

In Focus

Shaping Films from the Inside Out: Embodied Mental Schemas in Filmmaking and Viewing



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ABSTRACT

This article aims to highlight the role of embodied mental representations or embodied schemas in both perception and filmmaking/viewing by foregrounding three premises: (1) perception is inferential and relies on prior embodied schemas; (2) filmmakers (authors) do not merely reproduce reality but equally impose body-based schemas onto the parts of a film in order to convey meanings; and (3) these schemas, as presented by the formal design of the work, may enrich the viewers' experience by allowing them a privileged look into the embodied creative-thinking processes of filmmakers. It will be argued that viewers are prompted to peek into these processes because the representational embodied concepts, as cued by the films, are grounded in shared sensory-motor capacities that scaffold all abstract thinking and reasoning.

KEYWORDS: authorship, embodied cognition, film form, image schemas, intentionalism, perception, narration

INTRODUCTION

In the last decades the embodied mind thesis has gained firm ground in the cognitive sciences (e.g., Claxton 2015; Gibbs 2005a; Johnson 2007; Lakoff, Johnson 1999; Shapiro 2014; Tversky 2019; Varela, Thompson, Rosch 1991). Central to this thesis is the idea that our minds are profoundly influenced by our bodily dispositions. An important concept that was introduced in the 1980s to grasp the connection between mind and body theoretically is the notion of an image schema (e.g., Johnson 1987; Lakoff 1987). Image schemas are dynamic mental representations, grounded in sensory-motor experiences, that have been argued to play a significant role in conceptual thinking. In the field of cognitive linguistics this has led to a very rapid growth in studies that are aimed at unraveling the underlying embodied metaphors

of linguistic expressions. It is within these conceptual metaphors that recurring patterns of bodily experience operate as concrete source domains for conceptualizing abstract target domains (Lakoff, Johnson 1980). This is how, for instance, our reasoning about time is widely understood in terms of spatial motion schemas (e.g., Boroditsky 2000; Gentner 2001) and our conceptualization of emotions is highly dependent on dynamic container schemas (e.g., Kövecses 2000). More recently, scholars have also explored the implications of Conceptual Metaphor Theory for the study of film (e.g., Coëgnarts 2017, 2019, 2020; Coëgnarts, Kravanja 2012, 2015; Fahlenbrach 2008, 2016; Kiss, Willemsen 2017; Ortiz 2011). These studies reveal a causal link with the functional and stylistic elements of film aesthetics, arguing that it is through these elements that embodied

patterns are shaped by virtue of which meanings are carried over to an audience. There is, however, one question that has received little attention so far: how do these embodied schemas, which these scholars show to be anchored in film form, relate to the embodied minds of both filmmaker and viewer? If we assume that human beings, filmmakers, and spectators alike make use of embodied mental representations to make sense of the world, then we should at least address three relations that are implied by this question:

(1) the relation between embodied schemas and perception in general; (2) the relation between embodied schemas and the art of filmmaking; and (3) the relation between embodied schemas in film form and the viewer's engagement with them. In this article we will draw upon extant literature to address each relation successively. In the first part we will defend an inferential view of perception as it recently gained new momentum in the neurosciences and the psychology of perception (e.g., Eagleman 2015; Gregory 2015; Kandel 2012; Seth 2021). According to this view, perception does not happen exclusively outside in, with external physical signals being detected and processed to constitute our view of the world; it also happens inside out. Our brains constantly make predictions about the causes of our sensory signals, that is, we use prior knowledge in the form of (embodied) mental representations in order to make sense of the world. A similar argument will be raised in the second part. Rather than claiming that representation in film is merely an act of registering reality, we will argue that artful representation in film is fundamentally cognitive. As people use schemas in perception, so do filmmakers impose schemas onto the parts of their medium of representation to convey meanings. In the third and last part, we turn to the film spectator by arguing that these schemas, as embedded in the formal design, may enrich the film experience by offering viewers a unique insight into the embodied creative-thinking processes of filmmakers. Because viewers, in their every-

day lives, make use of the same embodied processes of meaning-making by virtue of which artful purposes are fleshed out in cinematic form, we will argue that they are able to infer the meanings that, consciously or unconsciously, the filmmaker intended to convey. At the same time, however, while we consider authorial intentions to be important, we will refrain from ascribing to them too much significance in terms of being a determining factor in the active meaning-making processes of the viewer. Schemas in the work may prompt audiences to reflect on the filmmaker's creative intentions, a reflection that may enrich the viewer's experience, but these intentions can never be taken as standing for the "one, true" meaning of the artwork (which, after all, is not a fixed thing but a set of affordances for meaning).

PERCEPTION AS UNCONSCIOUS INFERENCE

How do we perceive the world? One intuitive and common-sense view of perception, which Anil Seth (2021: 76) calls the "how things seems view," is that conscious perceptions come to us directly (veridically) through our senses. According to this outside-in notion of perception, which can be found in Gibson (1966) and Searle (2015), among others, the brain processes sensory stimuli from an external mind-independent world in a "bottom-up" or "inwards" fashion. This data enters through the eyes and then progresses deeper into the brain with each stage bringing increasingly advanced processing. Early stages respond to simple features like luminance and edges, while higher or deeper stages deal with more complex features and whole objects such as faces and cars. Sensory data channel information about an external world into the brain where it is read out to form perceptions. On this view, there is no need for additional mental representations or schematic maps that come from the inside. Because perception is unmediated, this view is often called "direct realism" and sometimes called "naïve realism" (Searle 2015: 15). The relation between object

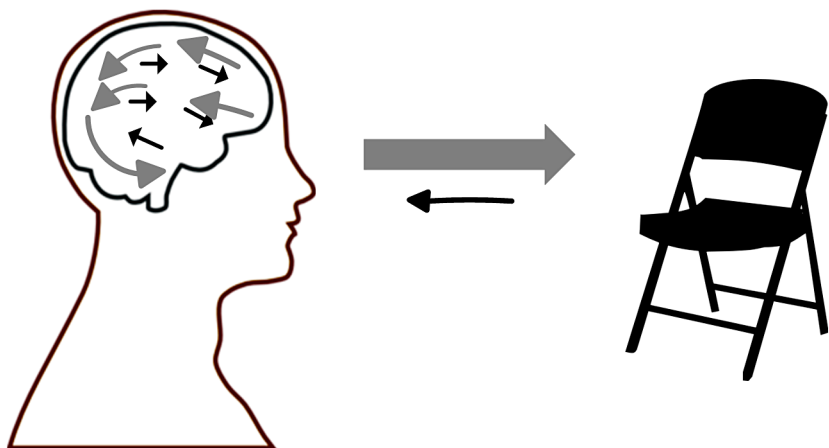
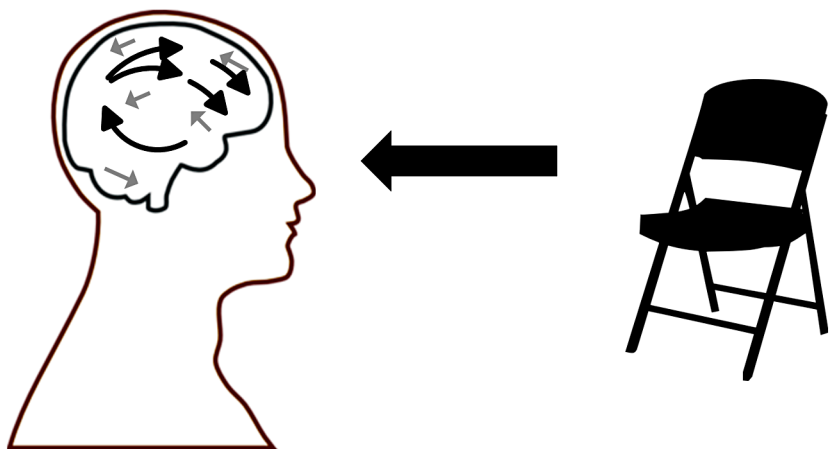


FIGURE 1. Perception as bottom-up feature detection.

FIGURE 2. Perception as unconscious inference.

and subject is unidirectional: an ontologically objective state of affairs in the world outside your head causes an ontologically subjective visual experience of that state of affairs entirely inside your head (Searle 2015: 17). Perception runs from the physical to the mental with no additional vector running in the opposite direction (see **Figure 1**).

More recently, however, scholars have come to embrace a somewhat different view. How things intuitively seem to be are not how they are. This is the central argument of Anil Seth who, in his highly praised book *Being You: A New Science of Consciousness* (2021), prefers to think of perception in the same way as the famous 19th-century scientist Herman von Helmholtz did, that is, as a process of unconscious inference (see also Gregory 2015). The stress lies on the term “unconscious” because, as Hochberg (2007: 239) points out, “neither the raw sensations nor the inferences as to what the likely object is, are consciously experienced.” Seth refers to perception as a “prediction machine” or “controlled hallucination.” Instead of perception depending mainly on signals coming into the brain from the sensory organs, it depends just as much, if not more, on perceptual predictions flowing in the opposite direction, from the top down or the inside out. Instead of one vector, we have two vectors: from the physical to the mental and from the mental back to the physical with the latter being significantly contributory to the perceptual scene (hence, the bigger arrow in **Figure 2**).¹ We do not just passively perceive our worlds; we actively generate them. Perception is not about reading out sensory information; it is a process of calibration of the brain’s best guesses against an unknown and ultimately unknowable world. In the spirit of the German philosopher Kant,

Seth (2021: 81) speaks of a “sensory veil” with the objects of reality behind it, and the objects of our perception as the brain’s best guesses of the objects behind this sensory veil. So the sensory data itself is colorless, it is soundless, it is odorless, but the brain is at all times just using the sensory data to update and refine its perceptual best guesses and what we perceive is the content of these perceptual best guesses. Seth (2021: 84) gives the example of color. We know since Newton that colors are not really things that have objective existences out there in the world. There is electromagnetic radiation, which has various wavelengths. Our eyes are sensitive to just three wavelengths and, from that thin slice of reality, we construct a world with infinitely many colors. The colors exist only in the interaction between our brains and the physical world. As Seth (2020) explains in an online interview: “Colors are a useful device that evolution has hit upon so that our visual systems can track how surfaces change under different lighting conditions. They allow us to adaptively interact with the world. But green does not exist out there. It does not exist in our brains either. It exists only in the interaction. It is a construction.” This may give the impression that things do not exist. But this is not how Seth sees it. He is keen to point out that things like cars, buses, and chairs do exist. Not everything is in the mind. Rather, it is how that reality appears in our experience that is always a construction. What is constructed is how these things appear in your conscious experience.

To illustrate Seth’s view more concretely, let us consider one of the three examples that the author cites in his own book: Adelson’s famous checkerboard illusion (see **Figure 3**), named after its author Edward H. Adelson, a professor of vision science at the Massachusetts Institute of Technology (MIT). It shows an image of two checkerboards with light and dark squares, partly shadowed by another object. The optical illusion is that on the left-side checkerboard A appears to be darker than B, whereas in fact they are of identical

1 One may find a resemblance here with Lawrence Barsalou’s perceptual theory of knowledge: “During perceptual experience, association areas in the brain capture bottom-up patterns of activation in sensory-motor areas. Later, in a top-down manner, association areas partially reactivate sensory-motor areas to implement perceptual symbols” (Barsalou 1999: 577).

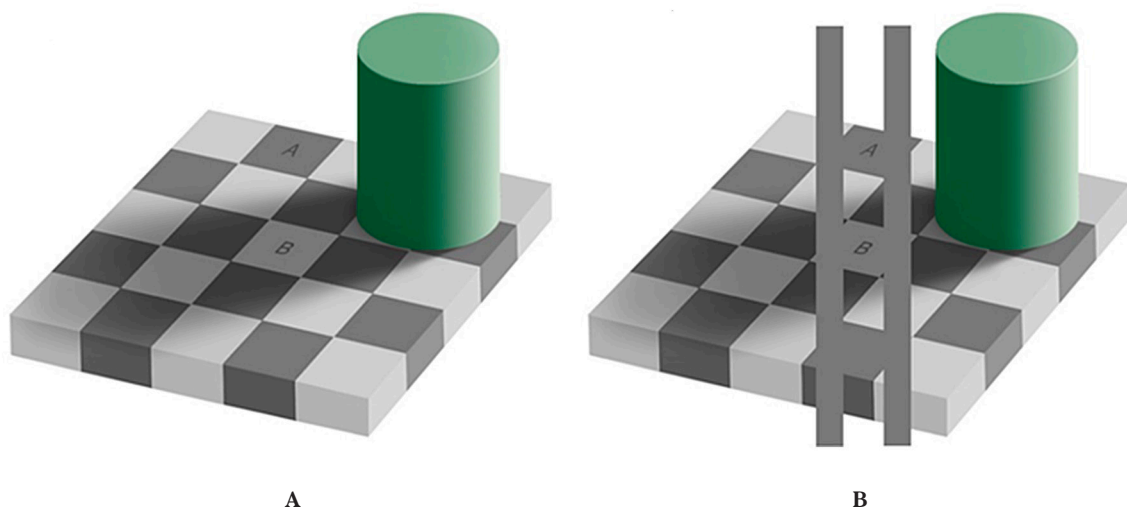


FIGURE 3. Adelson's checkerboard shadow illusion.

brightness. The right-side checkerboard proves this by linking A and B with a rectangle of identical color with no changes of shading or transitions of any kind. Despite this knowledge, however, our vision of the left-side checkerboard does not change. Our perception is what we may call cognitively impenetrable. How does this come about? As Seth (2021: 89–90) explains, what happens is this: our perception of grayness is not determined by the actual light waves coming from A to B (these are identical) “but by the brain’s best guess about what caused these particular combinations of wavelengths.” This, Seth points out, depends on context. As he writes: “The brain’s visual system has inscribed deep in its circuitry the knowledge that surfaces in shadow appear darker.” Thus, we perceive B in shadow and not A. “In just the same way that the brain adjusts its perceptual inferences on the basis of ambient lighting, it adjusts its inferences about the shade of B on the basis of prior knowledge about shadows. This is why, in the left-side checkerboard, we perceive B as being lighter than the shadow-free A” (ibid.: 90).²

THE HANDS OF THE FILM-MAKER AS THE CUTTING EDGE OF THE MIND

If perception is not the passive ability to receive sensory impressions about the other world, but rather, as shown above, the active mental process of structuring things, then, one could argue, as prominent German psychologist of art Rudolf Arnheim (1969: 13) already did many decades ago, that the abstract functions of thinking (e.g., “active exploration, selection, grasping of essentials, simplification, abstraction, analysis and synthesis, completion, correction, comparison, problem solving”) “are not the privilege of mental processes above and beyond perception” (i.e., the “higher” more respectable function of thinking),

but the “essential ingredients of perception itself.” That is, the dichotomy between perception and cognition is a misleading one because perception is fundamentally cognitive and, since cognition is embodied, it is also fundamentally embodied. Most significantly, Arnheim did not restrict his nondualistic model of “visual thinking” to the mental activity of perception alone. Together with other famous theorists of the cognitive turn in art history such as Ernst Gombrich (1961), he held a related and similar belief about representation in the arts (see also Parsons 1998: 106). Just as perception is not the passive reception of sensory impressions, so representation is not an attempt to copy reality. Unlike replication, which is based on a one-to-one correspondence with the elements of an object (i.e., faithful rendition), representation, as conceived by Arnheim, aims at the creation of dynamic forms or schemas that “are structurally or dynamically *equivalent* to the object” (Golomb 1993: 13). Its aim is to capture the structural characteristics of an object or scene in organized form. Moving from perception to representation, however, is not a straightforward matter of duplication. As Claire Golomb (1993: 14) points out, it requires the conception of “representational concepts” that “are not automatically given in the perceptual experience.” The active search for them “requires active and constructive experimentation within the medium of representation” (Parsons 1998: 108). This development of artistic thinking already starts early in life with the creation of highly abstract and simplified forms (Golomb 1993, 2012; Schaefer-Simmern 1948). Consider, for example, the drawing in **Figure 4**, as taken from one of Golomb’s highly insightful studies of child art. It depicts the drawing of a four-year-old boy on dictation in a single short session.

In short succession this boy advances from a mere scribble to a coherent representation of the human figure. On the first trial, all the body parts were placed inside the circle. Although still without differentiation, the circle already betrays a visual activity directed toward the production of

2 For many introspective experiments that consider the role of mental schemata in the perception of film, see the pioneering work of Julian Hochberg and his wife Virginia Brooks (Hochberg, Brooks 2007). For a good discussion, see also Tan (2018: 4–8).

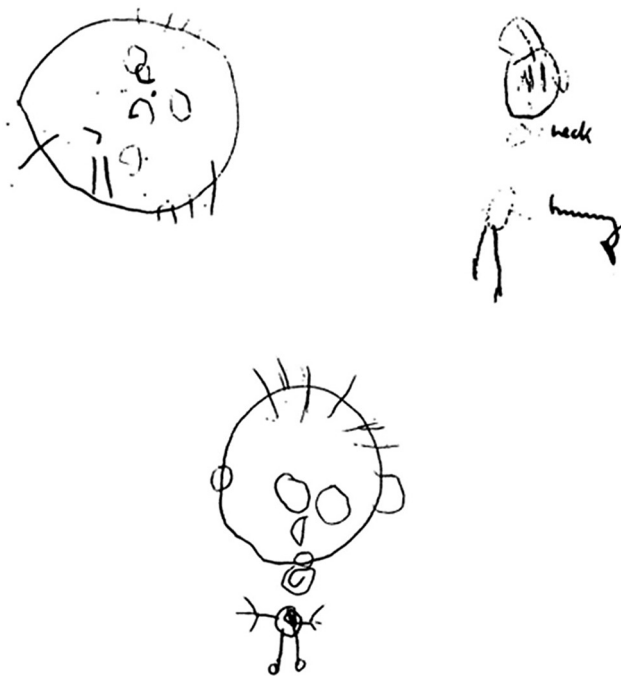


FIGURE 4. Drawing of a four-year-old boy (after Golomb 1993: 20)

FIGURE 5. *Lamentation* (The Mourning of Christ) by Giotto.

a definite form. This “intentional figure,” as Schaefer-Simmern (1948: 11) calls it, which is deprived of any direction, then becomes extended on the next attempt as the major parts are aligned along the vertical axis. The figure obtains an orderly structure based on what Arnheim would call a directionality or vector quality. On the third trial, the boy shaped a clearly human figure consisting of distinguishable body features such as a head, hair, eyes, nose, a neck, arms, and legs. All parts are now related to one another by the horizontal–vertical order. As Schaefer-Simmern (1948: 11) comments in relation to a similar drawing: “Not one line can be changed without disturbing the structural organization of form. If a change is undertaken in one part, it demands also a change in the others in order to maintain the unity.”³

With the improvement of our skills and its progression over time then also comes a craving for visual storytelling and the drive as well as the skill to depict the multiple dynamics of human behavior. Turning from children’s drawings to the works of the great painters and sculpturers, Arnheim has shown how artists draw precisely upon an organization of formal patterns to create what he describes as “the strongest, purest, most precise embodiment of the meaning that, consciously or unconsciously, he [the artist] intends to convey” (Arnheim 1969: 270). Consider, for example, Arnheim’s analysis of Giotto’s depiction of the Lamentation (**Figure 5**), which extends the graphic logic of the horizontal and the vertical to depict the story of death and resurrection (Arnheim [1954] 1974: 441; see also Coëgnarts 2022: 21–22).

3 The reader may notice here a strong conceptual alliance with Lakoff and Johnson’s description of an image schema. When defining the container image schema, they write: “This is a gestalt structure in the sense that the parts make no sense without the whole. There is no inside without a boundary and an outside, no outside without a boundary and an inside, and no boundary without sides. The structure is topological in the sense that the boundary can be made larger, smaller, or distorted and still remain the boundary of a container schema” (Lakoff, Johnson 1999: 32).

The horizontal represents death and is abandoned by the body of Christ, which by virtue of its lifted posture and arms is endowed with an oblique orientation toward the vertical (life). Arnheim sees in this deviation from the horizontal “a motif of revival” that is continued in the directed force of the diagonal ridge of the hill. As he writes: “Just broad enough for a man to walk upward, it leads through the entire picture, from the horizontal of death to the verticals of the two upright men, the vertical edge of the picture frame, and the tree. The tree takes over where the diagonal of the hill is about to end and turns the oblique climbing into straight rising” (Arnheim [1954] 1974: 441). As with the boy’s drawing, we are dealing with a structural organization of form, only now the compositional pattern spells out something far more complex and abstract.

More recently, my own work within the field of cognitive film studies (Coëgnarts 2019, 2022, 2023) has moved from the non-temporal arts to the temporal medium of film to defend a similar claim with regard to the embodied meaning-making processes in film art. Rather than stressing the importance of visual dynamics in stationary artworks, these studies draw attention to the significant role of motion vectors and the dynamic patterns of containment in fleshing out narrative meanings (see also Coëgnarts, Sluga 2022). The following two examples, which are here presented in written form for the first time, can serve as illustrations.⁴

The first example considers a long take scene from Andrew Dominik’s film *Blonde* (2022). The scene depicts Marilyn Monroe (Ana de Armas) and her third husband, renowned playwright Arthur Miller (Adrian Brody), as they are having a conversation in the kitchen. Marilyn’s unsettling feeling of “being emotionally contained” in her relationship with Miller is expressed through a formal structure of three dynamic patterns of containment: a pattern of entry

4 Both examples are included in the video-essay “Embodied Visual Meaning [in] Motion” (Coëgnarts 2023)

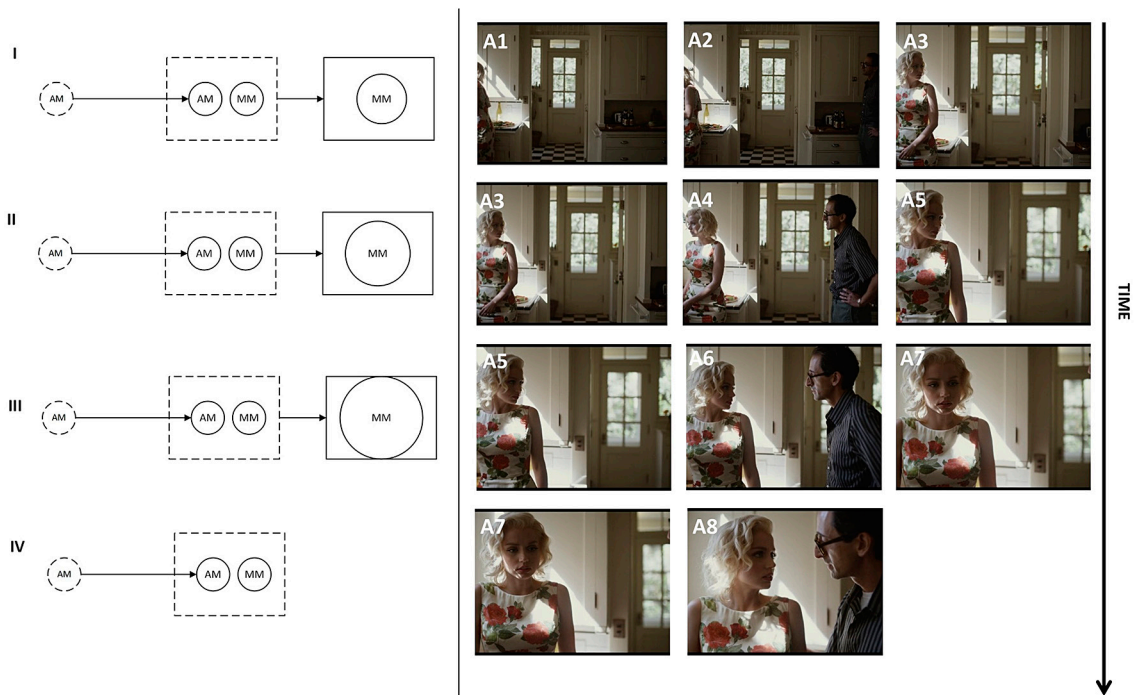


FIGURE 6. Embodying Monroe's feeling of being constrained by Miller's presence (scene from *Blonde* (2022)).

followed by a simultaneous instantiation of exclusion and enclosure. As can be seen in **Figure 6**, Arthur Miller (AM) enters the frame of Marilyn Monroe (MM) four times from the right edge of the frame (A2, A4, A6, and A8). Each time AM is inside her space, the camera closes in on MM, thus excluding AM from the off-screen space. At the same time, we see a gradual increase of the graphic size of MM from medium long shot (A3) to medium shot (A5) and ending with a medium close-up (A7). The frame tightens in her face, thus decreasing her available “breathing room.” This can be associated with the prototypical emotion metaphor according to which the increase of intensity of emotion is understood in terms of an increase of amount (of substance in a container) (Kövecses 2000: 41). When AM enters her frame for the last time, the initial distance between the couple (A2) has been reduced to almost nothing (A8). As with the Arnheim example, the theme of the scene is fleshed out by a formal pattern, a phrase with an embodied logic that is imposed on the depicted two-dimensional space by the tools of filmmaking.

The second example is taken from *Close* (2022) by Belgian filmmaker Lukas Dhont. This film tells the story of an intense friendship between two thirteen-year-old boys, Léo and Rémi, which suddenly gets disrupted. The themes of equilibrium and disruption, which of course are recurring themes in classical narrative theory (e.g., Todorov 1971), are fleshed out by a graphic logic that is embedded in the formal design of two bicycle scenes (**Figure 7**). In the first scene, which embodies the theme of equilibrium, both boys are recorded while the camera moves alongside its subjects (A1–A4). During the entire duration of the tracking shot, both boys stay balanced in center frame. A bit later in the film, however, when disruption has impinged upon their friendship, we get a similar scene, albeit now with a different graphic logic. At first they are shown together (B1), but then Rémi and the camera exclude Léo (B2) from the frame as Rémi accelerates. Léo joins him again by entering his frame (B3), but once more a

dynamic pattern of *exclusion* abandons him to the off-screen space (B4).⁵

These examples seem to indicate that the hands of the filmmaker, like the hands of the boy and the hands of Giotto, serve as the “cutting edge of the mind,” to use the famous phrase by mathematician and philosopher Bronowski (2011). They are expressive of a creative mind that imposes a graphic, embodied logic onto the elements of the chosen medium. Upholding this thesis, however, also presents us with some challenges. From the artistic side, there is the problem of authorship. In the case of the boy’s drawing or Giotto’s painting, it would be fairly uncontroversial to draw a creative intentional connection between the individual’s dynamic mental activity of visual conceiving and its pictorial realization in the static traces of the pencil and the painted brushstrokes. This is not always the case with film, especially collective film productions, whose conception or making cannot always be attributed as straightforwardly to a single creative agency. This, in turn, necessitates that we consider different types or modes of authorship, as proposed by scholars such as Sellors (2007), Livingston (2009), Gaut (2010), and Cowan (2022). Livingston (2009: 72–73), for instance, proposes to replace a purely individualistic notion of filmmaking by a conception of authorship with joint conditions of sufficient control and expressive or artistic design. He makes a useful distinction between “individual authorship,” “individual authorship in the context of a collective film-making process,” and “joint authorship amongst equals.” As his model indicates, the author restrains himself from adopting medium essentialism, the

5 One may wonder how a simple animated version of the underlying abstract but embodied configuration of patterns would be perceived by an audience if one were to isolate it from the actual film images (see also Coëgnarts, Sluga 2022; Coëgnarts 2023). Although such experimental data does not yet exist, it would be likely to assume, as Heider and Simmel (1944) already proved in their famous experiment, that viewers will attribute animacy to abstract figures and their motion patterns. Whether or not this animacy is in line with the story dynamics as intended by the filmmakers is a question worth addressing.

claim that collaborativeness is somehow *essential* to the film medium. Evidence for this can be found in some films (including important “experimental” and avant-garde ones such as the works of Stan Brakhage and Jonas Mekas) that were made by an individual filmmaker in the absence of any significant collaboration. Moreover, there are reasons why it may be wrong to postulate the existence of an essence of the film medium, especially if the conception of the medium is linked to technology that keeps changing. In other words, one can critique any overemphasis on individual authorship without adopting medium essentialism.

Moreover, the issue of authorship invites us to consider the different ways in which a group of people can work collectively in a process where significantly different contributions are made by sub-groups and individuals. A key topic here is the different ways in which decision-making authority and responsibility are distributed in the group. Another basic question asks which activities and contributions do and do not constitute authorship, be it individual, joint, or collective. According to the “multiple-author view” of Berys Gaut (2010), anybody who makes an artistic difference to a film can be considered one of that film’s authors. Others would restrict that to differences pertaining to expressive functions and moral (and other) responsibility. Since art-making is a skillful, intentional activity, collective artistry or authorship must involve some kind of sharing or distribution of intentions. What, then, are joint intentions, and how do they organize a distribution and sharing of labor and activity? According to Sellors (2007: 268), the problem of collective authorship “rests in understanding where intention resides and how collective intention functions. Whereas individual intention resides in an individual mind, there is no equivalent in a collective, for there is no such thing as a collective mind or ‘superagent.’” Rather than inventing such collective agents, he sees a key task in finding ways to understand how individual and collective intentions relate to each other. More recently, Pearlman and Sutton

(2022) have provided an account of creativity and cognition that is informed by the concept of “distribution.” They argue that creativity in filmmaking practice is fundamentally dispersed “across the brains, bodies, and tools of collaborators who ‘make’ the film together” (Pearlman, Sutton 2022: 87). Their notion of “distributed creativity” might offer an interesting conceptual avenue worthy of further exploration.

Another challenge has to do with the role of the spectator. If we assume that these schemas provide viewers with a unique insight into the creative embodied cognitive processes of filmmakers, as the examples above indicate, do viewers then also actively engage with filmmakers while interpreting films and making sense of them? Since this question touches upon the debate on cinematic narration, one of the key topics in film philosophy, we will consider this issue separately in the third and last section of this article.

VIEWERS, CINEMATIC AGENCY, AND EMBODIED MARKERS

The idea that perceptual experience rests on the active involvement of the experimenter has long been recognized by both science and art. In science this idea is captured by Helmholtz’s concept of perception as unconscious inference, as elaborated above. In art history this traces to Gombrich’s “beholder’s share” and in film studies this is Hochberg’s “the mind’s eye.” As Seth (2019: 378) sums up, “the shared idea is that our perceptual experience – whether of the world, of ourselves, or of an artwork – depends on the active top-down interpretation of sensory input.” One question that has dominated much of the debate in film philosophy and film narratology concerns whether or not the spectator, while being involved in this elaboration process, also engages with an agency in control of the overall narration of the film (Gaut 2010). Broadly speaking, we may delineate three different schools of thought (Alber 2010: 163) that together comprise three different theoretical answers or theses on the subject of cinematic agency: the Cinematic

Narrator Thesis (CNT), the Zero-Agency Thesis (ZAT), and the Cinematic Author Thesis (CAT). Let us briefly recapitulate these positions by using the diagram in **Figure 8** as a schematic guideline.

Proponents of CNT argue that spectators do not engage with the mind of an actual author because the flesh-and-blood author resides outside of the narrative and therefore cannot provide information about the story. Instead, they argue that spectators are involved in a narratological process where stories are told to them by a fictional extra-diegetic narrator. This thesis has attracted a widespread following by scholars who have coined a number of different terms for this type of implicit narrator, such as the “cinematic narrator” (Chatman 1990: 124), the “image-maker” (Kozloff 1988: 44), the “grand imagier” (Metz 1974: 20–21), the “fundamental narrator” (Gaudreault 1988), the “filmic narrator” (Gunning 1994: 21), and the “perceptual enabler” (Levinson 1996: 252). The telling in which this narrator is involved, however, is of a different kind from the classical literary narrator we know from literature. Rather than making linguistic assertions, the cinematic narrator is involved in an act of making “pictorial assertions” (Terrone 2022: 205). Rather than a teller, the cinematic narrator is a shower or a “presenter” of the events depicted on screen (Bordwell 2008: 128). On this view, the graphic logic of the two film examples presented above would be imposed onto the parts not by the real filmmaker but by an implicit fictional agent who presents this logic from a fictional point of view inside the film and who has been delegated by the voiceless implied author to speak in his or her name. Scholars within this school draw upon various arguments to defend the necessity of a fictional narrator. One such argument is known as the “a priori argument” and entails the conceptual claim that any narrative of necessity requires a narrator: since narration is an activity of telling a story, and every activity implies an agent, the agent of fiction narration being the narrator, it follows that all narrative fictions, including all narrative fiction films,

have narrators (e.g., Curran 2019: 100–101; Patron 2021: 14). This argument and others, however, have been criticized by a number of scholars on logical grounds. For one, it has been argued that the a priori claim does not prove what it purports to prove. From the proposition that all narration entails an agent does not necessarily follow the ontological claim that all fictional narration entails a *fictional* narrator. As Gaut (2010: 201) puts it, “the a priori argument if successful proves the necessity of an actual author, not of a narrator.”

By contrast, proponents of ZAT refute the idea of a cinematic narrator, but also restrain themselves from attributing much significance to the communicative role of the filmmaker in the process of cinematic narration. On this view, which has been identified almost unilaterally with the work of David Bordwell (1985), it is the spectator who construes a mental model of the story on the basis of cues presented by the film. This inferential process presupposes the necessity of a perceiver of those cues, but not the necessity of a sending agency. As Bordwell (2008: 128) puts it: “Narratives are ‘organized’ for perceivers but not ‘sent’ as part of a communication.” This does not mean that Bordwell denies the causal role of filmmakers in what we see and hear in a screening. It is rather that “they are not immediately present therein,” as Livingston (2016: 14) writes. As with CNT, ZAT has faced some criticism. Thön (2016: 130–131), for example, has argued that his account focuses too strongly on the recipient’s activity at the expense of “questions connected to authorship, intended meaning, and the real or represented ‘sources’ of narrative representation.” Others make the counterclaim that authorial intentions cannot be dismissed so easily for the reason that the mental act of attributing intentions is an intrinsic part of a spectator’s or reader’s intersubjective and communicative involvement with fictional narratives (e.g., Alber 2010; Carroll 2000, 2009; Gibbs 1999; Herman 2008; Palmer 2004; Stockwell 2019; Stockwell, Mahlberg 2015; Zunshine 2006). These scholars not seldomly draw

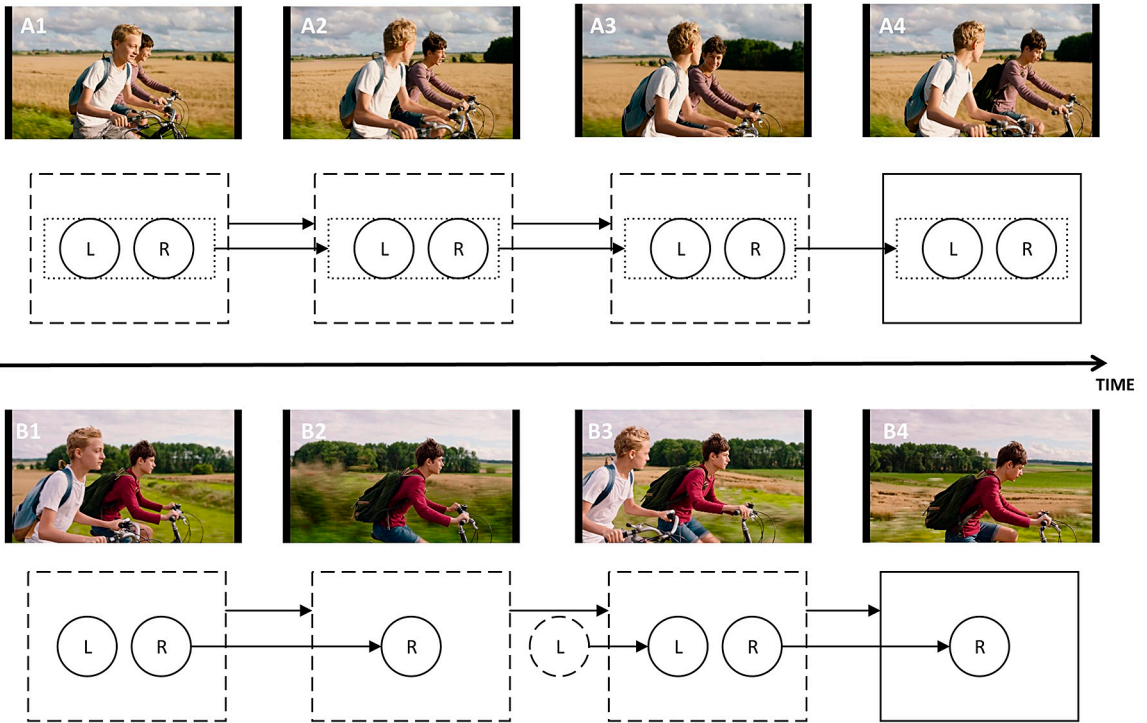
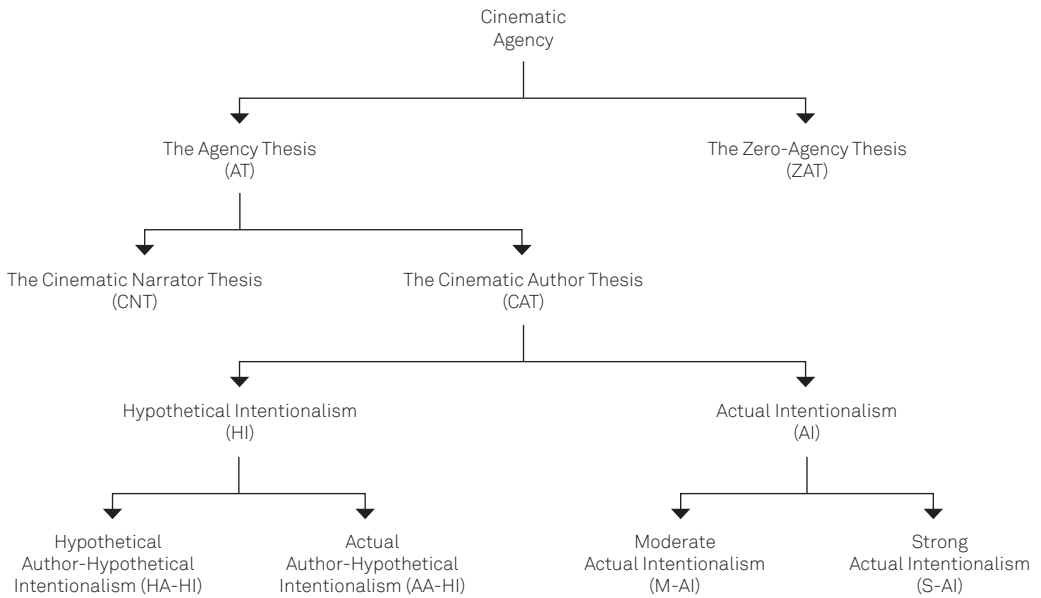


FIGURE 7. Equilibrium versus disruption in *Close* (2022).

FIGURE 8. Mapping the various positions on cinematic agency.



a comparison to the way we make sense of the everyday discourse of our conspecifics. In everyday life, Carroll (2009: 138) argues, “interpretation is typically aimed at understanding the intentions of others. We scrutinize the speech and the action, often including nonverbal behaviour, of our conspecifics in order to make sense of them by inferring the intentions that gave rise to them.” Why then not approach artworks “in the same way in which we interpret our conspecifics every day?” As Gibbs (2005b: 249) states: “No theory can eliminate the cognitive impulse to assume that someone wrote a narrative for some intentional purpose, which, at the very least, constrains fast, unconscious reading processes, similar to those that occur in understanding spoken language.”

The intentional stance brings us to the third and last school that takes into consideration the role of authorial intentions in the viewer’s interpretation and evaluation of films. The doctrine that underlies CAT is known as intentionalism and gives rise to a rich, albeit complex, theoretical debate in contemporary analytic aesthetics (e.g., Carroll 2000; Gaut 2010; Livingston 2005). Much of this debate revolves around two opposing views as to how the notion of intentionalism should be interpreted (Iseminger 1996). The first view, actual intentionalism (AI), considers the actual intentions of the author to be important when interpreting the meaning of a work. Proponents of this view believe that our interpretation of artworks resembles our interpretation of intentional action in daily life (Carroll 2000: 75). Just as we try to make sense of everyday discourse by figuring out the actual intentions of the words and actions of other real people, we try to make sense of artworks by trying to identify the actual intentions of the actual artists that produce the artworks. One locus of debate, then, resolves around the question to what degree one should take into account the actual author’s intention in one’s interpretative elaboration of an artwork. The most extreme answer would be to hold that the meaning of an artwork is always and

unconditionally determined by the actual intentions of the artist (or artists) who created it, even if these intentions are not supported by the artwork itself. This view, which underlies the strong and absolute variant of AI (e.g., Hirsch 1967), is not widely accepted for it leads to what is known in the literature as “Humpty-Dumpty-ism”: “the idea that an author could make a work mean anything simply because he wills it so as Humpty Dumpty tries to do when he says to Alice that ‘glory’ means ‘there’s a knockdown argument’” (Carroll 2000: 76). This criticism can be overcome by upholding the more moderate or modest view of actual intentionalism (M-AI), which holds that “intentions determine some, but not all, of the semantic properties of at least some works of art” (Livingston 2009: 93). On this view, only realized intentions can play a part in determining the artwork’s meaning, a constraint that has led theorists to formulate certain success conditions for fixating actual authorial intentions (Carroll 2000, 2009; Livingston 2005, 2009; Stecker 2006). For Livingston (2009: 99), “the intention to mean *q* by saying or otherwise representing *p* is successful just in case the intention to imply *q* meshes sufficiently with what is written, spoken, or otherwise put on display.” For Carroll (2001: 198), “the correct interpretation of a text is the meaning of the text that is compatible with the actual author’s intention.”

In contrast to the M-AI advocate stands the hypothetical intentionalist who believes that the correct interpretation or meaning of an artwork is constrained “by the best hypotheses available about what they intended” (Carroll 2000: 78). That is, the hypothetical intentionalist claims that the meaning of the text correlates with the hypothesized intention, not the real intention of the author. For this reason, hypothetical intentionalists, as opposed to actual intentionalists, are hesitant about using nonpublic authorial statements of intent (e.g., diaries, journals, correspondence). As with AI, hypothetical intentionalism (HI) comes in two forms (Irvin 2006; Lin 2023). The first version of HI, AA-HI, claims

that interpretation involves hypothesizing the most plausible intention of the actual author from the perspective of an appropriately situated audience, and that this hypothetical intention overthrows the actual intention in instructing an interpretation (e.g., Levinson 2016: 146–162). The latter part of the claim makes AA-HI different from AI (Lin 2023: 1). By contrast, the second version of HI, HA-HI, holds to the conviction that the author to be involved is not the actual author but a hypothetical, imagined author, one that is postulated or constructed by the audience (or reader/interpreter) in terms of features selected from the work. As with the cinematic narrator, a number of different terms have been proposed to term this theoretical construct, such as the “apparent artist,” the “postulated author,” the “ideal author,” and the “fictional author” (Lin 2023: 1). As such, it bears much resemblance to Wayne Booth’s (1961) abstract construct of an “implied author,” which Chatman (1990) held to be responsible for inventing the figure of the cinematic narrator, as elaborated above.

Holding the film examples from the prior section in the light of this debate, which merits more space than can be allotted to it here, we are inclined to follow the actual author intentionalists in the sense that the embodied logic discerned in the formal design of the films cannot be attributed to a disembodied, fleshless construct. Just as we connect the representational concepts of the boy’s drawing to his actual mind, so do we connect the graphic logic in the film examples to the embodied mind of the real filmmakers. The schemas are indicative of universal features of representational thought and embodied visual thinking. They draw us into what Gombrich (1961: 188) calls “the magic circle of creation” and allow us “to experience something of the thrill of ‘making’ which had once been the privilege of the artist.” In this sense it can be argued that the embodied schemas facilitate a degree of intersubjectivity, as also expressed by Pia Tikka’s (2022) model of enactive authorship. Because the schemas appeal to sensory-motor capacities

shared by both filmmaker and viewer, the latter are allowed access into the creative-thinking process of the filmmakers. If we can find evidence such as authorial assertions in diaries in support of our model of the author’s mind, then it should not be excluded from our search for meaning, but welcomed, as a one-to-one correspondence between the actual authorial intention and the intentions inferred from the embodied logic would further endow these schemas with explanatory power as to the creative authorial stage of visual conception, whether this stage is conducted on an individual or a collective basis.

At the same time, however, we should be careful not to ascribe too big a role to the filmmaker’s (plural) intentions than is justified by our argument. As one of the reviewers aptly pointed out in response to this article, the meaning of an artwork cannot be narrowed down to an authorial intention even if this intention is fleshed out in the most definitive, fixed way. It may play a significant role in the meaning afforded by the artwork, but it is not the ultimate “true” meaning of the artwork. The meaning of the film (and for that matter the meaning of any other object) is the experiences, past and future ones, which it evokes for the viewer. This is the view one finds in the work of Mark Johnson whose recent book *Mind in Nature* (2023), co-written with neuroscientist Jay Schulkin, draws strongly upon John Dewey’s classic work *Experience and Nature* (1925) to articulate a naturalistic and experiential view of meaning and aesthetics (see also Johnson 2007). In their book they provide the following description of meaning, which also seems an appropriate way to conclude this section:

“The meaning of something is not any sort abstract entity or nugget of essential features entertained and manipulated within a private, interior realm of mind. Rather, the meaning of something is what it does in, through, and to experience. The meaning of something

is its implications for experience and action, where those implications can be either conditions of a particular object or event, involving its previous history, or also the expectancies for future possible experiences that it afford” (Johnson, Schulkin 2023: 51).

CONCLUSION

The purpose of this article was to discuss the significance of embodied cognitive schemas in filmmaking and viewing. We started with perception in general by arguing that sensory experience is not so much a passive bottom-up process that happens outside in, with external physical signals constituting our view of the world, as it is a top-down, inferential process that occurs inside out with our brains constantly making predictions about the causes of our sensory signals based on prior embodied knowledge. Subsequently, we formulated a similar claim about representation in film. Just as perception is fundamentally cognitive, so is the artistic activity of filmmaking. Filmmakers do not merely copy reality; they rearrange it by imposing an embodied logic onto the elements in order to convey narrative meanings. Lastly, we considered the role of embodied cognition in the viewer’s interpretation of films by arguing that the graphic and representational conceptual logic, as embedded in the film form, may provide viewers access to the creative thought processes of filmmakers. It is through these schemas, which appeal to the embodiment of both viewers and filmmakers, that the former are cued into the creative meaning-making processes of the latter.

The theoretical outline proposed in this article, however, is still very schematic and introductory in its conception. Further research should be carried out in order to explore the embodied underpinnings of film form in a more systematic and analytical way. Moreover, since image schemas are typically defined as cross-modal and pre-linguistic gestalts of bodily experience, it becomes pertinent to explore the potential

of new visual and graphic methodologies in order to assess the dynamic bodily logic of film form. Hochberg and Brooks (2007: 390) already set the tone for this many years ago when they pointed out that “we need an annotation system better fitted by visual displays than by words. Perhaps it should consist of brief high points or action features economically sampled from the flow of events; it will be relatively schematic, since details are not normally maintained unless needed; it will be mostly ego-centered or camera-centered, with a definite viewpoint and 2D composition.” For similar reasons, we also consider it opportune to engage with the experiential heuristics of film practitioners (e.g., Cowan 2022; Lotman 2021; Pearlman 2019, 2021; Yilmaz et al. 2023) who are best placed to discuss the techniques by virtue of which mindful patterns are developed and improved in the practice of filmmaking.

Such an interdisciplinary research network would also benefit the broader program of artistic research. Rather than reducing art and film to the subject matter of a study (i.e., research *on* the arts), artistic research or research *through* the arts seeks to articulate “the unreflective, non-conceptual content enclosed in aesthetic experiences, enacted in creative practices and embodied in artistic products” (Borgdorff 2010: 59). Since the framework of embodied cognition is precisely aimed at laying bare the structures that operate beneath the level of conscious awareness, such a collaboration between cognitive film scholars and film artists would be most productive in uncovering the creative and artistic laws of filmmaking. At the same time, such fundamental research should go hand in hand with experimental investigations to provide the embodied understanding of film with a sound empirical and scientific foundation. To this aim, we think it might be prolific to establish an interdisciplinary dialogue with the flourishing field of neurocinematics, especially since research within this field (e.g., Hasson et al. 2008) already seems to have found neurological indications for the controlling effects of well-structured and

visually guided movies on viewers' brain states. The question whether there exist "brain markers" for image schemas in film might be a subject worthy of experimental inquiry.

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