being integrated into culture more and more (Ettinger, 1988).

Integration of computers into culture may stem heavily from the economic front, but because so many in the arts are using the computer, it has become both a commercial and aesthetic based cultural revolution. “The relationships between techology, class, scarcity, and competition can no longer be framed in strictly economic terms ; they have encompassed the individual (Druckrey, 1994, pp. 1-2). The individual is confronted with economic as well as the intellectual art concepts. This is not just a hard facts world but an extremely intellectually stimulating environment. I, believe that it always has been, but it is more intensified in our current
culture because the computer is rapidly dispersing art. We actually live in an "artworld" as Arthur Danto, the philosopher, would put it (Josephson, 1996, p. 13). Danto further suggests "that to see something as art requires seeing it in the context of the art world, that is in relation to art history and in an atmosphere of artistic theory" (p. 13). So in our current society we need to be fully aware of not only the commercial side but the aesthetic side of life as well. Theory is an essential requirement in understanding this "artworld" of ours and the aestheticization of society.

Carroll addresses this aestheticization of society as mass art. Carroll (1997) claims that "[n]owadays it is commonplace to remark that we live in an environment dominated by mass art, that is, by television, movies, popular music (both recorded and broadcast), best-selling 'blockbuster' novels, photography, and the like" (p. 187). These elements of an industrial society are probably "the most common form of aesthetic experience for the largest number of people" (p. 187). People can relate to the things that are of their current surroundings. This functions in much the same way as Pop Art. Pop art was so widely accepted because it narrowed the boundaries between common culture and the art world (Danto, 1992,
"Movie stars, the stars of the supermarket shelf, the stars of the sports world, the stars of the comic pages, even, in the case of Warhol himself, the stars of the art world ..." all of these elements of daily life were portrayed in Pop Art (p. 41). Much in the same way as Pop Art, our current dominant technological conveyor of culture is the Internet. A December 1997 survey reported that the Internet had an on-line community of 56 million people and that there had been an increase of 4.9 million new users in a three month period (Young, 1998, p. 27). The Internet is now our mass art advocate. It is extremely narrowing the boundary between, industrial machine, aesthetic imagery and elements of culture. The Internet has taken a cue from Pop Art and in its effort is bringing aesthetics to the masses.

"The early twentieth century artist Piet Mondrian (1937) wrote that he imagined a future where we no longer just had paintings hanging on walls, but lived in realized art. The items of domestic life would all be art" (Josephson, 1996, p. 1). Due to the Internet and its powerful imaging capabilities, we are living in realized art. "Imaging systems have come to echo the forms of representation that so dominate this culture. Digital-imaging
technologies now routinely use computed sequences to dramatize their content ... (Druckrey, 1994, p. 7). The Internet is such an advanced digital-imaging technology, capable of creating a content that can dramatize things of our domestic life and in an aesthetic manner. "Imaging systems have come to echo the forms of representation that so dominate this culture" (Druckrey, 1994, p. 7).

In addition, The advanced digital-imaging technology of the Internet has roots that are similar to its predecessors, such as photography. These technologies may be introduced to society appearing as novelty, when in actuality they are being used as a testing ground for the technology itself. This novelty then leads to necessity, in which people feel required to have the technology in order to function in society. The commercialization of the technology leads to a desire for all to have it and to use it (Druckrey, 1994 ). Photography, video, television, and other technology have quite agreeably become a necessity.

The Internet is well on its way to becoming not just desired, but an essential feature for all. In fact, the Internet is overshadowing many of the previous technologies. As Druckrey (1994) puts it "[a]t the same time, video, film, and principally
photography are being challenged to hold their authority against visual modeling systems that are emerging to eclipse its forms" (p. 7). Druckrey (1994) goes on to point out that digital-imaging technologies, such as the Internet, have their roots in the previous technology, especially in photography. It is for this reason that I will expand on origins leading to the Internet, before concentrating on it solely. It is also necessary to expand on the idea that the Internet, as was its predecessors, is becoming a metaphor to society. What came before can help explain where we are headed with the Internet. Druckrey (1994) has used some harsh phrasing in stating that "these imaging models have their practical roots in the photographic, but their conceptual schemes lie in simulation. As representation and technology converge, a crisis emerges" (p. 7).

As I work in a logical manner from analysis of origins, to metaphorical references, to the reality of the Internet in our culture, my intention is to show otherwise, that representation and technology can merge in a harmonious and beneficial union. As I have stated in my introduction, theoretical inquiry with an open mind about technology is going to be our best chance to convey the message to others.
The Internet: Origins of Tradition and Beyond

In carrying out the discussion regarding the origins of the Internet, I would like to start by emphasizing photography and its strong ties to the newer technology. As early as 1927, Edward Weston was transforming objects of nature, scientific things, into aesthetic object of beauty. He was doing close-up photographs of vegetables, shells, and rocks, and in the process was taking them out of their original scientific context and transforming them into essences of art (Mora, 1998, p. 119). Weston in this case has already borrowed from science and has dealt with metaphor in using “... organic forms as metaphors for the primal forces of nature” (p. 119). Many symbolist photographers borrowed from painting in that they too used technical devices to communicate in poetic terms elements of the visible world. Alfred Stieglitz and Edward Steichen both explored this in their photographic work. (Mora, 1998). Weston, Stieglitz, and Steichen, in the tradition of some painters, were all using “... elements from the visible world as metaphors for personal sensations and emotion ...” (p. 119). By combining nature, art, and poetic language, they can be seen as pioneers paving the way for the future.
Edward Steichen, in particular, became one of the strongest influences to the merger of technology and art. He, in fact, is regarded as being the most successful commercial photographer of the 1920s and 1930s. His willingness to incorporate all of the theories and input from persons of both the industrial and art-related fields helped him to create the most visual effective work (Johnston, 1997, p. 255). Steichen went beyond the other photographers, such as Stieglitz, in order to convey a commercial message to the audience in an artistic fashion. Johnston devotes an entire book to this important subject in her work “Real fantasies: Edward Steichen’s advertising photography.” In her book, Johnston (1997) points out that “Steichen challenged Stieglitz’s tenet that commercialism precludes fine art. ... “Steichen restructured Stieglitz’s argument, placing work created for commercial patrons on a continuum with fine art rather than in opposition to private expression” (p. 256). Steichen was working in the commercial sector but at the same time he was expanding his knowledge of modern photography and the arts. He was incorporating his best asset and that was to use photography to portray people and things in a beautiful manner and as a result influencing consumers to buy a
product (Johnston, 1997). "Thus Steichen reframed the discussion to accentuate the social and cultural nature of imagery, enlarged the scope of art, and situated commercial art within the whole" (Johnston, 1997, p. 256).

Steichen influenced American consumerism with his imagery of a fantasy world comprised of beautiful, young, and wealthy people. Viewers believed that they too would exhibit good taste by buying the advertised products and in a more extreme nature they could be part of this fantasy world. Corporate America knew that this was a working strategy and that photography had the power to manipulate the consumers. (Johnston, 1997). Steichen was free and also encouraged to push this merger to its fullest. This is such a powerful comparison to the way in which imagery on the Internet can be applied today by corporate as well as private sectors in an effort to produce fantasy. Steichen's work may not have been reaching the public with the rapidity of the Internet, but he too was paving a way for an industrial society of realized art.

To carry further the concept of an industrial society of realized art, another influential source of origin to be discussed is the Bauhaus. It is considered to be the most famous experiment in
art education to have taken place in the modern era. It was founded in Weimar in 1919 by Walter Gropius and had a short existence which ended with the Weimar Republic. Even though short lived, the Bauhaus contributed greatly to the culture of this century and its principles are still valued and applied to the present. Its faculty, including some of Europe's greatest artists, and it students all added tremendously to twentieth-century pictorial theory. (Franciscono, 1971). The Bauhaus promoted the theory that art and design should be an integral part of everyday life and functioning. This theory is what was called "design-for-life." Moholy-Nagy, one of the Bauhaus participants, coined this term in an effort to define the Bauhaus goals and to advocate a democratic view of the arts (Johnson, 1992). They even applied this theory during their short duration. Everything from photography, advertisement, architecture, to design of everyday products, was done with the incorporation of art and aesthetic principles. The Bauhaus was created in an effort to "realize the dream cherished since the industrial revolution not merely to bring visual art back into closer tie with everyday life, but make it the very instrument of social and cultural regeneration" (Franciscono, 1971, p. 3). Once again, in the same nature as Steichen,
the Bauhaus also had led the way to the future.

The current innovation in technology, the Internet, is applying and then advancing principles laid down by the Bauhaus. The Internet, through imagery, message, and physical computer tools, is blending art into our everyday existence. Proponents of the Internet have much to learn from the influences of the Bauhaus. “[T]he desire for a universal style of design stemming from and expressive of an integral society and culture is a theme that can be found in Gropius’s earliest writings” (p. 13). This is a trait that is still to this date being promoted and utilized in large part by the Internet.

So society continuously advances into a new mode of technological use. Knowledge is gained from origins and then moves toward the future. Jenks (1995) points this out in explaining how fine art did not end with photography, as some predicted, but is still uncovered in all that surrounds us or in what he calls our “visual culture.” The end of the Bauhaus and its ideals did not signal the end of art for the masses. Art qualities can be found in our everyday industrial world, not just on museum walls. Jenks supports his view with references to other philosophers who recognize the shift of strict fine art to a pop art orientation. He discusses Benjamin’s
references to the "age of mechanical reproduction" and Baudrillard's references to simulation. Baudrillard even states in regard to simulation that "[a]bstraction today is no longer that of the map, the double, the mirror or the concept" (Jenks, 1995, pp. 10-11). In other words, abstraction is not restricted to fine art but is instead incorporated in art simulated in an industrial fashion. Both of these references deal with art which is being industrialized and thus made into a popular art. The Internet is our new mode of technology and it is carrying fine art into a popular art category. Warhol and the "Pop" art principles of incorporating the everyday may have been novelty, but the Internet is making popular art or art for the masses a current reality.

In addition, Josephson (1996) talks about how art has been separated into different categories in society based on a distribution definition. We have Popular Art defined as mass media, Design Art being mass-market art, and Fine Art as one of a kind objects of an an elite artworld. Josephson feels that categorizing art by the distribution systems is not going to help us entirely in understanding art. I agree strongly with Josephson due to the fact that art of all types are being incorporated into our everyday over
the Internet. Art is not just distributed in isolated channels but is fed to us as a mixture of Fine Art, Popular Art, and Design Art by means of the Internet. The Internet is a compilation of all that Steichen and his contemporaries, the Bauhaus group, or Warhol and his comrades, could have ever envisioned or hoped for. The Internet is now our reigning mode of cultural identity. Just as earlier cultural institutions have formed tradition and helped advanced society, the Internet is our current link and it too will carry us beyond the present.

Our society is currently fascinated with this multi-faceted technology, the Internet. "The Internet is a global network of computers or, more accurately, a network of computer networks - the network of networks - after all, there is only one Internet" (Pipes, 1998, p. 203). The Internet works with the communication principles of the telephone. Individual computers are connected to every other computer which are also on the Internet. They are connected through the telephone line. The Internet is more advanced than the phone in that it has tools and resources for the user. The three major features are email (electronic mail), newsgroups, and the World Wide Web (Pipes, 1998).
The World Wide Web is the feature of the Internet which involves not only text, but imagery and sound as well. The “Web” as it is referred to, combines all of these elements and therefore is capable of immersing the viewer both physically and mentally. It is comprised of a vast collection of interconnected “pages”, possibly reaching several billions by now, which are viewed by a program called a browser. The browser is Internet software, Netscape Navigator being just one of the choices, which is downloaded and enabling one computer to connect to others which may be on servers anywhere around the world. (Pipes, 1998). The many pages sent via the browser are therefore coming from many places and unique people. Individuals create these pages with various imaging and audio capable software. This creation process is referred to as Web page design. Many companies specialize in making these pages for others or the individuals can simply create their own. In fact, many individuals are inspired to do it all themselves. “In [Web design], the entire concept-to-production cycle is back in the designer’s hands. Gutenberg must be smiling” (Pipes, p. 220). The Web is a democratic system so creators can use anything as subject matter for their pages. This aspect is in the same vain as Pop art, in that imagery and
the everyday can unite. The theme can be commercial or personal. Whatever the theme or the persons creating the pages for the Internet, the important thing is that the Internet is conveying ideas rapidly and worldwide in a strong sensory manner.

Young (1998) discusses society’s urge for things to be done rapidly. There is a fast-food mentality and we want instant delivery of material and in the process we disregard that which is too slow or which we find boring. “The rapid clicking of the TV remote was simply good practice for the even more rapid clicking of the mouse” (p. 29). The Internet is an extremely good source of rapid communication but we should use it to entertain and to educate with higher standards than fast-food mentality. It can be seen as a vehicle for reaching a large audience of culturally different people in a short time span and in a manner that elevates standards. Just because it is fast, does not mean it has to be uncreative. “Web designers can strive for true interaction between ‘author’ and ‘reader/viewer,’ or they can choose merely to replicate television’s passive forms of ‘infotainment’ and mindless reception” (Ise, 1996, p. 11). The Internet is a language that is capable of communicating to and bringing understanding to a whole world. I am of the opinion
that it should be communicating something worthwhile. This thought is reinforced by the sentiment that "... It is up to artistic scholars, and all types of creative thinkers to make the Net into something that pushes society's creative and conceptual boundaries (Ise, 1996, p. 11). To many people the Internet is viewed "as much more than a collection of co-operating computer networks. They see a new community called Cyberspace, with its own culture, language, and laws" (Pipes, 1998, p. 204).

The Internet as Metaphor in the Age of Information and Image

The language of the Internet community is becoming a metaphorical reference for society. The high-level vision and sensory capabilities of the Internet are produced with different stylistic devices. These stylistic devices are capable of simulation of natural perception and of communicating like a language (Josephson, 1996). Druckrey (1994) explains this by stating that "[o]ur technologies and our fictions are converging. Promises of dizzying access to information, communication, and electronic communities suggest the kind of conjecture that fills science fiction" (p. 2). Baudrillard (1994) also goes to a science fiction extreme in his metaphorical reference comparing technology to
language when he points out that "[a]ny fusion of the thought (of writing, of language) with the real, a so-called 'faithfulness of the real,' with a thought that has made the real emerge in all of its configurations is hallucinatory" (p. 3 of 9). Baudrillard believes that technology is functioning as a language and one which is never providing any more than an illusion of meaning or emptiness (Baudrillard, 1994). Metaphorically speaking, a technology such as the Internet is capable of creating works of fiction for the viewer. While at the same time it speaks in factual terms. Therefore, I would prefer not to label Internet technology as science fiction or as creations of emptiness. The Internet may combine art and technology, by "adopting a point of view that is relatively more 'artistic' than 'scientific' but that does not mean that logic, specificity, or disciplined thinking must be abandoned - quite the contrary" (Laurel, 1993, p. xix). There is a combination of both true and false material coming across the Internet, just as there is in the world. All involved with the Internet need to work together to provide a language which differentiates truth from fiction. The Internet should have a content which encourages freedom of expression, whether it be fact or fiction, and at the same time one that respects
the audience’s ability to tell the difference. The Internet may come across at times as fiction, but never as a meaningless metaphor.

Ulmer (1994) uses the aspect of metaphor heavily in his research related to technology. He initially uses a broad metaphor in describing the total field of technology. He refers to it as a "frontier," in other words something which has unchartered territories that need explored. Ulmer states that "[t]he electronic apparatus, however is a social machine: the frontier metaphor is in our habits, our conduct, our emotions, in curiosity itself" (Ulmer, 1994, p. 31). Ulmer then goes on to discuss another metaphor, that of the interface metaphor of the book or library. This metaphor he believes was never adequate for the newer technology. "Hypermedia is dynamic, not in the manner of pages to be turned, but in the manner of a tutor to converse with or ... as a laboratory for conducting experiments" (p. 30). Ulmer brings the metaphor directly into connection with the present when he makes reference to the Internet. "The new metaphor, which is replacing the book or desktop in recent interface design theory, is that of navigating an ocean of information ..." (p. 30). He then narrows his topic to his main emphasis, the metaphor of language, one which he believes better
suits the hypermedia capabilities of current technology. Ulmer believes that the metaphor of language is the appropriate metaphor which society has been looking for "... something from the world familiar to users, that functions as a model of the system, mediating and giving the user an intuitive feel for how to interact with the equipment" (p. 28).

Ulmer (1994) in an attempt to emphasize the metaphor of language and its relationship to technology has developed a field which is termed "Heuretics." Heuretics involves the technologies of language. By using hypermedia which involves the convergence of video and the computer, it is possible to "write" in multimedia. A composition is composed of not only words, but pictures and sounds. It becomes a "picto-ideo-phonographic writing." This "writing on a screen" involves subject matter that investigates technology from different angles. Poetics, avant-garde art experiments, and electronic media are incorporated into academics at the same time. Heuretics is an "experimental" humanities incorporating theories of the avant-garde artist. "Vanguard artists, like their counterparts among academic critics, often base their projects on the important theoretical texts of the day" (p.xii). The vanguard artist builds upon
the theory by actually creating art and thus has formed a prototype that can function critically and aesthetically. "Theory is assimilated into the humanities in two principal ways - by critical interpretation and by artistic experiment" (p. 3). Heuretics is an attempt to achieve a transition between traditional academics and the incorporation of technology. Theorists from Plato to Derrida have influenced the making of arts and letters as much as they have their analysis and interpretation (and often have been influenced in turn by the arts as much as by arguments)" (p. 3). This type of academic instruction could be very useful toward the understanding of the Internet.

Metaphorically speaking, just as Heuretics is used as academic based language, the Internet has all the same qualities and so much more. We should use the Internet, with its theoretical and art based features to communicate in an educative manner. Ulmer sums this idea up in stating "... inasmuch as individual and societies tend to internalize as forms of reasoning the operations of their tools" (p. 16-17).

Technologies such as the Internet can then be seen as a metaphor of language because of their communicative abilities.
Language is something that leads into interaction. When a language is learned it leads people into many avenues. One such avenue that builds on language and brings about opportunities for creative and interactive experiences is drama. Laurel (1993) forwards this belief when she comments “[w]hen we look toward what is known about the nature of interaction, why not turn to those who manage it best - to those from the world of drama, of the stage, of the theatre” (p. xii)? Another useful metaphor for technology then is theatre. Theatre is built on the theory of dramatizing life in an artistic event. A representation of real life is portrayed through dramatic action. The early twentieth-century German dramatist Bertolt Brecht recognized that there is a catharsis affect brought about for the audience of a drama, but believed that it was not complete until they take what they had grasped form the representation and apply it to their lives. The representation stands between imagination and reality. The Internet, a computer-based representation facilitator, works with many of the principles of theatre in that “... a person participates in a representation that is not the same as real life but which has real-world effects or consequences” (Laurel, 1993, p. 31).

Gigliotti (1995) also builds on this drama metaphor in much of
her research. She furthers the idea of how Brecht understood the cathartic experience of theatre. Brecht believed that the audience must have a proper knowledge of the context of the drama so they are not simply immobilized with a cathartic experience. The audience is free to view and reason what actions are truth or representation and which ones they may desire to incorporate into their real lives.

Ethics are also introduced into this discussion. “Decisions about what is right or wrong are inextricably linked to a grasp of what is real and what is true” (p. 289). The dramatic content of theatre or of the Internet, they both leave the audience with a constructed representation of life. The audience is left to decide between fact and fiction and between right and wrong.

Some of the slang terms which we use for the Internet and World Wide Web are metaphors themselves. The “net” and “web” deal with escapism and the possibility of users being caught in their powers in the attempt to escape worldly realities. “What [users will] see and hear will not reproduce a remote landscape but an imaginary landscape or imagescape. [They] will be telepresent not in a physically distant place but in a physically novel place” (Heim,
1998, p. 14). Viewers want to use the Internet as a novel place or partial escape from their existence. The Internet has just the right combination of real life and fiction, like theatre, so that users can get both. Metaphorically speaking, with the Internet the audience can possibly escape into a novel place, like theatre, and have enough association with reality to escape the “net.”

Metaphors, as shown, can be used to increase understanding of that which is foreign to us. Metaphors used for technology are an attempt to compare it with something else which we already understand and can relate to. The connection is intended to increase our familiarity with technology. As shown, language and theatre stand out as two very useful metaphors. Heim (1998) states that “confusion has its fruitful, creative side, and metaphors can mix things to illuminate” (p. 4). He goes on to clarify that we must go further than merely dealing with metaphors in an attempt to understand technology. Heim says that we must begin to look at technology from the reality perspective. He goes on to state that “... if we are truly to understand virtual reality as part of the dynamics of cultural evolution, we have to focus on what exactly it is” (p. 4).
CHAPTER 4

THE SHIFTING DEFINITIONS OF REALITY

Reality and Art

Many philosophers such as Heim urge us to move beyond the initial phase of finding metaphors to help in our understanding of technology and to delve further into seeking an understanding of virtual reality and its role in technology. Virtual reality would be the best place to start this exploration. Virtual reality involves knowing the principles of art as well as those of technology. It is a combination of those basic areas. The use of graphic imagery and the computer are used jointly to produce a sensation of reality for the audience. I believe that as a starting point to move forward into a study of computer-mediated reality, there first needs to be an examination of the link between reality and art.

Dewey (1958) explains his belief that experience is something which takes place inside the mind or consciousness and has only external relations to the objective. This objective could be art or anything which individuals have interaction with. Dewey goes on to
point out that "[w]hen the linkage of the self with its world is broken, then also the various ways in which the self interacts with the world cease to have a unitary connection with one another" (pp. 246-247). I would like to expand on Dewey's account of experience. I feel that individuals do have interaction with art or the objective, both physically and mentally. The important part of the experience then takes place in the mind where all of the information is translated and turned into the subjective. When individuals cannot discern the objective from the subjective in their mind that is when this linkage between the self and the world is severed. Sometimes art creates such a overwhelming aesthetic experience for the audience that they are unable to distinguish between the physical objective art and the subjective reasoning. The objective sometimes takes on a different reality because the subjective is so strongly persuaded by the aesthetic interaction. Binkley (1997) points this out by observing that the audience can sometimes reach the level of the experience where they curtail the physical representation and the present is made absent. They enter a totally subjective presence and one which is even referred to as "spiritual." It is arts ability to raise us to another level where association with physical reality is
lessened or totally lost in our mind. Binkley (1997) states that “[I]t is this ability to make the absent present that allows us vicariously to travel the world from an easy chair and have feelings about it through the voyeurism of [the medium]” (p. 108). How true this is today when Internet users sitting at their computers can be so influenced by the aesthetics of virtual reality that they are subjectively transported away from concerns of physical reality.

Carrier (1986) discusses the subjective quality which art incorporates for the audience. He describes how many of Cezanne’s paintings and other impressionist works were physical pieces of art which depicted actual scenes. Cezanne and others used certain stylistic principles of art to portray their impression of the scene. The art was then viewed and formed an impression of the scene for the viewers. The art expressed the painters’ individual awareness of the scene, their subjective response to the visual experience, and in turn was subjectively interpreted by viewers. There is a connection between the ability of art to express the external or real through subjective impression. Danto (1992) is in agreement with this when he points out that works of art have the ability to embody what they are about. Danto believes that “there is a deep continuity between
works of art and the symbolic expressions of everyday life ...” (p. 63). Art with its impression of our everyday environment is connecting the objective of this world and transferring it into the subjective of our mind.

Art, especially in the form of images, surrounds us daily. Technology such as the Internet and its electronic catalog of art imagery forwards these images even more rapidly and on a daily basis. Danto (1992) makes references to the power of these images by stating “the power belongs less to the image than to the being or entity ‘captured’ in it” (p. 63). Danto is referring to the power of an image to capture the objective and transfer it to the subjective orientation. We can begin to understand the capabilities of image when we have been affected by it and then realize that “it is literally true that we are in the presence of only an image” (p. 63). Danto goes on to label this as “immanent representation” and it describes the situation as involving “where what is represented is felt to be present or continued in the representation - survives vigorously” (p. 63). The objective captured in the image lingers on in our subjective through expression. It can become symbolic and even real to us. Laurel (1993) observes that “[m]ost art forms
characteristically involve representation of real-world phenomena” (p. 125). These portrayals can be so expressive of the original source that they survive in our mind and become as real. Aristotle even observed that art does not represent what it is but instead something that it might be. A wide range of deviation takes place in portraying real life. “The degree and types of deviations are the result of the form, style, and purpose of the representation” (p. 125).

It is understood that the resources of art, including subject matter, physical materials and processes, are extremely important. Yet, attached to each process are also beliefs, practices, and conventions. The artist uses them to convey a particular effect that will in turn affect the audiences understanding of the image (Savedoff, 1997). The introduction of a new medium can change the way we are use to looking at art even though all of these elements are still involved. It is the new way in which they can be applied that confuses us. Art that was created in a previous and familiar medium, is not as foreign to the audience. They are more aware of how far artists can go in their efforts to manipulate the medium, both in mind and hand. (Savedoff, 1997). The new medium has to
undergo a period of evaluation, so that the audience is more aware of its powers. Computer-mediated art is that new form of expression and it is currently undergoing the evaluation period.

**Computer-mediated Art and Reality**

Binkley (1997) makes the observation that "[c]omputers affect us, in part, because images do. But computers supersede our modern image-drenched culture of magazines and movies because we can influence them to act in response to us" (p. 109). Binkley is commenting on how computer-mediated art, consisting of technology and imagery, can be altered by its creators in order to send a message. The original art is also further electronically altered in the manner in which it comes across the computer screen. These digital representations can move us and can involve us in personal interactive experiences. "If images make their subjects present to us, digital representation make us present to them. The computer opens up our image-saturated culture to a virtual universe composed of numbers that are oddly capable of reaching out to us" (p. 109).

A digital image is comprised of individual units called pixels. Numbers are used to indicate the color or shade of each pixel, making it possible to electronically store, copy, transmit, display,
and print the image (Savedoff, 1997). The image contains subject matter which can be altered using the computer along with imaging software and the result is a digital representation which convey the creators message about the subject. Steichen also explored this alteration with photography, but the computer has carried it to a more intensified level. Once the enhancement has been done, the representation can then be viewed and experienced by the audience in a subjective manner. The reality of the image is something which the audience perceives for themselves. Although it is the audience which experiences the representation and perceives meaning from it, the creators and computers have been an influence in the process.

Virtual reality applies digital imagery to reconstruct subject matter from real life. It is an emerging field of science and one which also incorporates contemporary culture. Just like our culture, it too fuses the real and the artificial, and the natural with the fabricated (Heim, 1998). Computer technology is applied to take physical things from our current cultural surroundings and digitally represent them. Virtual reality relies on immersion, interactivity, and information intensity. The immersion feature is related to making use of devices that are capable of isolating the senses.
enough to transport the audience into another place. The interaction feature deals with the computer's ability to quickly change a scene's point of view and in relation to the human's quick change in physical position and perspective. Finally, the information intensity corresponds to the intelligent behavior which the virtual world demonstrates. Computers are capable of rapidly updating information and that is essential to the immersion and interactivity. (Heim, 1998). Virtual reality, with all of these features, is causing art to become both a mentally and physically absorbing experience. Our senses are involved as well as our reasoning capabilities. There has to be decisions made about the truth of what the sensory is relating to us.

A form of abstraction is taking place due to the area of computer-mediated art and the forces of imagery transferred through virtual reality. Jenks (1995) observes that "[a]bstraction, then, involves the transposition of worlds; an extracting of essences, or elements, or generalities from one original plane into another" (p. 9). Objective things are taken and are abstracted for subjective consumption. Jenks goes on to state that "[t]he new world, the created level, the (re)presentation, provides the potential arena for
the manipulation and control of images. Images become infinitely malleable once freed from their original context, whilst still retaining significations within that original context" (p. 9). This abstraction makes it harder for the audience know how much truth has been carried over from the original context.

Heim (1998) recognizes that “[v]irtual realism requires the capacity to reconstitute the real through computers, and it also means the maintenance of human identity as we install the technology into our lives and our lives into the technology” (p. 6). The audience should understand the technology well enough to know how it will affect them. Binkley (1997) goes on to reinforce this sentiment regarding human responses to imagery. He discusses the separation of intellect and emotion and the role of sensation in knowledge. Binkley goes on to point out that “computers press this challenge to dualism much more deeply as they interpenetrate the image and the viewer to merge representation and reality in a new way” (p. 108). The audience may at times be confronted with virtual imagery that questions their ability to discern representation from reality. Danto (1992) points out though that “[t]here may be those who feel that even if we cannot tell the difference in outputs of
machines and humans, there even so is a difference” (p. 36). With the proper background the audience will have a better chance to know that there is a difference.

**The Societal Impact of Reality**

Much of society is receiving the visual experience of the real through representation. Images of worldly things are conveyed to society through mediums such as TV, film, video, photography, advertising, and now the Internet (Jenks, 1995). “[O]ur most immediate access to [things of the world are] through frozen, stored, contrived, and re-presented images” (Jenks, 1995, p. 10).

The Internet with its virtual capabilities is transmitting interactive and representational imagery to us rapidly. The Internet has ensured that “[i]nformation has become the lubricant for a swiftly emerging social structure that is wholly dependent on the potential malleability, and exchangeability of data” (Druckrey, 1994, p. 9). The simulated realities produced by the Internet “[a]re more than signifiers of technological progress. They mark a radical transformation of the social order in which knowledge is linked with ideology, biology, or identity ...” (p. 9).

An abstraction takes place through the use of the simulated
imagery and society is left to decide which image to attend to and which image really represents the world (Jenks, 1995). Society, in addition, has to be cautious of the message that is conveyed through virtual reality. As Heim (1998) states: “[t]oday we must be realistic about virtual reality, untiringly suspicious of the airy idealism and commercialism surrounding it, and we must keep an eye on the needs of fiction and fantasy that threaten to stifle the blossom” (p. 44). So society has been infiltrated with computer simulation of reality. Computers “routinely ingest, digest, and regurgitate vast amounts of digital imagery, along with many other types of information including, text, sound, and numerical data. Computer-assisted pictures are filling the theater of civilization ...” (Binkley, 1997, p. 107). A final social aspect is the fact that the audience in some cases is just not satisfied with the reality of their own world and they use virtual reality as an escape.
CHAPTER 5

THE INTERNET AND ART: MAKING A CASE FOR A NEW AESTHETIC PARADIGM

The Internet and Aesthetic Tradition

Now that it is understood that art and its aesthetic qualities are reaching out to all areas of society and drastically influencing the individuals in it, it is time to reevaluate traditional aesthetic belief and its relation to the newer computer mediums. Some philosophers in their analysis, such as Baudrillard, have tried to conclude that the merger of art and technology totally destroys our link to the real world. There is no longer reference to the real or history, just emptiness is created (Baudrillard, 1993). I believe too that we have to move on to a new aesthetic paradigm, but Baudrillard is headed in the wrong direction. The audience of such technology as the Internet is continuously confronted with the real or representations of reality. They are not separated totally from the real but instead are always searching for the truths in the imagery that is relayed to them. The audience must be aware of how
far the abstraction of reality has been carried in the representation. When the representation becomes so close to reality that it causes illusion, that is when the audience needs truth the most. I stress “so close to reality” not totally separated as Baudrillard wants us to believe (Baudrillard, 1993).

The widely regarded philosophy of Kant is also too outdated for this age of fascination with the Internet and virtual reality. Kant like Baudrillard insists on keeping the truth and cognition of reality separate from the interaction with art. Baudrillard’s theory is more current and it concentrates on the art of technology. Kant’s theory regards the aesthetics of art in general. Kant had stressed the “disinterestedness of truth and beauty.” He wanted to maintain the aesthetic experience as only involving beauty. This “Kantian” mode of thinking about aesthetics simply cannot fully explain the impact of art and imagery. It never has and especially today it will not help increase understanding of aesthetic influence.

Today, technology pushes worldly or real information at the viewer through the form of representation. Our society is living in a visual landscape of intensified reality. Ethical decisions have to be made on the part of the viewer. As Gigliotti (1995) has pointed out
“[d]ecisions about what is right or wrong are inextricably linked to a grasp of what is real and what is true” (p. 289). The audience desires and needs to have truth or cognition connected to the beauty and power of imagery. The pleasure of the senses cannot be separated from reasoning. “Current technology offers us countless means to reevaluate our perceptions of reality and truth” (p. 289). Why then should we follow outdated philosophies that strive to keep truth on the outskirts of aesthetics. There could be nothing better than technology itself to make a case for a new aesthetic paradigm. “[V]irtual reality in the strong sense stands behind the scenes as a paradigm or special model for many things” (Heim, 1998, p. 1).

Creating a New Theory of Art

Gigliotti (1995) points out, in her many references to Brecht, the strong stand which he took on the importance of the viewers capabilities of “empowerment” or “desire for change.” Empowerment, indeed, is important to art. Empowerment can only come about when truth and reasoning are involved. Art does not solely portray beauty but it incorporates truth. A new paradigm that incorporates both is much needed to replace the more close-minded and limited theories. Binkley (1997) also affirms the push toward a new paradigm. He
states that despite recent criticism our everyday language still differentiates “mind from matter, representation from reality, and emotion from cognition” (p. 108). He further adds that “[a]s a result, we will continue speaking about computers in paradoxes until our language catches up with our creativity” (p. 108). In other words we need a paradigm that does not involve paradox but communicates to all the power of the joint forces of truth and art. Jenks (1995) goes on to say that “[d]ifferent paradigms within sociology, then, produce different worlds [of thought]” (pp. 9-10). They affect our cultural outlook and in turn our “vision.” “Vision is a skilled cultural practice” (pp. 9-10). We need a paradigm then that addresses the way we view art and conceptualize it in todays technological culture.

“The ‘real’ virtual reality - that sample of contemporary technology that provides the paradigm ... creates a very different experience made possible by high-speed computers” (Heim, 1998, p. 6). It provides the new paradigm because it incorporates both essential elements, the power of art imagery and truth. Josephson (1996) points out that “[w]e can understand how art functions in a given culture by what sort of powers it has ... [and] we can see the
evolving direction of a culture by which powers of art it chooses to use” (p. 40). The new paradigm will facilitate our understanding and will guide our culture into the future.

Art Education and its Role in Creating the New Theory

The importance of the role of understanding is something which the field of art education strives to express. Art education in its effort to teach understanding related to the culture we live in has incorporated technology into its curriculum. “The computer as an art medium ... is not neutral, and it cannot simply be plugged into existing art programs” (Ettinger, 1988, p. 60). Ettinger (1988) believes that the relationship between the computer and art education must involve careful theoretical analysis along with the technological instruction of the visual tool. This combination will ensure a chance for a better understanding of the importance of the computer in society. “The types of individuals who use and critically examine new technology will have an impact on the direction of cultural change” (p. 61). Ettinger believes that “[a]rt educators have the necessary preparation and orientation to explore the pedagogic roles of this new medium and to contribute their perspectives” (p. 61).
Duncum (1997) observes that art educators are beginning to realize that students are getting much of their imagery through the media and the Internet. The new mediums deal not only with fine art images but with all types of visual images. Therefore an education that keeps in touch with the current culture must include the study of both forms of imagery. "An inclusive conception of culture could begin to address the proliferation of mass media images and their multiple readings by our multifaceted selves ..." (p. 77). Art education is taking on the task of responding to the connection of art and culture through the use of computers. Students are beginning to gain solid understanding about the truths of imagery in their lives. As a result, art education is assisting in the creation and implementation of a new theory of art.
CHAPTER 6
CONCLUSION

Savedoff (1997) observes that "[t]he materials and tools employed by artists help to shape the character of their art: it is difficult to imagine Rembrandt painting with tempera instead of oils, or Cartier-Bresson taking his photographs without a hand-held camera" (p. 201). The artists become familiar with their tools and in turn they use it to create art which impacts society and changes cultural ideas. "[A]ny technological advancement would seem to expand the resources of art, providing artists with more possibilities to choose from, more ways of creating" (p. 201). Currently the new tools of expression are computer-mediated art related ones. The Internet because of its virtual reality capabilities and expansive communicative qualities has become the present tool of choice for artists. These arists know that the Internet provides limitless expression. It is the best form of public art available. Fisher (1996) refers to artist Louis Hoods and her opinion on public art. Hoods is quoted as saying "[p]ublic art was once a village green
with a statue on it. But the whole concept of community has radially changed. It is now the media and the Internet, a display outlet for more and more artists” (p. 16). The Internet is a provider of mass art created by artists partaking in its democratic environment. “[T]he Internet becomes a truly democratic site where the currency of exchange remains the idea and the image” (p. 16). Carroll (1997) emphasizes the belief that “[m]ass art is here to stay for the foreseeable future. And, therefore, it is incumbent upon philosophers of art to begin to take account of it theoretically” (p. 198). The Internet has conveyed art to large portions of society and now theoretical inquiry is required to help the audience understand the art.

Any new form of technology, such as the Internet, which is introduced into society will also bring forth skepticism, fear, and new questions. Positive as well as negative ideas regarding the technology and its use need to be addressed. Theoretical inquiry in order to be complete must view the subject from all directions. Understanding has a better chance of being achieved when all ideas are allowed into the inquiry.

I have attempted to stress an optimistic future and integration
for the large scale conveyance of art over the computer. But in order to make this inquiry complete and worthwhile, doubts and fears also need to be addressed. I would like to conclude on a hopeful note in regard to the merger of art and technology, but that involves a total progression that is willing to include both positive and negative. If the audience is not allowed to analyze their doubts, they are less willing to listen. As a result, they will have no ideas on the subject other than fear and fear does not bring about trust and understanding. Carroll (1997) states that “mass art is meant to capture large markets, it gravitates toward the choice of devices that will make it readily accessible to mass, untutored audiences” (p. 190). An untutored audience deserves to have their questions raised while being introduced to any new medium. Mass art is capable of reaching a larger spectrum of the population and therefore more questions will be raised. “The products of mass art are, in principle, produced for a plurality of recipients, and mass technology contributes to the realization of this aim” (Carroll, 1997, p. 189). Plurality of recipients is tied to plurality of responses and only a total theoretical inquiry can begin to deal with this fact.
I have emphasized that art education can play a major role in assisting this large and relatively untutored audience in regard to the newer technology. There are those though that would disagree and would try to keep technology out of the art education classroom. The reasons for this attitude can range from fear of the technology to total devotion to tradition. Newer technology is not something that is readily accepted and it requires proper theoretical inquiry and practice with the tools to recognize the benefits. Ettinger (1988) makes the observation that "[a]long with teaching people to use computers comes the responsibility to direct a focus on critical study of the values underlying information based technology, and simultaneously of the values underlying our field" (p. 53). Fear and uncertainty are going to persist unless a critical study is allowed. In addition, "a careful evaluation of the pedagogical questions concerning computer use from an art education perspective must parallel classroom implementation" (pp. 53-54). The technology therefore cannot just be quickly integrated without thorough analysis in regard to the concerns of all involved. Student and faculty concerns both need to be addressed. People always have fear of the new and they tend to cling to tradition as a comfort zone.
Integration has to be done slowly and it has to be well thought out. People need to be cautious of things which are done in a quick manner and it is their right to be that way. Society is becoming so fast paced anyhow and therefore a well organized education could act as link between the rapid society and the knowledge needed to handle it. There is a rush to place computers in the classroom, but it should be done instead in a well researched manner. Multifaceted goals and perspectives should not be overlooked in the process (Ettinger, 1988). A technological and theoretical based education is capable of doing this, but not when it is quickly and haphazardly put together.

Besides the aspect of technology being too quickly integrated, is the aspect of breaking with tradition. Many people have fear that the computer-mediated art is signaling the demise of the traditional forms of art such as drawing and painting. They see the more traditional forms of art as being created in a slower and delicate process. They regard the traditional methods as ones which put the artist in a more natural and physical relation with the tool and materials. To the traditionalist, the computer is viewed as the dominating force in the art process. They see the human as a servant
to the computer. Instead, I would promote an education that stresses both the traditional tools and the newer technological ones. We do not need to totally disregard one tool for another. Technology can build on the principles that define drawing and painting. In fact, imagery which is created for the Internet could benefit from cues taken from tradition. Photography is an example of how technology can build on tradition while at the same time becoming an area of fine art itself. Photography may be of a more mechanical nature but it has expanded on painting qualities to create images aesthetically equal to those of painting. Photography and the Internet may have led to a rapid pace of representation, yet that is no reason to make the representation tasteless and boring. Much is to be gained from the sharing of elements from different schools of art. Many artists use the computer to simulate traditional styles and at the same time they are beginning to build upon the unique communicative characteristics of the newer technology (Ettinger, 1988).

The interaction between the different approaches to art could help eliminate some of the tasteless imagery that is being created today. There is a lot of good art being done with the computer, but as with any art form, there is also some poor quality work produced.
Critics of the Internet tend to put down all computer art produced, citing it as bland and unappealing. The commercialization of the imagery and the quickness to get it produced does sometimes result in poor quality art. Some creators are rushing to meet commercial deadlines and to get their message out before others do. The audience is also use to getting the message quickly now. There may be somewhat of a fast food mentality involved here but the creators owe it to the audience to convey with creativity and not crudeness. There are many who strive to do this. They use the technology very effectively to combine fine art and commercial principles. They are willing to carry on in the manner of Edward Steichen (Johnston, 1997). They are not compromising presentation because of the tool which they are using. As with any medium, there will always be good quality and poor quality works produced. A solid education in tradition can benefit the quality of the current work. Tradition and taste do not need to be sacrificed. All elements should be considered in the total.

In regard to taste, some people want a strict distinction between fine art or high-art and art for the masses. They see art as the one thing which could still be exclusive in society. They prefer
to confront art in the museum setting and not in reproduction over
the Internet. It is the one thing left for them that still has class and
prestige. The Internet is not attempting to do away with the
museums but it is bringing art in connection with the updates in
society. Art originals and tradition can still be viewed in the
museum setting while at the same time art can also be created and
conveyed on the computer. A greater number of people are getting
the chance to share in the understanding of art due to the computer.
They may even be motivated to go to the museum setting to
investigate origins of art and for inspiration. I am not saying that
one mode of participation is better, but instead that art is updated
to reflect the time period which it is created in. Tradition is
something to build on and not to do away with. Many museums have
recognized this and they too are starting to display collections of
photography prints as well as computer generated works alongside
the masterpieces.

There is also criticism of computers for being too cathartic.
Aesthetics of the imagery can create a cathartic experience for the
viewers. The Internet can draw people in and mesmerize them with
all of the special effects. It can appear that the computer is doing
all of the decision making and taking over the imagination. But as Brecht has emphasized it is knowledge of the context that enables the audience to understand how they are being affected (Gigliotti, 1995). Education brings about this reasoning skill and that is why it is so important. The audience is better prepared to decide their own action. With education comes a shift from the focus on viewing and production to one that deals with ideation. Students focus more on ideas and action after they have had the proper education in production and have gained more control of the computer (Freedman & Relan, 1992). The computer is a tool, an effective one, but it is the informed audience who realizes their cognitive power over the tool. Proper education leads to this understanding.

Another concern in dealing with computers in education is the chance that students may withdraw, focus solely on the computer, and disregard any social interaction (Freedman & Relan, 1992). Therefore it is important for educators to make social interaction an integral part of the curriculum. Studies have shown that promoting group interaction when using computers in art education can enhance student learning (Freedman & Relan, 1992). "The use of computers broadened the possibilities for group participation in
aesthetic decision-making and critique, which, in a sense, increased the students’ control over the production process” (Freedman & Relan, 1992, p. 108).

There are also those who worry that computers in education are merely a gimmick or novelty device used to entice the students. “Technology’s potential for motivating students with its novelty and glitz, some may argue, rests on educationally dubious practices of titillation” (Petraglia, 1998, p. 6). Some believe that the imagery and interactivity combined are a means to create mere entertainment. Most educators should realize that there is something unseemly about having students become involved in learning just because it is entertaining and besides, novelty wears off quickly (Petraglia, 1998). Instead computers should be regarded as innovating authenticity in education. This involves the use of computers and technology in the classroom to reflect real-world learning and tasks. In bringing authentic learning materials and environments into the classroom there is a push to “encourage ‘everyday’ thinking within ‘authentic’ tasks in an attempt to situate learning” (Petraglia, 1998, p. 5). Authenticity is considered the focus of this curriculum and not novelty.
A final criticism that surfaces with the merger of art and technology is the one that has some people simply questioning why there needs to be any mention of reality at all in art. They want to use art as an escape from the everyday realities and as an area that is elevated from the everyday. I agree that art can be used in some cases as a relief from the mundane everyday. But society is changing and becoming more technological. "The future demands that we learn now how to live in our evolving communications environment, to cope with possible impacts before they occur. Assessment of our future is vital" (Guerra, 1980, p. 112). A future where art is in sync with the changes in society and included in all areas of it would be most desireable. Reality is bound to dominate everything so we should make the merger most beneficial. We could have all areas of society, including technology, striving to incorporate art into their makeup. We should strive for the ideals of the Bauhaus. This is not to take away form art but instead to make everything in society, including the mundane, more aesthetic. Truth and beauty could abound in all things.

Guerra (1980) points out that "what is intended to be and is advantageous for some is often traumatic for others in the myriad of
effects brought on by the high speed changes and forced reorientation in our always changing and increasingly complex system" (p. 111). A complete analysis of the merger of art and technology has to include the hopes for the merger as well as the uncertainty. Guerra (1980) indicates that in doing this analysis we need to identify and refine the subject, identify the parties affected by the subject, and to compare the pros and cons of alternative strategies. All opinions are helpful in coming to terms on the subject and to an understanding of it. A thorough analysis is one which includes everyone’s ability to have an input. Because technology is affecting such a wide range audience, the analysis will involve a very large input.

The analysis is then in the hands of all people. Technology, and especially the Internet, is affecting all areas of society. It is not just the educator or engineer who will do the reassessment of the directions of change, but it is up to everyone in society (Guerra, 1980). “We [all] need to be the masters of the technology we create” (Guerra, 1980, p. 111). Theoretical inquiry combined with interaction with the technology will help all to be better suited to master the technology and to understand its relation to shifting
definitions in society. Guerra (1980) observes that “[i]t is a matter of social and cultural definition, according to the ends sought. It is how we, the affected individuals in an impacted society, choose to use the technology that determines the effects of that technology” (p. 112).

Theoretical inquiry which takes into account the Internet and its influence in the arts has begun to prove that there is a shift in the definitions of reality. No longer can we try to define reality as something that occurs outside of beauty and taste. The audience of the Internet is not simply viewing images from a beauty standpoint but they are also conceptualizing about them and the reality they convey. The need to conceptualize is required to sort through the vast array of images produced by technology. A new aesthetic paradigm is required that would define reality as being a major component in the experience of the merger between art and technology.

I believe that we have to work toward a new aesthetic paradigm in a progressive and a theoretical manner in order to achieve the greatest understanding. I have shown that we must first start by regarding art and aesthetics in general. Then we are able to
move onto art and aesthetics applied to computers. We start this phase by investigating how tradition as well as metaphorical reference have influenced our outlook on computer-mediated art. Then, we are ready to study the relationship between art and reality which is an aspect of this new technology. It has a strong impact on us as a society. The final phase would be to arrive at a new aesthetic paradigm capable of enhancing society’s understanding of computer-mediated art. Art education plays a major role in arriving at this paradigm. This is a theoretical progression that can lead to a new paradigm and one which will help assist society in expressing its zeitgeist. Beller (1996) believes “for artists to get at new ideas that express their zeitgeist, new implements are needed” (p. 14). I believe that it is the combination of the new technology and the new paradigm that will properly reflect art in our culture.
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