

Understanding the Semiotics of The Cinema: How Cinemaphotographers Use Semiotic Concepts and Techniques to Illicit a Feeling or Message Within its Viewers

Abstract

Cinematographers have been using their films as mediums to send their audience a message, or illicit a certain emotion or feeling within them, since the form of art and expression was first developed. Semiotics is the study of sign, sign manipulations, and the interpretation or meaning that individuals derives from each. By dissecting film from a semiotic perspective, one will be able to begin to understand how a motion picture can influence an individual's high-level cognitive processes, and in turn shape their conceptual representations created. We examine many concepts and theories developed by well renowned cognitive scientists and semioticians including Ferdinand de Saussure, C.S. Peirce, Christian Metz, Susanne Langer and Roland Barthes. We discuss in depth just how these well-known theories and concepts have shed a light on the effects of the cinema, while also diving into the many alternative perspectives one can take when approaching this problem.

Introduction

Since the art of creating film was first established, it has been used as a medium for conveying information to the spectators in attendance in a meaningful way. Cinematography in general terms is "the art and technology of motion-picture photography" (The Editors of Encyclopaedia Britannica, 2011). Cinemaphotography involves more than one stagnant image, it is a collection of many images composed into a sequence, with outside variables and conceptual

systems providing structure and constraints to the sequence of images and objects, in a set way. There are many aspects, as previously stated, in the production of a film, and every aspect adds to the overall meaning that is attached to the end product shown at a premier. Semiotics is a well-known subfield of cognitive science, and at its most basic level, “semiotics is the study of signs and symbols and their meanings and interpretations” (Horton, 2017). Signs are all around us and the way in which individuals interpret symbols, infers a lot about the cognitive processes and conceptual representations created within the individual. With that being said, this paper argues that the approaches and techniques used by filmmakers to portray a certain meaning, influence the mental processes within the individuals in the audience watching.

There are many high-level mental processes and conceptual representations that occur within the individual sitting in a theater observing a film. These mental processes and conceptual representations are shaped by the meaning derived from signs hidden within a film. In film, signs can be seen as individual images within a frame, the sounds, and colors used on a set, even the color of the main character's cape can be seen as a sign and hold importance to the film's message and meaning being conveyed. Any aspect of a film can be seen as a sign and portray meaning to the viewer watching, and these signs have been compiled by the producer in a set way, to serve a set purpose. In Peter Wollen's novel *Signs and Meaning in the Cinema*, Wollen dives into this very concept by showing a great deal of meaning that one can derive through the images of a film:

“Yet our experience of cinema suggests that great complexity of meaning can be expressed through images. Thus, to take an obvious example, the most trivial and banal book can be made into an extremely interesting and, to all appearances, significant film; reading a screenplay is usually a barren and arid experience, intellectually as well as

emotionally. The implication of this is that it is not only systems exclusively 'grounded on the arbitrariness of the sign' which are expressive and meaningful. 'Natural signs' cannot be so readily dismissed as Saussure imagined." (P.120)

Just as a novel filled with words can strike the reader with such vivid representations and make them think and feel a certain way, a film does through the use of imagery and sounds. Except with more stimulating aspects to a film over a novel, the audience of a film is more immersed because they can find a relationship with the film that speaks to their sensory and perceptual systems. Often an individual can become so involved and invested in a film that they can imagine themselves within the film as if they were cast to play the lead role. There are many factors that allow individuals to derive meaning from film and more importantly derive the meaning intended by the film creator. To again reference Peter Wollen's novel, *Signs and Meaning in the Cinema* (1972), Wollen makes clear the ways in which filmmakers need to keep up with the changes of society to ensure their film is concurrent within the audience's culture.

"The study of film must keep pace with and be responsive to changes and developments in the study of other media, other arts, other modes of communication and expression.

For much too long film aesthetics and film criticism, in the Anglo-Saxon countries at least, have been privileged zones, private reserves in which thought has developed along its own lines, haphazardly, irrespective of what goes on in the larger realm of ideas.

Writers about the cinema have felt free to talk about film language as if linguistics did not exist and to discuss Eisenstein's theory of montage in blissful ignorance of the Marxist concept of dialectic." (P. 17)

This idea can be found in any form of art, if your art does not reflect the society or culture the observer is currently experiencing or has experienced, they will most likely struggle to derive the

intended meaning or message. Filmmakers rely on the fact that most humans have similar enough experiences due to development in similar societies. Even though each experience one has is subjective, being a part of the same or similar culture can allow the subjective experience of two individuals to be similar. This also means that filmmakers need to keep up with the development and changes in society. Keeping up with these changes can help ensure a cinematographer that the intended meaning the audience derives from their film is coherent and understood in the context of the culture that surrounds the audience. If a filmmaker can keep up with cultural values, it allows the audience to get more invested in the plot and connect with the characters because there is an “impression of reality being experienced by the spectator” (Metz, 1991). This idea is very prominent in the work done by Christian Metz, a film theorist and semiotician, whose theories and concepts we will revisit later in the paper. In Metz's novel *Film language: A Semiotics of the Cinema* (1991), he touches on this very idea of a film appealing to all the senses of the spectator, influencing the perspective in which they view the film.

“One of the most important of the many problems in film theory is that of the impression of reality experienced by the spectator. Films give us the feeling that we are witnessing an almost real spectacle—to a much greater extent, as Albert Laffay has noted, than does a novel, a play, or a figurative painting * Films release a mechanism of affective and perceptual participation in the spectator (one is almost never totally bored by a movie). They spontaneously appeal to his sense of belief—never, of course, entirely, but more intensely than do the other arts, and occasionally films are, even in the absolute, very convincing. They speak to us with the accents of true evidence, using the argument that “It is so.” With ease they make the kind of statements a linguist would call fully assertive and which, moreover, are usually taken at face value.” (P.4)

Metz makes apparent how wonderful of an experience a film can create for the audience, and is something that no other form of art does justice like a motion picture. The idea that “films release a mechanism of affective and perceptual participation in the spectator” is what allows filmmakers to influence the mental processes and representations within its viewers (Metz,). All the aspects that lock the spectator in, keeping them on the edge of their seat and unaware of any surroundings because it feels as if they have stepped into a new reality, are designed in a particular way by the producer. The way in which this all occurs is what we will be discussing throughout the sections following the introduction.

Succeeding this paper's introduction, there are four sections dedicated to understanding some of the foundational concepts and theories developed by well-known cognitive scientists and semioticians in their respected fields. Many of the semioticians also specialize in a variety of other related fields including linguistics, psychology, and philosophy, allowing this problem to be viewed from multiple perspectives. The first of the four sections dedicated to foundational work features Ferdinand de Saussure and C.S. Peirce. These two semioticians can be seen as setting the stage for semiotics, as it was an emerging and unheard field in their time. Saussure can be seen to have a linguistic twist to his semiotic theories and provides much insight into how language and the manipulation of signs are interconnected. Peirce's semiotic work makes clear the relationship between the signifier and signified, when interpreting different signs of the world. Pierce's theories also provide those new to semiotics, a different perspective of looking at the world, by suggesting that humans only view the world through the relationships of signs. The other three sections will feature work from Christian Metz, Roland Barthes, and Susanne Langer, each of these semioticians helping to provide insight into the problem under question. Following those four sections, we will dive deeper into

important concepts introduced when discussing the works of known semioticians, as well as concepts not previously discussed, by exposing their role and influence in cinemaphotography. These concepts are split up between three sections and each section is related to one another. The first section will explain the concepts of embodied cognition, categorization, conceptual metaphors, and image schemas, all being critical for understanding how meaning is derived in the minds of the audience watching. The next section will break down the functionality of a cinemaphotographers camera and a film's frame, enlightening the reader on the ways in which their functions are similar to cognitive processes and conceptual representations produced in the human brain. Finally, we will bring to light the importance of diegetic and non-diegetic sounds, by examining the influence they have on the meaning and mental representations one derives from film. Our papers final section, the conclusion, features a summary of the papers significance to the field of cognitive science and film theory. Lastly, the latter half of the conclusion includes an interdisciplinary perspective one could embrace to extend this research down the road, opening up our community of researchers to new horizons and ways of thinking.

In this paper, we look to understand how concepts and theories in the field of semiotics are being used by film makers to influence the spectators in the audience. We bring to light many different semiotic techniques developed over the years and show how they are used to affect the subjective meaning one derives from film. This paper argues that the techniques and approaches used by filmmakers to illicit a particular message or emotion within its audience, influence their high-level cognitive processes, and shapes their conceptual representations.

Foundational Semiotic Concepts and Ideology

The field of semiotics is considered a sub-field of cognitive science and the field of semiotics is concerned with “the study of signs and symbols and their meanings and interpretations” (Horton, 2017). The field of semiotics places a special emphasis on the meaning interpreted and the reasoning behind the meaning derived from any given sign. There are many semioticians that have laid foundational work in this fields and it is crucial to mention many of their theories as they provide insight into the way in which humans derive meaning from signs. Ferdinand de Saussure is one of those foundational contributors to the field of semiotics and takes a linguistic and structuralist approach in much of his work. “Saussure treated language as a sign-system,” and his work in linguistics supplied the concepts and methods that semioticians applied to sign-systems other than language. (The Editors of Encyclopaedia Britannica, May 2020). Saussure treated the study of any language as a system of signs and the manipulation of those signs inferred a lot about the semantics or meaning that an individual assigns to each sign. Saussure considered language as a system of relations, where the values assigned to the symbols within the system are the result of difference. In other words, elements within the system are understood in terms of their relation to overlying structure. “While structural linguistics, as a part of the semiology postulated by de Saussure, investigates natural languages as a system of signs, in structuralism, instead, methods and terms of structural linguistics are generalized a priori and applied to the realm of non-linguistic signs pertaining to the semiology of communication, and especially to the realm of indices in the semiology of signification” (The Editors of Encyclopaedia Britannica, May 2020). By Saussure taking a structuralist approach the idea of natural language being a system of signs, can be generalized to describe the semiology of any form of communication. This allows for comparison between the

semiology of language and general communication, allowing more insight into the semiotics of cinema as the same ideas can be generalized to describe the communication found in film.

In Saussure's semiotic work he places a great emphasis on the idea of the signifier and the signified, and as we will see later so does C.S. Peirce. The signifier is the sign itself or in other words the object in the physical world being interpreted. Where the signified is the interpretation or meaning that is derived from a given sign (The Editors of Encyclopaedia Britannica, May 2020). The concepts of the two semiotic components of a sign, the signified and the signifier, are conceptually similar to Saussure's linguistic ideology that language as a system is composed of two components, *la parole* and *la langue*. Saussure "distinguished parole, actual individual utterances, from langue, the underlying system of conventions that makes such utterances understandable; it is this underlying langue that most interests semioticians" (The Editors of Encyclopaedia Britannica, May 2020). Parole can be seen as the individual words or phrases themselves, signifier, and parole relates to langue, which is the context behind the words and phrases, allowing meaning to be understood.

Ferdinand de Saussure's semiotic theories consider natural language as a system of signs, making the idea of syntax and discourse, when examining the context and meaning assigned to a particular sign, increasing important. Syntax in natural language refers to the underlying structure of a language and using the idea of discourse, you can compare and contrast the meaning and context behind written language to derive new information and meaning. This same idea can be applied to semiotics and film theory. More specifically, when looking at the syntax, semantics and pragmatics of natural language, meaning is derived in very similar ways to how it is accomplished in film and cinematography. In Gilles Deleuze's novel *Cinema 2: The Time-Image* (1986), begins to introduce the idea of film and natural language having similar

structure and methods of producing and deriving meaning. Deleuze states that “language features which necessarily apply to utterances will be found in the cinema, as rules of use, in the language system and outside of it: the syntagm (conjunction of present relative units) and the paradigm (disjunction of present units with comparable absent units). The semiology of cinema will be the discipline that applies linguistic models, especially syntagmatic ones, to images as constituting one of their principal 'codes'” (Deleuze, 1986). Deleuze gives a brief but descriptive explanation of how the structure of language and film can be seen as similar. He does so by showing that like language film can be seen as a system of signs, and the manipulation of any sign in that system will affect the systems function or meaning as a whole. Deleuze end his short explanation by referencing the idea of an images code and idea will be further explored when looking at Roland Barthes semiotic theories.

Similar to Ferdinand de Saussure’s semiotic theories, C.S. Peirce places a great emphasis on the fact that a sign is composed of a signifier and the signified, although Peirce extends this idea by adding an interpretant component. Beside the object itself and the identification of the objects properties being associated with one common idea. The individual identifying the sign under question must interpret the signified information, and that individuals past experiences govern how that information is interpreted and the emotions that are elicited within. Much of C.S. Peirce’s “seminal work in the field was anchored in pragmatism and logic” and he defined a sign as “something which stands to somebody for something” (The Editors of Encyclopaedia Britannica, May 2020). Peirce also demonstrated “that a sign can never have a definite meaning, for the meaning must be continuously qualified”(The Editors of Encyclopaedia Britannica, May 2020). This idea becomes increasingly important when

considering film because if the meaning assigned to a film's signs don't align with the social constructs of the time, meaning will be lost.

Peirce furthered the foundational seminal work of his time by classifying a sign and its meaning into three distinct categories and those categories are then further broken down into three distinct types. The three distinct categories Peirce classified signs into are: “Firstness”, which is the “quality of feeling or qualia” of a sign, “Secondness” being the “reaction or relation” of the sign, and “Thirdness” as the “representation and discourse” of a given sign (PN1). All three categories are required properties of a sign under Peirce's semiotic ideology and in the absence of one of the categories, the information or meaning conveyed by the sign may be lost. As previously mentioned, the three distinct categories of a sign are further broken down into three different types, each exposing the different properties a sign possesses and the information that is critical for interpretation. The first category, the icon, “resembles the sign's referent” and corresponds with firstness because an icon is conserved with the physical properties of a sign (The Editors of Encyclopaedia Britannica, May 2020). An example of an icon in everyday life is smoke and smoke has the physical properties of being a thick, cloudlike vapor. The second type is the index and corresponding with secondness, an index “is associated with its referent” (The Editors of Encyclopaedia Britannica, May 2020). Another way of understanding the function of an index is what does the concept behind the sign relate to. To continue with the example of smoke, the association with the referent could be that smoke signifies fire. The last sign type is symbol and corresponds to the concept of thirdness under Peirce's semiotic theory. A symbol “is related to its referent only by convention,” showing the need for the aspect of an interpretant when examining different signs (The Editors of Encyclopaedia Britannica, May 2020). Symbols rely on the past experience and knowledge of

the individual to interpret the conventions of a sign. Getting back to the idea of smoke signifying fire, to different individuals fire can signify a wide variety of different things. Fire can elicit the feeling of warmth and comfort, or it could spark an uneasy feeling due to a past experience with fire causing destruction. In Gilles Deleuze novel, *Cinema 2: The Time-Image* (1986), he explains how Peirce's semiotic concepts can be applied to film by breaking down the images of a film into the three components previously mentioned.

“This said, the sign in Peirce apparently combines the three kinds of image, but not in any kind of way: the sign is an image which stands for another image (its object), through the relation of a third image which constitutes 'its interpretant', this in turn being a sign, and so on to infinity” (Deleuze, 1986)

The images of a film are considered signs and Deleuze briefly describes how the different types of images used in film come together to represent a certain idea. Each image in a film is related to one another within the film's sign system just as each utterance in language is related to each other in a structured sentence, further exposing the similarities between film theory and linguistics.

Christian Metz and Film Theory

Film Theorists study film by examining the various different aspects and attributes involved in the construction of a renowned motion picture. Cinematography is more than just a director, a camera and a cast of actors, there is an underlying structure and strict constraints set on the flow of sequential images that forms a full-fledged motion picture. To form a well-constructed film it “involves such techniques as the general composition of a scene; the lighting of the set or location; the choice of cameras, lenses, filters, and film stock;

the camera angle and movements; and the integration of any special effects. All these concerns may involve a sizable crew on a feature film, headed by a person variously known as the cinematographer, first cameraman, lighting cameraman, or director of photography, whose responsibility is to achieve the photographic images and effects desired by the director” (The Editors of Encyclopaedia Britannica, 2011). There are so many aspects and variables to consider when creating a memorable motion picture. All of the different angles, positions, and still images just mentioned are what allows a director to construct a story in his film that immerses the audience watching. “The historical fact is that cinema was constituted as such by becoming narrative, by presenting a story, and by rejecting its other possible directions” (Deleuze, 1986). Through the sequence of images a film’s narrative or story is created, which is driven by the characters and their actions as they progress through the film’s plot. “The rule of the "story" is so powerful that the image, which is said to be the major constituent of film, vanishes behind the plot it has woven” (Metz, 1991). Cinema, simply put, in theory is “the art of images” and the individual images that form a film hide behind the plot they create.

The aspect of immersion allows immense amounts of feeling and emotion to be portrayed to the audience watching, making the interpretation and derivation of meaning a critical area of study for film theorists. Film portrays meaning to the audience watching through the use of a system of signs, where each sign attributes to the overall message of the film. Anything from the squeaking of a door to the defeat of an antagonist can be seen as a sign and attribute meaning to the overall whole. As described by Christian Metz in his novel *Film Language: A Semiotics of the Cinema* (1991):

“One of the most important of the many problems in film theory is that of the impression of reality experienced by the spectator. Films give us the feeling that we are witnessing

an almost real spectacle— to a much greater extent, as Albert Laffay has noted, than does a novel, a play, or a figurative painting * Films release a mechanism of affective and perceptual participation in the spectator (one is almost never totally bored by a movie). They spontaneously appeal to his sense of belief—never, of course, entirely, but more intensely than do the other arts, and occasionally films are, even in the absolute, very convincing. They speak to us with the accents of true evidence, using the argument that "It is so." With ease they make the kind of statements a linguist would call fully assertive and which, moreover, are usually taken at face value."

A good director creates a whole new world within their film that plays on common experiences had among the films directed audience. A film is one of the most powerful mediums for conveying meaning and other forms of expression like painting or photography do not have the same capabilities that film does. Where a painting or photo is a single image, a motion picture is a collection of many sequential images with the addition of sound, allowing for a whole new world to be created.

Christian Metz is probably one of the most renowned semiotician when it comes to studying and analyzing the semiotics of film. Through Metz work there has been a foundation laid that provides an understanding for how film operates as a system of signs and how the meaning conveyed by those signs influences the audience watching. Like the work done by Ferdinand de Saussure and many others, Metz was a semiotician interested in studying signs as a two part construct. Along with his fascination with the signifier and the signified, Metz more closely focused his attention on the connotational and denotation elements of cinematic signs. Metz suggests that denotation elements of film should be studied first before diving into the connotational elements due to the order in which we as humans perceive them. Denotational

elements are the visual elements presented to the viewer sitting in the audience, and in simpler terms the denotational elements are generally the images that make up the story. The audience perceives the denotational elements of film as they are, interpreting the effects or influence the elements encompass later. The interpretation process of denotational elements occurs when understanding cinematic connotations. “Metz recognizes that one form of cinematic connotation, which unlike others is clearly under the control of filmmakers, is the figurative and strictly speaking extra- narrative meaning generated as a result of pro-filmic objects being framed, lit, edited or otherwise shown by filmmakers (like Bresson, in the example above) in unusual and often creatively stylized ways” (Yacavone, 2018). Connotational elements present something to the viewer that require interpretations themselves and cannot be understood with just the basic materials of the film, like denotational elements.

Along with Metz focus on the connotational and denotational elements of a sign, Metz differs from other semioticians with his theory of the imaginary signifier. Christian Metz saw the signifier of a film as being a reflection of the individual watching, placing an emphasis on the role of the audience. “Metz sees the spectator’s captivation by the image as being equivalent to the child’s identification of itself with its image in the mirror. Most importantly, this identification is pleasurable, a factor reinforced by the cinema institution’s encouragement of the spectator (Mambrol, 2018). This is a different approach from traditional film theory, because before the role of the audience was really not considered. Instead there was more of a focus on the creative process behind the scenes by the director. “Thus film is like the mirror. But it differs from the primordial mirror in one essential point: although, as in the latter, everything may come to be projected, there is one thing and one thing only that is never reflected in it: the spectator’s own body. In a certain emplacement, the mirror suddenly becomes clear

glass.” (Metz, 1991). Metz saw film as a mirror that reflected the views and experiences of the viewer watching. The signifier becomes imaginary because it is arbitrary to the individual making it imaginary, as no one else experiences the effects of the signifier in the exact same way. There may be general consensus of what is being portrayed by the signifier, but it is not replicated exactly between the audience, making it imaginary.

“The differences between photography and cinematography are many. A single photograph may be a complete work in itself, but a cinematographer deals with relations between shots and between groups of shots” (The Editors of Encyclopaedia Britannica, 2011). Cinemaphotography involves more than one stagnant image, it is a collection of many images composed into a sequence, with outside variables and systems providing structure and constraints to the sequence of images and objects, in a set way. This idea relates directly to the idea of natural language being a system of signs, established by Ferdinand de Saussure, where discourse and difference determine how meaning is derived. Saussure believed that natural language is a system of signs, where the meaning of an individual unit of speech is the result of the co-existence of a different unit. Saussure stated that no unit could stand alone and each unit only held meaning due to its co-existence with other units in the system (Krampen et al., 1987). The idea that film is a sequential set of images assembled in a particular way, appealed to no one more than Christian Metz. Metz believed that film was made up of series of minimal sequences, which he named syntagma's, where each sequence added to the overall message of a film. Metz followed the idea that "it is the felicity of art to show how a thing begins to signify, not by reference to ideas that are already formed or acquired, but by the temporal and spatial arrangement of elements." If you manipulated the arrangements of elements, altering any little detail of the sequence, it would affect the overall message or story the film projects.

Roland Barthes and The Coded Message

Roland Barthes was a French theorist, philosopher, and of course a well-known semiotician in the mid 1900's. Like Ferdinand de Saussure, Barthes was very interested in the structuralism movement that was popular during his life time. Structuralism is a method of interpretation, that analyses human backgrounds and ways of thinking, to see the relationships between the different parts of the conceptual system (Barthes, 1968). His theories investigate the idea that individual elements and aspects of experience or culture belong to an overall conceptual system, where each element is related to one another. Barthes focus was on how an individual's development and the social ideology around them, shapes the meaning interpreted from a given sign in a conceptual system. Barthes believed that "the institutional and the systematic aspect are of course connected: it is because a language is a system of contractual values (in part arbitrary, or, more exactly, unmotivated) that it resists the modification coming from a single unit, and is consequently a social institution." (Barthes, 1968). Barthes approach to understanding how meaning is interpreted stems from his work in anthropology and is very apparent in this quote. Barthes believed that a single symbolic unit cannot stand alone and the meaning it conveys is arbitrary and requires a certain context to comprehend. Barthes was interested in how someone's culture, religion, and societal backgrounds provides the context needed to derive meaning in a conceptual system, like film. Much of the work Roland Barthes has done relates to understanding how advertisements influence those that interpret it. The ways in which Barthes breaks down an advertisement, into a conceptual system, can be applied when understanding film as a system of related signs. Roland Barthes breaks down his interpretation of a symbolic image into three different "messages," where each message provides another meaningful aspect to the image being interpreted.

The first “message” that Barthes investigates is the linguistic message that a symbolic image or scene projects. The linguistic image, simply put, is the linguistic words or elements found within a scene. The linguistic elements add another level of understanding to an image and to fully comprehend the message, you need to interpret the connotational and denotational messages within. This is the same concept developed by Saussure with regard to natural language, where a symbol is composed of a two part construct, the signifier and signified. “Roland Barthes, as a result of his researches into the language of costume, concluded that it was impossible to escape the pervasive presence of verbal language. Words enter into discourse of another order either to fix an ambiguous meaning, like a label or a title, or to contribute to the meaning that cannot otherwise be communicated, like the words in the bubbles in a strip-cartoon. Words either anchor meaning or convey it” (Wollen, 1972). The denotational aspect of a linguistic message is “the code from which this message has been taken” (Seiler, n.d.). In other words, the denotational message is the natural language in which the linguistic symbols stem from. The denotational message only examines the background of the language to understand the phrases and words shown. The connotational message then takes the examination of the linguistic message a step further. Once it is understood what language the linguistic message is coded in, it is crucial to find out how the cultural background of the language adds meaning to the message (Seiler, n.d.). By breaking down the linguistic message into these two distinct parts allows insight into the process the creator took when constructing the message, adding meaning to the overall image.

The second message that Roland Barthes breaks down the signs of a conceptual system into is the symbolic or coded image. The literal image “yields a series of discontinuous signs” where the order of the signs is not linear in the series (Seiler, n.d.). The discontinuous

signs involved within the literal message attribute different aspect of meaning. To understand the meaning that is attributed, you need to understand the contextual or connotational information that is “coded” into the image. Barthes breaks down the literal image into four different sign types, none of which are specifically named. The first sign is what is being signified by the scene or image as a whole. The first sign relies on understanding the societal values of the creator and of the given time period to fully comprehend. The second sign is the signifier and relies on understanding aspects of a specific ethnicity. “This sign stands in a relation of redundancy with the connoted sign of the linguistic message” (Seiler, n.d.). An example of this seeing the color scheme of red, white and green, and if you’re not Italian you may not understand the reasoning behind the color scheme. Without this understanding the viewer is deprived of contextual information needed to comprehend what they are seeing. The third sign is the collection of the elements within an image to transmit a single idea. For example seeing various fresh fruits and vegetables, one can infer that a fresh, quality meal is going to be prepared. The fourth and final sign deals with the arraignment of the collection of elements, but focuses on how the arrangement of items are aesthetically pleasing. The elements found in the scene of a movie or advertisement are not placed at random. They are strategically placed to be aesthetically appealing to the viewer and convey to them a particular meaning.

The third and final message that Roland Barthes breaks down the signs of a conceptual system into is the literal or non-coded image. This is the easiest of the three messages to comprehend as there is no contextual information required to understand what is being conveyed. The literal image is the “literal” denotation, the recognition of identifiable objects in an image or scene, irrespective of the larger societal code previously described (Seiler, n.d.). The literal images are the real objects in the image and are not coded, the viewer only

needs to know what each object is before looking at the image. These images have no required connotations to comprehend what the object stands for, they have a universally known meaning. An example of this could simply be seeing a four-legged furry animal in a scene and being able to recognize that it is a dog. No other interpretations needs to be made, the viewer simply needs to be able to identify the object as relating to a single idea. In the example give, the features of a four-legged furry animal are mapped to the idea of a dog. No specific breed is determined and no other past experiences of dogs are required. The viewer doesn't even need to belong to a certain cultural or have a specific societal development because the ideas behind these images are more or less universal.

Susanne Langer: Art and Expression

Susanne Langer was a well-known philosopher, artist, and semiotician of her time who was fascinated with language and the aesthetics of art and music. Unfortunately because Langer was a women, she was not held with the same prestige as other intellects of her time. Langer used artistic expression to relate to other cognitive activities humans perform and this is very apparent throughout her work. The work Langer published regarding aesthetics and expression, relates directly to the Metz theory of a film being a system of signs and Saussure's ideology of natural language being a system of signs. Langer saw each individual aspect of a piece of art as a sign that added meaning to the message being portrayed by the creator. Langer's approach to understanding how meaning is conveyed focuses on the presentational symbolism and discursive symbolism that is portrayed (Langer, 1953). Presentational symbolism dissects the emotional significance of an individual artistic feature or sign. Presentational symbolism can be manipulated and used in various different ways by the artists, eliciting different emotions or feelings within the viewer depending on the perspective the artist took (Langer, 1953). An

example of presentational symbolism in art is showcased when an artist paints a tiny dog with very large eyes. To many observers this will elicit a happy and sympathetic feeling within because the dog is portrayed as being cute and innocent. Discursive symbolism on the other hand considers the implied message of a painting, acting similar to the signified half of a sign's two-part construct under Saussure and Peirce (Langer, 1953). An example of discursive symbolism is the idea of fire being conveyed as destructive and devastating. Just like the idea of a signifier and the signified aspects of a sign, Langer looks at the presentational and discursive aspects of signs found in art and expression.

Langer's theories and ideology for examining art and expression emphasizes the importance of first considering the individual units of a piece before examining the whole.

In doing so, it allows those interpreting given piece of art or music an understanding of how each piece or aspect is mapped to one other, to form the whole. Each individual unit is considered an artistic sign or aspect of a piece and holds meaning (Innis, 2012). This is similar to the idea of a phoneme in linguistics, which is the smallest unit of sound that holds meaning. In the same way that phonemes come together to form words that have meaning, the different aspects of a painting come together to portray a message or elicit a certain feeling. Each frame of a film can be seen as an image that can be interpreted using Langer's semiotic approach. In one frame of a film there are a variety of different aspects to inspect. Lighting is an aspect of film that holds immense amounts of meaning to the scene that is being shown (Innis, 2012). Brighter lights can be used to set a peaceful and innocent mood within the viewer, acting on peaceful experiences that allow them to relate directly to the film. The reverse effect can be seen with dark lighting where the audience will observe the mood as being dismal and remind them of a gloomy or depressing time in their lives. A similar affect can be seen when looking at the color scheme used

by the artist (Innis, 2012). Brighter colors are meant to illicit a happy or positive feeling within the viewer. On the other hand, darker colors are meant to do the reverse, making the viewer feel sad or possess a negative feeling. Other aspects of art that are a concern of Langer's include setting, props, object placement, the use of empty space, outfits of the characters, although this only names a few, the list goes on and on. All of these different aspects described add new meaning to the piece as a whole, and helps structure the message that the artist is portraying to the viewer.

Susanne Langer examined expression and art as a system of signs just like Ferdinand de Saussure did with language and like Christian Metz with regards to film.

Before concluding our last discussion considering foundational semioticians theories it is important to note the similar semiotic approaches used across disciplines. So far we have seen art, language, and film all as being represented as systems of signs. In all cases, each of the individual signs or units within the various systems hold meaning that attribute to the system as a whole. No individual unit can stand alone independent of the system and still portray the same meaning as if it were a part of the system. Also each individual unit attributes meaning to the whole system and removing any sign from the system will change its function. All of the approaches we have looked at also describe the signs of a system as being composed of a two part construct. In C.S. Peirce and Ferdinand de Saussure's approach there is the common idea of the signified and the signifier, although Pierce adds a third element of an interpretant. Christian Metz broke down cinematic signs into two parts, the connotational elements and the denotational elements. Now we have just seen that Langer followed suit and described artistic signs and expression as portraying presentational symbolism and discursive symbolism. Even though all of

the semioticians theories take different approaches and perspectives on how a sign functions, the concepts used are almost universal across disciplines.

Embodiment, Categorization, and Conceptual Metaphors

The way in which humans derive meaning and understand the world around them is a result of cognition being embodied. Embodied cognition “appeals to the idea that cognition deeply depends on aspects of the agent's body other than the brain. Without the involvement of the body in both sensing and acting, thoughts would be empty, and mental affairs would not exhibit the characteristics and properties they do” (Wilson & Foglia, 2015). Embodied cognition involves the idea that cognition is not depended of the mind, but is influenced by the bodies interaction with the physical world. Embodied cognition is an important topic that needs to be understood when examining the semiotics of film because without it mental representations could not be formed. **If cognition was not embodied, cinematographer would be unable to influence the cognitive processes that construct conceptual representation within it viewers. Film encompasses both auditory and visual stimuli, differentiating this form of expression and communication from literature and painting. Information from our visual and auditory systems are necessary to accurately form representations of a films message.** Humans need the interpretation of sensory information to be able to understand what is occurring in a film. Without sensory information from the body, thoughts would be empty and the mind would be unable to form mental representations because it is unable to acquire new knowledge from the world or manipulate past experiences and patterns of thought.

Categorization is a process that allows for reasoning and understanding by our cognitive systems as we try to make sense of the world around us. To better understand this idea, George Lakoff explains extensively how prominent categorization is in our everyday lives

and how reliant human cognitive processes are on categorization in his novel *Women, fire, and dangerous things: What categories reveal about the mind* (2008).

“In moving about the world, we automatically categorize people, animals, and physical objects, both natural and man-made. This sometimes leads to the impression that we just categorize things as they are, that things come in natural kinds, and that our categories of mind naturally fit the kinds of things there are in the world. But a large proportion of our categories are not categories of things; they are categories of abstract entities. We categorize events, actions, emotions, spatial relationships, social relationships, and abstract entities of an enormous range: governments, illnesses, and entities in both scientific and folk theories, like electrons and colds. Any adequate account of human thought must provide an accurate theory for all our categories, both concrete and abstract.”

As humans we categorize everything we experience or do, whether we know it or not.

Categorization sets the weights of incoming stimuli in conceptual representation spaces and manipulates the weights of past stimuli based on new experiences has through cognition.

Categorization is needed to perform cognitive processes efficiently and effectively, and without it our mind may misrepresent the world. Categorization of sensory stimuli allow our perceptual systems to determine what incoming information is intrinsic or important from extrinsic information which is seen as less important and may just overload our cognitive systems.

Without categorization within the mind, our perceptual systems and cognitive process may be unable to understand the message of a film as information is lost.

Another way in which humans understand the physical world around them, that relies on cognition being partially embodied, is the idea of conceptual metaphors.

Conceptual metaphors rely on the idea that human cognition is embodied as conceptual metaphors also require information from the bodied interaction with the world. Conceptual metaphors “are frame-to-frame mappings, with the roles of the source frame mapping to corresponding roles of the target frame. In conceptual metaphors, source and target frame mappings are not necessarily one to one. In some cases not all roles or role fillers are mapped, and in others metaphorical roles are added to the target domain” (Lakoff, 2012). Conceptual metaphors are “the very systematicity that allows us to comprehend one aspect of a concept in terms of another” (Lakoff & Johnson, 1980). Conceptual metaphors show the relationship between two objects in conjunction, relating to the idea that natural language and film are system of signs that use difference and discourse to understand the meaning produced. A good example of a conceptual metaphor can be seen when understanding the phrase: “The price of peace is rising.” Peace is not something you can buy or actually place a value on, but the phrase refers to the increase in efforts to keep peace. Therefore you are understanding the immense amount of work that it takes to keep peace in terms of quantity or money, which is a simpler and more straight forward concept to understand. Conceptual metaphors are used in film when comprehending dialog produced by the characters within. Being unable to decipher conceptual metaphors will deprive the individual watching of important information or messages being portrayed by the producer that are critical for forming conceptual representations.

A common phenomena that is studied extensively in the field of cognitive psychology is that of an image schema. An image schema is an embodied recurring prelinguistic structure within humans cognitive process that establishes a pattern of understanding and reasoning (PN3).

As a human experiences the same stimuli or are placed into the similar situations multiple times, a pattern of understanding is established around the information and environment being perceived. This allows for easier recall of relevant information at a later date and for reasoning to occur when placed in a new or previously existing environment. Image schemas are what allow conceptual metaphors to be understood, because conceptual metaphors require information from past experiences to understand a new concept. Image schemes establish the path to efficiently and accurately recall the information needed by our perceptual and cognitive systems. Due to this fact, image schemas are another concept that allows for the derivation of meaning and interpretation of cinematic signs, providing more insight into the influence film's producer possess.

The Camera and The Frame

In almost all the work we have seen regarding film theory and the semiotics of film, there has been an emphasize placed on the role of the films frame. Christian Metz brought to light the idea that a films individual frames are a part of a sequence or system, which he called syntagma's, where each frame is considered to be a sign that conveys meaning. Metz also showed that the frames within a syntagma provide meaning to the whole system, not just to the individual elements within, and the absence of one frame will manipulate the overall meaning produced. This is because meaning within the system, similar to natural language for Ferdinand de Saussure and art for Susanne Langer, is derived through discourse and relations to the rest of the signs in the system. "The frame therefore forms a set which has a great number of parts, that is of elements, which themselves form subsets. It can be broken down... This is why Jakobson calls them object-signs, and Pasolini 'cinemes'...(cinemes would be very like phonemes, and the shot would be like a moneme)" (Deleuze, 1986).The frame of a film can be broken down and

compared to the linguistic components found in natural language. Each frame is composed of meaningful elements, carefully crafted together in a way to develop meaning, similar to how symbols of language come together to form meaningful words and phrases. Each of a frame's elements can be thought of as phonemes coming together to form something meaningful. A frame is then composed of many elements all coming together to form one meaningful morpheme, which adds meaning to the film's overall system. With that said, an individual frame can provide mass amounts of information to the viewers, as we have already seen, but a frame can also project small amounts of very specific information. "If the frame has an analogue, it is to be found in an information system rather than a linguistics one. The elements are the data, which are sometimes very numerous, sometimes of limited number. The frame is therefore inseparable from two tendencies: towards saturation or towards rarefaction." (Deleuze, 1986). Some frames are constructed to project only a few meaningful elements, that doesn't mean the information is less important, it is actually the opposite, quantity does not equate to quality.

We have discussed non-stop about the importance of the frame, although we have not really touched upon the function of the camera. When we discuss the function of the camera, with regards to film theory, we are referring to a camera with the capability of recording single frame or "shot" or a sequence of single frames, forming syntagma's. As we have seen before "the differences between photography and cinematography are many. A single photograph may be a complete work in itself, but a cinematographer deals with relations between shots and between groups of shots" (The Editors of Encyclopaedia Britannica, 2011). The camera, under the instruction of the director, is designed to compile the sequences of meaning syntagma's to form a congregate "whole", or the completed film seen in theater. The camera must interpret the elements of each frame, taking into account both auditory and visual

information about the individual aspects and properties, and structure and categorize it in a way that is meaningful to the audience watching. “The technology of photography carefully conforms to this (banal) phantasy accompanying perception. The camera is ‘trained’ on the object like a fire-arm (=projection) and the object arrives to make an imprint, a trace, on the receptive surface of the film-strip (=introjection). The spectator himself does not escape these pincers, for he is part of the apparatus, and also because pincers, on the imaginary plane (Melanie Klein), mark our relation to the world as a whole and are rooted in the primary figures of orality” (Metz, 1982). The camera conforms to the perception of the viewer watching, pulling them in and imprinting a particular conceptual representation. If the film is designed properly, as Metz states, the audience will be unable to “escape these pincers” and their way of thinking will be influenced whether they know it or not.

The camera and frames used to construct a motion picture function similar to the human brain, processing, interpreting, and manipulating the various elements of a film to form a representation that’s meaningful. The camera can be shown to represent and function similar to the human mind, compiling and interpreting a sequence of meaningful frames into a congregate whole. The camera is reflective of the directors experience, which acts as the cameras mind. The frames of a film, similarly, can be compared to the conceptual representation formed inside the audiences mind, directed by the camera to “think” or perceive information in a certain way. The frame is instructed by the camera, or the mind, to compile the meaningful elements within in a set way and then the camera compiles those frames into meaningful sequences that projects a message reflective of the directors experiences and perception.

Diegetic and Non-Diegetic Sounds

A theory that Christian Metz's looked extensively at as a film theorist was the idea of diegetic and non-diegetic sounds and music. The term diegesis was first developed by Plato in his novel Plato's Republic, although diegesis then was said to "denotes narrative in the wider generic sense of discourse that communicates information keyed to a temporal framework (events "past, present, or future," Republic 392d)". In modern terms, "Diegetic sound is any sound that emanates from the story world of the film. The term comes from the word diegesis, which is the evolution of a Greek term that means narration or narrative... **The source of diegetic sound doesn't necessarily need to be seen on screen, as long as the audience understands that it is coming from something within the film**" (MasterClass, October 2019). Diegesis deals with the world created within a film and the story that is being told by a film's plot. To put things into perspective music performed on instruments by a film's characters affect the plot and requires narration in the music, qualifying the sounds being heard as diegetic. Diegetic music and sounds can be seen in almost any well-known movie, and adds a whole new outlook and perspective to the movie being produced. A well-known example of diegetic sounds in action can be seen when examining the hit movie

Where background music that does not involve any characters from the film helps to set the tone/mood of the film and is not considered to be non-diegetic. "Non-diegetic sound, also called commentary or nonliteral sound, is any sound that does not originate from within the film's world. The film's characters are not able to hear non-diegetic sound. All non-diegetic sound is added by sound editors in post-production" (MasterClass, October 2019). This idea can be seen in virtually every movie you watch today and a great example of non-diegetic sounds is seen in the movie *Jaws*, directed by Steven Spielberg. Everyone knows the ominous music of the great white shark, *Jaws*, that plays in various scenes of the film as the

shark approaches the main characters boat. The ominous sounds that the audience is hearing is considered background music due to the fact that the characters in the film are unaffected and not involved with the music in any way. The characters within a film never actually hear any of the background music because it is only meant to influence the audience, setting a mood that adds to the immersive factor of the viewing experience. The example shown in the movie Jaws is a very effective example of setting a films mood. Those viewing the film cannot help the chills that creep up their spine and the feeling of fear as they anticipate the horror that is about to take place within the film.

The transition between diegetic sounds and non-diegetic sounds can be seamless and often confusion occurs trying to determine the difference between the two in any given scene of a film. “A character hums a tune (diegetic sound) and that humming sound turns into an orchestral version of the same tune (non-diegetic sound), which carries over into the next scene.” In the matter of seconds the type of sound being heard can switch from being diegetic to non-diegetic and vice versa. The two different sounds can be combined and used to form what is considered a “trans-diegetic sound.” “Trans-diegetic sound refers to any sound that moves in between non-diegetic and diegetic, or vice versa. Trans-diegetic sound helps bridge or link two things, like transitions between scenes.” Trans-diegetic sounds are used to both set a mood within the audience watching the film while also affecting the world and plot in which the film is taking place. The idea of a trans-diegetic sound allows producers to add more depth and detail to the film they produce. The incorporation of these different concepts of sound better immerses the audience watching and allows the producer to further influence the audiences thoughts and emotions towards the film. Another important sound type featured in any well-made film is an object sound. “Object sounds make a film more realistic. For

example, if a character walks in the snow, the audience should hear the crunching of their footsteps. If a character is standing on a busy street, we hear the natural ambiance of the city” (MasterClass, October 2019). Object sounds add depth and intensifies the mood created in a film using non-diegetic sounds. Object sounds plays on the common experiences and cultural backgrounds of those watching the movie. Most people can picture the sound described of someone walking through the snow and many can even mentally picture themselves performing the action. Object sounds allows any audience to step into the star characters shoes and producers are able to accomplish this by influencing common experiences had by the majority. In doing so, subjectivity of experiences becomes less of a problem and a common take away can be had, just like the work of an influential painter.

Conclusion

We have shown that cinematographers avoid the subjectivity of human experience by constructing their films to play on common or similar experiences those living in similar cultures or societies possess. In doing so, we are able to show how cinemaphotographers use semiotic techniques and concepts to illicit a certain message, feeling, or emotion within it audience, helping expose the affects had on individual’s conceptual representations and mental cognitive processes. This same idea can be used when trying to understand the effect any form of communication has on either the sending or receiving party. As we have shown, by understanding linguistic semiotics and concepts found in the realm of structuralism, the semantic and syntactical structure of natural language can show how meaning is derived and portrayed from individual symbols and strings of symbols. The same concepts can then be applied in design and more specifically user centered design. Don Norman exposes they ways in which the ideas discussed previously can be incorporated into designing objects we interact with every day

in his book, *The Design of Everyday Things*. Just like much of the work done by Susan Langer and Roland Barthes, the individual parts to any form of expression adds meaning to the overall message being portrayed. Therefore, the concepts and techniques used in film to influence its audience can be applied to any conceptual system to understand how meaning is derived and interpreted. So understanding these concepts will allow them to be applied anywhere, whether it's a painting hung in the Smithsonian or the design of the next best self-driving car.

Instead of examining the way in which meaning is derived and interpreted from multiple different disciplines separately, one can look at all of the interdisciplinary perspectives through one lens. “Cognitive Semiotics (hence, CS) can be defined as an interdisciplinary matrix of disciplines and methods, focused on the multifaceted phenomenon of meaning” (Soloman & King, 2011). Another definition or explanation of cognitive semiotics is it is considered an area of study that “integrates methods and theories developed in the disciplines of cognitive science with methods and theories developed in semiotics and the humanities, with the ultimate aim of providing new insights into the realm of human signification and its manifestation in cultural practices” (Soloman & King, 2011). All of the techniques that we have shown to relate to both semiotics and other fields like linguistics, anthropology, and psychology, all fall under cognitive semiotics. Cognitive semiotics is not considered a subfield of semiotics, it “is defined either in terms of “domain” (in the manner of e.g. biosemiotics, semiotics of culture or social semiotics), or “modality” (e.g. visual semiotics, text semiotics). Not belonging to a single discipline, it is not a particular semiotics “school” (e.g. Peircean, Saussurean, Greimasian), and even less a particular theory (e.g. Existential Semiotics)” (Soloman & King, 2011). As work progresses in the field of semiotics and film theory, as there is

still so much to explore, it would be crucial to examine future problems using the perspective of cognitive semiotics, as it applies to more areas of study than one could imagine.

Through the progression of this paper we have shown how various semiotic theories can be applied and utilized in film to form the influential message projected. We have seen how cinematographers encompass meaning in various forms and how any aspect of a film can be considered a sign attributing meaning to film as a whole. Although it may seem like we have a complete understanding semiotics and how meaning is created and how it influences cognitive processes in the mind, we are only skimming the surface. Due to the subjectivity of human experience and our little understanding of emotion, there is still much to learn about how meaning is modeled and derived within an individual's mind. We may not currently have the answers we desire and those answers may not arise in the next century. Although as a community we have the capabilities find them by cooperating with one another and further refining current theories and concepts, while also forming new theories and perspectives.

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