Education, Semiotics, and the Virtual World of Second Life

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# Abstract

The virtual world of Second Life, the role playing game, has been adapted as an educational environment. The contemporary study of semiotics is based on how meanings are made and how reality is represented (Chandler, 2002). In Second Life, everything we can see represents reality or the imagination. The virtual world is not just a hyperreality but is also a semiotic world. Everything seen in the virtual world carries certain meanings. When teachers introduce new images to their students in the virtual world, they should help their students generate connections between the new image and other images, in order to help students to produce new layers of meaning around the new image. A semiotic-based approach to visual culture examines images as vehicles of meaning in every culture. Using semiotic theory to decode the virtual world helps us to understand how and why it forms its own particular visual culture.

# Key Words: Semiotics, Education, Virtual World, Second Life

# Introduction

Second Life is an online Role Play Game (RPG) with a Computer Mediated Communication (CMC) tool with which users use synchronous communication. But Second Life is not just a game; it is a virtual reality social communication network. Second Life is a world in which users are surrounded by other users' creations, and users can create anything they can imagine. Everything that can be thought or dreamed in the real world can happen in SL.

Semiotics is the science of signs, whether the signs are words or images, in daily life or in virtual worlds. In a virtual world like Second Life, everything people can see is a representation of reality or is a creation of the imagination. This virtual world is not just a hyperreality but is also a semiotic world. In the virtual world, because everything is created, everything carries certain meanings. Nothing can be taken for granted in Second Life.

When teachers introduce new images to their students, they should help their students generate connections between the new image and other images, in order to help students to produce new layers of meaning around the new image. A semiotic-based approach to visual culture examines images as vehicles of meaning in every culture. Using semiotic theory to decode the virtual world helps us to understand how and why it forms its own particular visual culture.

In this article the author introduces semiotic theory, and explains the relationship between semiotics and visual culture, followed by a discussion of semiotics and education. This article also discusses the semiotics of virtual culture and applications for semiotics in virtual worlds.

## **Semiotics Overview**

Semiotics is the science of signs, whether the signs are words or images, in daily life or in virtual worlds. Semiotics is the study of signs and sign systems (Denis, 1989; Sebok, 2001) and "involves the production of signs, communication through signs; the systematic structuring of signs into codes; the social function of signs, and finally the meaning of signs" (p. 183).

As Semali (2002) states, "a human being is by nature a sign-manipulator" (p. 7). Therefore, all signs we can see can be decoded and analyzed by semiotics (Fuery & Fuery, 2003). Smith-Shank (2004) points out that "semiotics is a broad approach to understanding the nature of meaning, cognition, culture, behavior, and life itself" (p. vii). In addition, semiotics "provide us with a deeper understanding and appreciation of the complexity of human communication with signs, symbols, and images" (Semali, 2002, p. 2). In other words, semiotics provides us a new way to know the world from different perspectives. As Chandler (2002) states, semiotics can also "help to denaturalize theoretical assumptions in academia just as in everyday life; it can thus raise new theoretical issues" (p. 214). Semiotics examines the sign systems "as vehicles of meaning in a culture and looks at how such sign systems are taught to children and adolescents and how they capture societal values about human relationships, myths, belief system, and established norms" (Semali, p. 3). Sturken and Cartwright (2004) also state, "we live in a world of signs, and it is the labor of our interpretation that makes meaning of those signs [...] we use semiotics all the time without labeling it as such or recognizing our interpretative acts" (p. 29). That is to say, semiotics is culturally bound because the meanings of images differ between cultures.

In a virtual world like Second Life, we can see is a representation of reality or is a creation of the imagination. This virtual world is not just a hyperreality but is also a semiotic world. In the virtual world, because everything is created, everything carries certain meanings. Nothing can be taken for granted in Second Life.



Figure 1. One scene in Second Life

The contemporary study of semiotics is based on how meanings are made and how reality is represented (Chandler, 2002). In a virtual world like Second Life, we can see is a representation of reality or is a creation of the imagination. This virtual world is not just a hyperreality but is also a semiotic world. In the virtual world everything, from avatars to mountains, rivers, and even the weather, is created by people, and everything in the virtual world carries certain meanings. Nothing can be taken for granted in the virtual world.

Many of the concepts central to semiotic theory have proved useful for visual culture theorists as well. The most well known of these include: Saussure's signified and signifier; Peirce's icon, index, and symbol; and Barth's denotation and connotation. The following sections will probe these theories and their importance to virtual worlds.

## Saussure, Peirce, and Barthes

#### Saussure

Semiotics is concerned with not only the function of signs but also the production of codes (Iser, 2006). Saussure (1983) stated "A linguistic sign is not a link between a thing and a name, but between a concept (signified) and a sound pattern (signifier)... A sound pattern is the hearer's psychological impression of a sound, as given to him by the evidence of his senses" (p. 66). For Saussure, a sign must have both a signifier (sound pattern) and a signified (concept); we cannot have a totally meaningless signifier or a completely formless signified. However, today, in the Saussurean model, the signifier not only stands for the sound pattern but is commonly interpreted as the material from the sign that can be seen, heard, touched, smelled or tasted (Morgan & Welton, 1992, p. 95). As Moriarty (2005) pointed out, "the semiotician unpacks the meaning by looking at the relationship of the signs to their signifieds, but also at the relationship among the sign in a complex message" (p. 245). Sebeok (2001) states that "Saussure considered the connection between the signifier and the signified an arbitrary one that human beings and/or societies have established at will" (p. 6). In short, signs carry conventional meanings, and the relationships between the meaning

and signs are not fixed, but are arbitrary and relative (Iser, 2006; Sturken & Cartwright, 2004).

Mirzoeff (1999) brought "signified" and "signifier" into the realm of visual culture. He states: "semiotics... divides the sign into two halves, the signifier-that which seen-and the signified-that is which is meant...Semiotics gained its strength from its denial of any necessary or causal relationship between the two halves of the sign" (p. 13). In visual culture, what can be seen (such as images, paintings, sculptures, photographs, even typography, etc.) are signifiers; and what is not seen (such as viewers' thoughts or reflections) are signified. Take Figure 2 as an example, the image is the signifier, and the meaning of this image is the signified.



Figure 2 Snapshot in Second Life

Signifiers in visual culture include not only the written words or sounds of the linguistic realm, but also the larger realm of all visual environments. This is as Semali (2002) proposes "all events in human experience are texts waiting to be read" (p. 13).

#### Peirce

Peirce categorizes signifiers into three groups: symbol, icon, and index. Peirce and Saussure use the term "symbol" differently and avoided referring to linguistic signs as symbols. Saussure insists that signs are never wholly arbitrary or empty configurations; signs show the natural connection between the signs and meanings. For Peirce (1392), a symbol is "a sign which refers to the object that it denotes by virtue of law, usually an

association of general ideas, which operates to cause the symbol to be interpreted as referring to that object" (p. 276). We interpret symbols according to a rule or a habitual connection (Chandler, 2002; Gottdiener, 1995). A symbol is an image that does not directly resemble its meaning but possesses a fundamentally arbitrary or purely conventional connection to that meaning (Chandler, 2002). In short, a symbol is a sign that stands for its referent in an arbitrary and conventional way.

"An icon is a sign that is made to resemble, simulate, or reproduce its referent in some way" (Sebeok, 2001, p. 10). Kindler and Darras (1998) also state that "references to various types of icons in the description of manifestations of pictorial behaviors are a direct result of our conceptualization of the process of the development of pictorial imagery in semiotic terms" (p. 148). In other words, icons are regional and conventional; they are images that physically resemble or imitate their meaning.

"An index is a sign that refers to something or someone in terms of its existence of location in time or space, or in relation to something or someone else" (Sebeok, 2001, p. 10). Therefore, an index is an image that possesses a direct causative connection to its meaning and gives direct attention to its object by blind compulsion. An index is a more globally conventional type of sign (Chandler, 2004).

#### **Barthes**

For Barthes, the image is not meaningful on its own. Barthes approaches images systematically, and scientifically (Fuery & Fuery, 2003). Barthes's original semiotic concepts were "essentially canonized and have become part of the movement to analyse many different forms of visual expression" (Burnett, 2002, p. 150). The terms that Barthes raised—denotation, connotation and metaphor—have been broadly used in semiotic, visual culture, and visual communication fields.

Denotation is the "direct, specific, or literal meaning we get from a sign" (Moriarty, 2005, p. 231). In short, it describes the literal meaning of a sign. Connotations are meanings that are "evoked by the object, that is, what it symbolizes on a subjective level" (p. 231). In other words, connotation refers to the social-cultural and personal affiliation of a sign. As Frascara (2004)

states, "the connoted message is more culture-dependent, and it is built as a combination of the designer's concept and the target public's experience" (p. 69). The connotation of signs helps us to understand the meaning behind the images better. Most of the time we notice the denotation of an image, but we may never think about the connotation of the image. If we do not think about the connotation of an image, we will not understand the hidden meaning of the image. "Connotation produces the illusion of denotation, the illusion of the medium as transparent and of the signifier and the signified as being identical" (Chandler, 2004, p. 141).

"In semiotic terms, a metaphor involves one signified acting as a signifier referring to a different signified" (Chandler, 2004, p. 127). Metaphor is initially unconventional because it apparently disregards "literal" or denotative resemblance (Chandler). A metaphor is "a type of sign that does not essentially represent something else, but which is used to represent a different meaning" (p. 145). Metaphors may vary from different cultures; however, metaphors are not arbitrary, being derived initially from our physical, social and cultural experience. (Chandler). As Chandler states, "all language is metaphor [and] even that 'reality' is purely a producer of metaphors" (p. 126).

Saussure, Peirce, and Barth hold their own theory. This article is going to apply these semiotic theories to visual culture and education in the virtual world. Visual culture is an area perfectly suited for semiotic analysis. Examining the visual culture environment from a semiotic point of view helps people to form a deeper understanding of our own culture.

# **Semiotics and Visual Culture**

As Lindlif and Shatzer (1998) state, "Cultural understandings are the semiotic products of people acting in a common spatiotemporal frame, with the meanings themselves embedded as objects of attention in each successive frame." Audiences and viewers signify the meaning of media. There is no absolute truth or untruth of representations (Mirzoeff, 1999). Images can only show the representation as true or not (Chandler, 2002). What is true and what is not depends on the values and beliefs of every particular social group. In other words, the process of making meaning of

images is at the center of all cultural production and consumption (Evans & Hall, 2005; Mirzoeff, 1999). Moreover, theoretically the signifier can float from one meaning, or signified, to others, creating different meanings in different cultural contexts. As Sebeok (1991) describes, an image can be seen as "a sign or a string of signs transmitted from a sign producer, or source, to a sign receiver, or destination" (p. 13). In short, to use a sign is to create the sign in the viewer's mind. Following Peirce's triadic relationship between sign, object, and interpretant, all three are interconnected and inter-influenced (as shown in Figure 2).



Figure 3. Peirce's Triad of Semiotics (Peirce, 1931, p. 58)

Semiotics provides the basic terminology that allows us to talk of signs, and semiotics focuses on the relationship between meaning and culture symbols; as such, semiotics is one of the best methods for decoding images (Semali, 2002). Denis (1989) states that as the study of codes and media, semiotics is the study between the humanities and the social sciences; hence, semiotics has become an emerging field in education as well.

## **Semiotics and Education**

The relationship between semiotics and education is not obvious. However, semiotics should be part of education; furthermore, it could be used as a pedagogy of education. For Eco, there are two implications for semiotics in education: first, "the segmentation of knowledge into fields or subject matter is arbitrary" (Semali, 2002, p. 7). That is to say, everything we know is related to everything else we know. No one route to knowledge is superior to other paths. All knowledge is interconnected; in other words, knowledge is intertextural. The second implication is that "as we investigate and interpret signs we are in effect creating other signs that may potentially become the object of investigation and interpretation... we can never know everything there is know about the world we live in" (Semali, p. 7). Whether it is for teachers to teach or for students to learn, we must rely upon the interconnected nature of related knowledge in order to construct new knowledge.

Semali (2002) states that semiotic-based instruction involves multilevel and multimedia textual analysis. When instructors teach and students learn, they need to translate the knowledge and meaning into their own sign system. As Myers (2002) states, "mediation and transmediation are similar in that both semiotic processes interpret a sign by generating relationships to other signs. Thus, all meaning is mediated, and transmediation refers to the intentional generation of meaning by relating signs that commonly operate within different sign systems" (p. 144). In short, when teachers and students engage in a transmedial experience, they are engaging in multiple ways between sign systems (Semali, 2002).

A multiperspectival practice acknowledges the multiple perspectives and subject positions individuals bring with them when they interact with cultural texts. A multidimensional practice examines the multiplicity of levels embedded in a cultural text from the literal level to its context. (p. 6)

Every sign may contain multiple meanings. The meanings of signs change from culture to culture. According to Smith-Shank (2007), "reasoning from sign to sign is semiosis, and semiosis is the subject matter of semiotics. Semiotic pedagogy is purposeful nurturing of semiosis; purposeful nurturing of reasoning from sign to sign within an unlimited arena of signs. Unlimited semiosis is the process of lifelong learning" (p. 226). How we learn is related to how we think. Learning is a lifelong process, not just a product, and it cannot be defined by the limits of subject matter parameters either.

Semali (2002) considers how students draw meaning from signs; for example, when students can explain the meaning from sign or symbols side by side, they are constructing meaning intertextually. "Intertextuality refers to the process of making connections with past texts in order to construct meaning of new texts" (p. 5). We understand a new text by searching through our past experiences to make or find connections with the new text. "This process is often automatic and even unconscious. The greater the range of experience and texts considered, the deeper the level of meaning" (p. 5).

Semali (2002) also points out that students have broad knowledge about the internet, television, films, and other visual forms when they come to school. In this twenty-first-century, students should be visually literate when they construct new knowledge. "The diverse media representations that are made available to our young people [...] are instruments of popular culture that not only engage these minds but also influence their views of life and people" (Garcia-Cardona, 2002, p. 87). However, most of the time students are not critically looking at or interpreting these images and are easily influenced by the images. Therefore, as Myers (2002) cautions when adapting semiotic strategies to the classroom, "it is critical to remember that a semiotic perspective on meaning does not just seek multiple meanings for any text; it also seeks an inquiry into the ideological intertext of experience that would lead one to signify each different meaning" (p. 143).

Smith-Shank (2007) states that all thinking processes involve signs, the meaning making process proceeds from external signs through a triadic relation, and meaning always builds on previous acquired meaning. Smith-Shank also states that the goals of contemporary semiotic pedagogy are understanding, thinking and making connections. Semiotic pedagogy should be natural for all teachers, especially for art teachers "because of the focus on interrelating signs and notions of understanding as anti-hierarchical, and impossible to parcel out into discrete disciplines" (p. 232). Semiotic pedagogy is "cooperative, active, experiential, and non-predictive in the sense that there are no limits to the amounts or types of inquiries that might be necessary to bring a task to closure after spinning interpretants" (p. 232). Smith-Shank notes that engagement is the key to semiotic pedagogy.

Students should connect their own life experiences to the new information they are learning in order to make the information meaningful for them.

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The use of semiotic pedagogy not only teaches students how to decode images but also shows students how to engage their life experiences with the images they have seen in order to build deeper understandings and develop their own critical thinking abilities.

# Semiotics and Virtual Culture

In this paper the virtual world of Second Life, the role playing game has been adapted as an educational environment, is not the same as the world of virtual reality. In Second Life, residents only need a computer and an internet connection to access this world. The virtual world also does not mean text-based cyberspace. Cyberspace includes websites, blogs, and messengers. Virtual worlds are possible worlds, as Lemke (1993) states: virtual worlds can be as real as the real world, but contain more possibilities. In virtual worlds, nothing is impossible. Everything semiotically constructable can exist in virtual worlds; every semiotically constructable transformation can take place in the virtual world; and virtual worlds can be semiotically and physically connect to reality. To be specific, the virtual world in this research indicates the computer generated three-dimensional visualized online virtual world of Second Life.

Second Life is open software that users can download for free from the internet. It is a Computer Mediated Communication (CMC) tool with which users can do synchronous communication. In other words, Second Life is an online Role Play Game (RPG). SL is developed by Linden Lab and was founded in 1999 in San Francisco by Philip Rosedale (Linden Lab, 2007). In Second Life, everything is designed by the residents. From avatars to the whole environment, it is user-generated content. In this 3D virtual environment, the world is wholly visualized.

Kindler and Darras (1998) point out that all visual images convey thoughts, ideas, facts, emotions, states, understandings, and interpretations, that is to say, images have a communication potential. Communication is consitiuted of components of semiotic signs. According to Semali (2002), "in this technological boom era, one of the sign systems we use to communicate

nonverbally is the visual sign system" (p. 8). In this kind of computer generated virtual environment, vision becomes the most important sense for users. Because vision is so important, visual culture in this kind of virtual world becomes more complex than in the real world. In the real world, most visual culture is regional: people with similar cultural backgrounds use similar style or meaning of images to understand each other. In Second Life, however, visual culture is no longer regional. The virtual world is populated by people from around the world with different cultural and personal backgrounds. The same image, symbol, or color may contain different meanings in different cultures. This virtual culture becomes a new field of study.

The contemporary study of semiotics is based on how meanings are made and how reality is represented (Chandler, 2002). In Second Life, everything we can see represents reality or the imagination. The virtual world is not just a hyperreality but is also a semiotic world. Everything seen in the virtual world carries certain meanings. In the virtual world everything, from avatars to mountains, rivers, and even the weather, is created by people. No image can be taken for granted in the virtual world.

Eco states that "semiotic systems are models which explain the world in which we live" (Lotman, 1990. p. x). Sless (1986) also states that "semiotics is above all an intellectual curiosity about the ways we represent our world to ourselves and each other" (p. 1). In the real world, there are many things that we cannot control; however, in the virtual world, everything is made and controlled by people; therefore, the virtual world is a particularly important place for semiotic research. Eco (1990) also notes that reconstructing the code of a culture does not explain all phenomena of a culture but allows us to explain why that culture has produced those phenomena. Using semiotic theory to decode the virtual world helps us to understand how and why it forms its own particular visual culture. For Sebeok (1991), a message is a sign or signs transmitted from a sign producer to a sign receiver. In the virtual world everything we can see is a sign and everything purposely transmits certain messages. As Luke (2006) states, many students have been enculturated in virtual world images since an early age; they learn social and cultural lessons from those images and reshape and reincorporate themselves into their own social relations and hypertextual productions. In other words, images from newer technologies are changing and shaping our new culture and world. Blumer (1969) states that "reality is different for different people and that people create meaning in social interaction. This sociological theory of symbolic interactionism suggests that both reality and the social order are created by people of joint action" (p. 180). In other words, "All representations are constructions and need to be interpreted for "authentic" meaning. However, what is considered "authentic" by one individual may not necessarily be authentic for other readers or viewers" (Semali, 2002, p. 13).

As Sturken and Cartwright (2004) note, semiotics shows us that viewers create meaning from images, objects, and texts, and that meanings are not fixed within them. Most images we see are aligned with dominant ideologies; however, the value of negotiation as an analytic concept is that it allows space for the different subjectivities, identities, and pleasures of audiences.

Using semiotics to decode the images we see in the virtual world will help us achieve a better understanding of virtual culture. In semiotic theory, we not only decode the images we can see, but we also connote the meaning behind the images in order to really understand the conventional cultural meanings of these images. By using semiotic theory in this way, all images can be easier to decode or translate and understand. For Sebeok (1991), a message is a sign or signs transmitted from a sign producer to a sign receiver. In the virtual world everything we can see is a sign and everything purposely transmits certain messages.

# **Semiotics Applications in Virtual Worlds**

To better understand how the semiotic methods that have introduced above could be applied in the virtual world I have included the following examples.

## Signified and Signifier



Figure 4. Avatar in Second Life

The signifier is the representation of a concept, and the concept is the signifier of the representation. In today's technology, users can never be present in the virtual world with their real physical bodies; therefore, in the virtual world, users create their own avatars to represent themselves. In other words, avatars are the signifiers (representations) of users in the virtual world. Avatars can be dressed up in any way the users choose. The avatars can wear clothes that the users may never have a chance to wear in real life. Avatars can look like their real users, but avatars can also look like anyone, of any age or gender, and any having characteristics, including those of animals. As our physical bodies have no limitations in the virtual world and as the signifier becomes much more creative, discovering the signified (the real people sitting in front of the screen) of the avatar becomes an important goal of the researcher.

#### Symbol, Icon, and Index

A symbol is an image that does not directly resemble its meaning but possesses a fundamentally arbitrary or purely conventional connection to that meaning. An icon is an image that physically resembles or imitates its meaning. An index is an image that possesses a direct causative connection to its meaning (Chandler, 2004). Everything we see in the virtual and the real world can be divided into these three categories. There are many different visual symbols in the virtual world, and if we are viewing a symbol for the first time, we will be unable to understand what that symbol means. However, after we see the same symbol at different times and locations in the virtual world, it will become possible for us to learn the meaning represented by that symbol. Icons in the virtual world vary. Icons are regional and conventional; however, for viewers without the same cultural background or experience, an icon in the virtual world may function more like a symbol. An index is a more globally conventional type of sign than the other two (Chandler, 2004); index gives direct attention to its object by blind compulsion. In the virtual world the most obvious example of an index is the map that directly indicates where the avatars are located and their relationship with different places.

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## **Denotation and Connotation**



Figure 5. Cultural specific location in Second Life

Denotation is what we see in an image and may include background, objects, light, time, effects, and other things. Connotation is the meaning behind the image. However, connotation is influenced by cultural conventional. All denotations have a connotation, but different people with different backgrounds may find different connotations for the same denotation. Frascara (2004) defines denotation as "the relatively objective dimensions of a message, such as description or representations in images or texts. Connotation refers to more subjective aspects of a message, and it is particularly important when the message strives for an emotional appeal, as in the case of persuasive message" (p. 69). In the virtual world, socializing is one of the most important activities. There are many different kinds of socializing places in the virtual world, such as natural parks, ballrooms, live

music, galleries, churches, and bars. As users, we go where we want because we think we know what kind of environment we will see and we would like. All those places can be seen as denotation; we think we know what we see. However, the reasons that builders construct those virtual environments could be better understood through connotation. Because the connotation differs from culture to culture and from user to user, using both denotation and connotation in the virtual world is necessary.

#### Metaphor



Figure 6. Animal avatar in Second Life

Metaphors are widely used in both the real and virtual worlds. A metaphor is a type of sign that does not essentially represent something else but which is used to represent a different meaning. In the virtual world, animal avatars can be seen as a metaphor for a real person in the real world. Different animals have different metaphorical meanings. Users make and use animal avatars to metaphorically represent their personalities.

#### Myths

"Myths can be seen as extended metaphors; myths help us to make sense of our experience within a culture" (Chandler, 2004, p. 145). Myths can be seen as connection between nature and culture as well. For Barthes, our dominant ideologies are presented as myths (Chandler). Virtual worlds, including Second Life and other games, are myths. People create a virtual environment for themselves to enjoy and to escape reality. Regardless of whether it is a scary environment or a homey place, it is a place without any natural restrictions, and it is a place of wonder for us. Education, Semiotics, and the Virtual World of Second Life

# Conclusion

As Smith-Shank (2004) states, "semiotics itself is discussed and deconstructed in ways that acknowledge the need for further exploration into realms of significance that may be more appropriate for technological, postmodern, post-colonial, and possibly even post-textual cultures" (p. x). Semiotics is a method of critically looking at and decoding images to uncover their deeper meaning. All images contain meaning, but these meanings differ for people from different backgrounds. A fully visualized virtual world is a great place for studying semiotics because all the images in the virtual world are created by virtual world residents, and these residents come from all parts of the globe. When a virtual world resident creates an image, that image contains multiple meanings. When other virtual world residents see the image, they create another meaning for the same image by using their own previous knowledge. Meanings for these images continue to grow when they are viewed by other virtual world residents from other cultural backgrounds. As Smith-Shank (1995) stated, "essentially, you're spinning interpretants forever and ever. You take a concept, sign, object, and endlessly interpret it and every time you interpret it you add new knowledge (which may be false) but at all times you expand" (p. 226) How we see, how we look, and how we perceive are all related to what we have seen before—our previous knowledge. Because semiotics can help us decode the deeper meaning of images, it can also help us understand images that are made by people whose cultural backgrounds are different from our own.

Visual culture is an arena of study for semiotics. Examining the visual culture environment from the perspective of semiotics will help us develop a deeper understanding of the visual world. Because semiotics takes the meanings of visual cultural images seriously on their own terms, images can be studied as complex and meaningful entities that are necessary to juxtapose human experiences (Myers, 2002; Semali, 2002; Smith-Shank, 2004). "When we read a text a second time, both the text and we are

different. Our identity is a constantly shifting intertext" (Myers, p. 140). Therefore, when teachers introduce new images to their students, they should help their students generate connections between the new image and other images, in order to help students to produce new layers of meaning around the new image. A semiotic-based approach to visual culture examines images as vehicles of meaning in every culture and looks at how images "are taught to children and adolescents and how they capture societal values about human relationships, myths, belief system, and established norms" (Semali, p. 3)

According to Burnett (2002), visual language has its roots in semiotics. "From a semiotic point of view, nothing is misrepresentation; everything is an ideological representation" (Myers, 2002, p. 138). Myers also states that regardless of the kind of signs or sign systems, through semiotic assumption, "all meaning is relational, not embedded (or entombed) within each single text" (Myers, 2002, pp. 137-138). In other words, semioticians recognize that the meaning of images is mediated by the experience of the reader and the viewer. According to Smith-Shank (2007), "semiotics is a broad approach to understanding the nature of meaning, cognition, culture, behavior, and even life" (p. 225).

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