Article

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Meaning Construction in the Film: A Cybernetic Approach

Abstract

Cybernetic film theory unveils how meaning in the film is emergent and self-reflexively crafted by the makers and the audience. Though governed by a script, in most cases, directors have their ways of visualising the script, and cinematographers have a personal touch in framing, just as the editors have in pacing the film. Thus, a film is an environment where meaning is crafted by a collective with their personal touch. When films are viewed, audiences perceive them from their perspective, i.e., they assign meaning to the film. Therefore, meaning in film is constructive and emergent. With the development of perception-based film understanding evident in enactive cinema theory, the problem of film authorship, i.e., meaning construction in the film, has become an important area to research. The cybernetic film theory addresses the complexity of authorship in films by referring to film as an environment that is self-reflectively crafted, which audiences self-reflexively interpret.

Introduction

Film theory is shifting its focus from an institutional and textual understanding of film to spectators' perceptions. At the same time, film theorists are encouraged to re-engage underlying philosophical concepts. These developments require film studies to rethink the notion of authorship, i.e., who assigns meaning to a film[i]. Spectators' self-referential responses have thus gained importance. Tikka considers the audience as a ***second-order author***[ii] of a film. Quentin Tarantino echoed this perspective, referring to his film Pulp Fiction, "If a million people see my movie, I hope they see a million different movies."[iii] This recognition of the role of spectators' perspectives parallels the paradigm shift in the theory of science—from **exo-science** (study from outside) to **endo-science** (study from within). To date, observation of systems has typically been from outside. Still, second-order **cybernetics** (i.e., the cybernetics of "observing systems") encourages scholars to approach things, objects, and phenomena as an observer observes. Second-order cybernetics thus paves the way for all areas of human thinking—hard science, biological science, social science, and humanities—to recognise the human observation that assigns meaning to what one observes. Approaching film from a second-order cybernetics perspective will add to our understanding of film by considering the spectator who watches a film.

In this context, I am proposing a cybernetic understanding of film by addressing how spectators assign meaning to films they watch. This will be a **film theory development innovative endeavour** from an interdisciplinary approach drawing on film studies, cybernetics, cognitive science, and neurophenomenology.

Problem of Authorship

The illustration below shows how the meaning of a film may be multiple as makers and audiences may not indicate the same things and interpret the same way as they craft and view the same film due to the difference in their life-world.

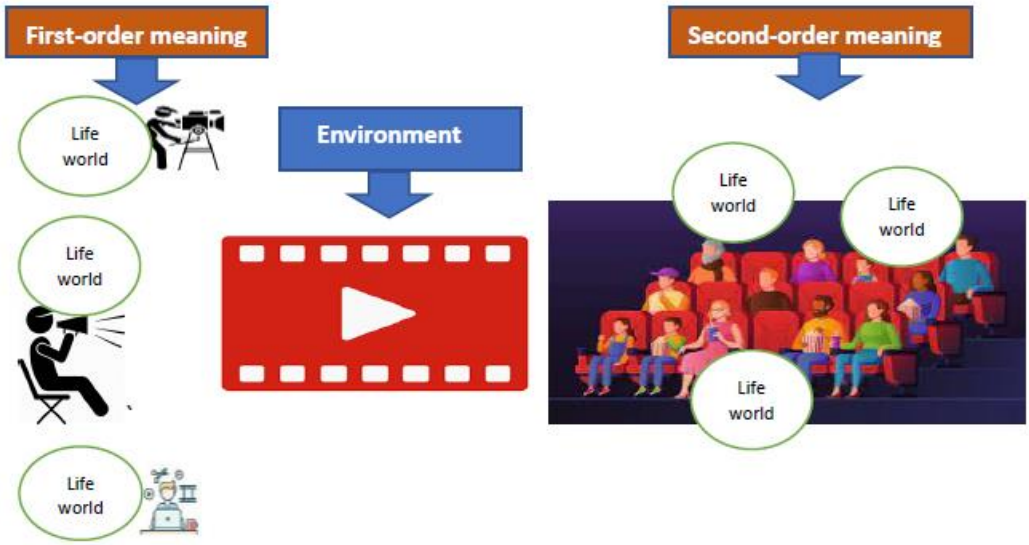


Figure 1: Problem of authorship in film

Contrasting the idea of asserting the author of a literary text as the sole authority, Stillinger[iv] argues how readers, by understanding and interpreting a text in their ways, take a share in authorship. Authorship resides at two levels—in constructing the text, i.e., **the first order**, and in interpretation, i.e., **the second order**. Unlike literature and painting, where an author or painter is the sole first-order author, the notion of authorship in the film is more complex and consists of multiple authors. At the first order of authorship, the film is authored by the screenwriter, director, cinematographer, editor, and actors. Everyone contributes to crafting the film using their competence and views while working on a single movie. In this order, here lies collective authorship[v], a writer writes the screenplay, but "Once a script is sold, the writer loses control of the outcome of their idea. Directors are free to rework, edit, and interpret a screenplay."[vi] In this tone, Grant suggests that a single consciousness does not create films[vii]. They become part of the collective effort of artists and technicians.

Furthermore, collective authorship comes from group intentionality moving towards a common goal [viii]. When a film takes its final shape, it becomes an environment[ix] that audiences observe from their perspectives. No wonder Quentin Tarantino, referring to his film Pulp Fiction says, "If a million people see my movie, I hope they see a million different movies."[x] Tikka considers the audience as a ***second-order author***[xi] of a film. Audiences sense films differently, as they could be different depending on their worldviews, moods, and intention. Thus, the problem of authorship in film, that is, how film attains meaning, porches importance on the notion of difference among the authors in the first and second order of authorship.

Self-referential observation

Worldview is known as **life-world,** which stays at the base of phenomenology and constructivism and studies the structures of consciousness as experienced from the first-person point of view. Phenomenology shows how individuals make sense of the world by self-referential observation[xii]. Kant outlined how objects are formed in our minds.[xiii] Referring to this, Uexküll *coined the term* ***Umwelt*** [xiv]denoting a self-centred world

for all living creatures and individuals, arguing that each *Umwelt* comprises a sealed unit governed by the meaning it has for the subject. Further, he states that there are as many worlds as there are subjects. We make sense of our environment according to our *Umwelt.* **Autopoiesis**[xv] strengthened this view through a methodic analysis of the structure of cognition of living systems' self-referential observation of the environment. In the autopoietic opinion, cognition is phenomenological for the organism(s) whose conduct realises cognition. Living systems approach and engage the world in terms of the perturbations in their nervous systems, which are operationally closed, i.e., the transformation occurs within the system's boundary. The boundary is a distinction that the system makes on its own, which makes the system different from another system or the environment.

In his Laws of form, Spencer-Brown theorised about how form emerges as an outcome of our observation. An observer observes by drawing a distinction. Making the distinction is fundamental, as this is how something is marked, indicated, and created. Celebrating an unmarked world is also how something emerges from the unconscious into the conscious, for consciousness itself is the progressive emergence of a self-reflective, recursive cycle of ever more subtle distinctions.

In this line of thought, i.e., making a distinction in observation self-referential way, there developed enactive cognitivism or **activism**[xvi]. Contrary to representing a pre-given world, activism views sense-making as occurring when a person finds significance in the world. Its fundamental premise is that cognition arises through a dynamic interaction between an acting organism and its environment. Enactivism further argues that experience of the world results from mutual interaction between the sensorimotor capacities of the organism and its environment. Human perception depends on the environment and on how that environment gives us specific structures to guide our perception. Therefore, no meaning will emerge if there is no enaction, and enaction is the idea that organisms create their own experience through their actions forming the life world.

Recent film theories: Emphasizing perception

Over the last two decades, contrasting the screen theories of the film arguing that text creates meaning, film theory has moved towards emphasising how perception assigns meaning in the movie. It is a radical shift in understanding the complex problem of understanding authorship in film. **Cognitive film theory**, primarily proposed by Bordwell[xvii], drew on constructivist psychology, according to which perceiving and thinking are active, goal-oriented processes. Psychocinematics and neurofilmology have recently advanced development in this direction[xviii.] **Enactive film theory**, which emphasises the involuntary response to a film one watches, is an integral part of this research area[xix]. Enactive film theory subscribes to the embodied mind that suggests the phenomenon of the human mind is fundamentally constituted by the dynamic interactions of the brain, body, and environment[xx]. It sees the spectator as an active perceiver. A spectator can "become" the camera and, with that become the perspective[xxi].

Second-order cybernetics: unveiling the author

Film theory's progressive emphasis on an enactive response to the film has a theoretical correspondence with second-order cybernetics, which sees meaning construction from an observational perspective. Classical cybernetics[xxii], created to explore regulatory systems through the physical and natural sciences lens, has been extended to **second-order cybernetics**, also known as neocybernetics[xxiii.] The field is being extended fruitfully in the soft and social sciences. Cybernetics is used in anthropology[xxiv], sociology[xxv], architecture and design[xxvi], art[xxvii], literature[xxviii,] and, recently, theatre[xxix]. Adding film studies to the list would demonstrate neocybernetics' potential in yet another discipline

. As second-order or neocybernetics was coming to the fore, Baecker[xxx] made the foundational case for a cybernetic understanding of film by examining the complex matter of how reality is communicated through moving pictures. For Baecker, the **fact communicated by the film is reality reproduced**. The film becomes a different reality—the reality of itself and its registration by the audience. The fact of the film becomes another reality when revealed to the audience and as they register. These two realities correspond to first-order and second-order meanings. Baecker considers **film as located in the interface of two complex systems**—a psychic system of people or their embedded consciousness and a mass communication system relying on communication techniques, from where reality is produced and film attains sense.

Taking Baecker's work as the point of departure, a cybernetic understanding of film considers film as an environment produced by its maker's observation of the world. A maker uses cinematic devices to distinguish time and space dictated by his intention and biography; thus, a reality is produced for comment. The audience's self-reflexive observation of this reality leads to the emergence of another fact. Here we find two levels of words. At the first level, a film is what the maker has observed. The style or structure of a film—cinematography, editing, acting, sound—is how the maker indicates what he keeps. Such indications at a second level are distinguished by audience members when they self-reflectively observe the film (the maker's observation). As anything said is said by an observer,[xxxi] and anything said is said to an observer[xxxii], the film (the speech of a maker and his team) and the audience's (spectator, reviewer, and critics) reflection on the film (the address of audience) are in a relationship of observation—observation of observation. By doing observation of observation, as Tikka suggests, audiences become second-order author, who is not the external author but an ***enactor*** in the system of film.

Second-order cybernetics' relevance to understanding first and second-order meaning construction in the film lies in emphasising the enaction of an observer to self-reflexively make a distinction of their observation of an environment. The enaction of our indication is guided by our life world. Second-order cybernetics compliments the merit of autopoiesis, laws of form, and activism in understanding the construction of meaning. More importantly, second-order cybernetics emphasises the **cognitive mental frame**, i.e., a mental template that individuals impose on an information environment to give it form and meaning.

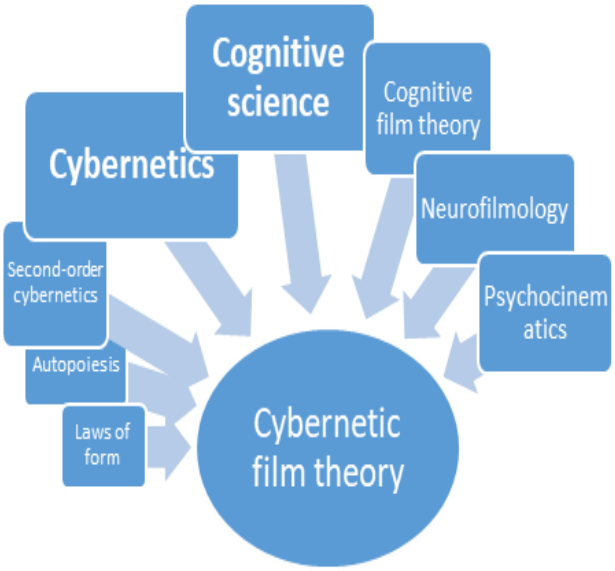
Objectives and conceptual mapping

The overarching mission of a cybernetic approach to the film has two specific objectives, asking:

1. How spectators distinguish between observing a film and assigning meaning to it.
2. How spectators' observations are cued by the film style they observe.

Aligned with the objectives, the project will answer **two research questions**—first, what indications spectators make from their observations of a film; second, how the film cues the indications they watch.

From the cybernetic film scheme discussed above, a filmmaker produces a film, which according to the theory of **Laws of Form,** is tokens that are observed, marked, and indicated by spectators in the form of recorded or not recorded comments. More precisely, tokens thus constructed and distinguished qualify film as an environment that cues spectators for self-reflection. Holding that the spectators create and assign meaning in film is an interpretive approach drawing on various concepts and theories developed in different disciplines—philosophy, cognitive science, neuroscience, and film studies. Below is a figurative illustration of conceptual mapping:



Cybernetic understanding of film will **require twofold theoretical support**—film theory and non-film theory. Drawing profoundly on Münsterberg's idea of perception and mental acts constructing meaning, the mission will take conceptual support from formalist film theory as the form—cinematography, editing etc.—indicates the intention being built in a film. The cognitive approach and its developments in psychocinematics and neurofilmology will be critical in understanding the viewer embedded in naturalistic and cultural settings. Such a viewer is the observer making distinctions of a film, from which sense emerges. Concerning non-film theoretical support, the mission will draw on the second-order cybernetics of Foerster, Spencer-Brown's Laws of form, and Maturana and Verala's autopoiesis.

Developing a cybernetic film approach requires a qualitative method because it understands the world or an object differently perceived by various people and communities. Any film about which audiences' comments are available would qualify as the research domain. It is suggested that one will do a **reader-response analysis** of these comments. This qualitative approach supports investigating how a reader actively participates in producing meaning. A **syntactic analysis** of these themes will unveil the relationship between the film and its observation, that is, how the film's meaning as constructed by a filmmaker is revealed and registered by the audience in creating further meaning. Reader response will address objective 1: how spectators distinguish what they observe, while syntactic analysis will address objective 2: what in the film perturbs spectators from making such distinctions.

Conclusion

An empirical mission towards developing a cybernetic film theory will complement the paradigm shift that emphasises meaning as assigned by the one who observes. With the development of perception-based film understanding evident in enactive cinema theory, the problem of film authorship, i.e., meaning construction in the film, has become an important area to research. The cybernetic film theory methodically explains the complexity of authorship in films by referring to film as a self-reflectively crafted environment that audiences self-reflexively interpret.

References:

[i] Sellors, C. P. (2007). Collective authorship in film. The Journal of Aesthetics and Art Criticism, 63(3), 263-271.
[ii] Tikka, P. (2008). *Enactive Cinema: Simulatorium Eisensteinense*. Helsinki: University of Art and Design.
[iii] Quotes. Retrieved 15 August, 2020, from https://www.quotes.net/authors/Quentin+Tarantino%2C+Referring+to+the+movie+Pulp+Fiction
[iv] Stillinger, J. (1991). *Multiple Authorship and the Myth of Solitary Genius*: Oxford University Press.

[v] Gaut, B. (1997). Film authorship and collaboration. In R. Allen & M. Smith (Eds.), *Film Theory and Philosophy* (pp. 149--172): Oxford University Press.
[vi] Tregde, D. (2013). A Case Study on Film Authorship: Exploring the Theoretical and Practical Sides in Film Production. *Elon Journal of Undergraduate Research in Communications, 4*(2).

[vii] Grant, B. K. (2008). *Auteurs and Authorship: A film reader*. MA: Wiley-Blackwel.

[viii] Sellors, C. P. (2007). Collective Authorship in Film. *The Journal of Aesthetics and Art Criticism, 65*(3), 263-271.

[ix] Pervez, A. (2012). Film as information system. *Celluloid, 33*(1-2), 5-12.

[x] Quotes. Retrieved 15 August, 2020, from https://www.quotes.net/authors/Quentin+Tarantino%2C+Referring+to+the+movie+Pulp+Fiction
[xi] Tikka, P. (2008). *Enactive Cinema: Simulatorium Eisensteinense*. Helsinki: University of Art and Design.
[xii] Maturana, H. R. (1970). The neurophilology of cognition. In P. Garvin (Ed.), *Cognition: A multiple view* (pp. 3-23). New York: Spartan Books.

[xiii] Alrøe, H. F., & Noe, E. (2012). Observing environments. *Constructivist Foundations, 8*(1), 39–52.

[xiv] Uexküll, J. v. (1957). *A Stroll Through the Worlds of Animals and Men: A Picture Book of Invisible Worlds*. New York: International Universities Press.

[xv] Maturana, H. R., & Varela, F. J. (1980). *Autopoiesis and cognition: The realizing of the living*. Dordech, The Netherland: D. Reidel.

[xvi] Varela, F. J., Thompson, E., & Rosch, E. (2016). *The embodied mind: cognitive science and human experience*. Cambridge, Massachusetts; London England: MIT Press.

[xvii] Bordwell, D. (1989). A Case for Cognitivism. *Iris, 9*, 11-40.
[xviii] D'Aloia, A., & Eugeni, R. (2015). Neurofilmology: An Introduction. *CINÉMA&CIE International Film Studies Journal, XIV*(22/23), 9-26.
[xix] Ibid.
[xx] Tikka, P., & Kaipainen, M. Y. (2014). From naturalistic neuroscience to modeling radical embodiment with narrative enactive systems. *Front. Hum. Neurosci*. doi: doi.org/10.3389/fnhum.2014.00794

[xxi] Beijnon, B. (2017). Enactive Cinematic Perception: The Cinema as Exploration of the (Re)Presented World. *Anthropoetics: the Journal of Generative Anthopology, XXIII*(1).

[xxii] Wiener, N. (1948). *Cybernetics, or Control and Communication in the Animal and the Machine*. Cambridge: MIT Press.
[xxiii] Clarke, B., & Hansen, M. B. N. (2009). Introduction: Neocybernetic Emergence. In B. Clarke & M. B. N. Hansen (Eds.), *Emergence and Embodiment: New Essays in Second-Order Systems Theory* (pp. 1-25). Durham: Duke University Press.
[xxiv] Bateson, G. (1972). *Steps to an Ecology of Mind: Collected Essays in Anthropology, Psychiatry, Evolution, and Epistemology*. Chicago, Illinois: University of Chicago Press.
[xxv] Luhmann, N. (1995). *Social Systems* Stanford: Stanford University Press.
[xxvi] Pask, G. (1971). A comment, a case history and a plan. In J. Reichardt (Ed.), *Cybernetics, art and ideas* (pp. 76-99). London: Studio Vista.
[xxvii] Shanken, E. A. (Ed.). (2003). *Telematic Embrace: Visionary Theories of Art, Technology, and Consciousness*. Berkeley: University of California Press.
[xxviii] Clarke, B. (2013). Gaming the Trace: Systems Theory for Comparative Literature. *The Comparatist 37*, 186-199

[xxix] Scholte, T. (2017). Audience and Eigenform: Cybersemiotic Epistemology and the "Truth of the Human Spirit" in Performance. *Constructivist Foundations, 12*(3), 316-325.
[xxx] Baecker, D. (1996). The reality of motion pictures. *Modern Language Notes, 111*, 560-577.
[xxxi] Maturana, H. R. (1970). The neurophilology of cognition. In P. Garvin (Ed.), *Cognition: A multiple view* (pp. 3-23). New York: Spartan Books.
[xxxii] Foerster, H. v. (1981). *Observing systems. Seaside, CA: Intersystems.* Seaside, CA: Intersystems.

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