

Film Theory *in the Mirror*

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Abstract

This essay is the English translation of the foreword to the Italian edition of *Film, Art, and the Third Culture*, published in 2022 as *Cinema, evoluzione, neuroscienze: un'estetica naturalizzata del film* (Rome: Dino Audino). It approaches Murray Smith's study as a key entry point into the ongoing dialogue between film theory and the cognitive sciences, and as a catalyst for rethinking the epistemological foundations of film studies in light of neuroscience. The analysis situates Smith's notion of "cooperative naturalism" within a broader critical framework that questions how the humanities can engage with scientific models without relinquishing their interpretive autonomy. By comparing Smith's work to other approaches—such as bioculturalism and Neurofilmology—the essay considers *Film, Art, and the Third Culture* as both a theoretical experiment and a methodological provocation: a testing ground for new interdisciplinary configurations that challenge the comfort zone of traditional film scholarship while redefining what it means to study cinematic experience today.

Keywords: Film theory, Cognitive neuroscience, Cooperative naturalism, Neurofilmology, Embodied cognition.

1. Third Culture and Triangulations

At a key point in *Film, Art, and the Third Culture*, Murray Smith confronts his readers with a choice—though in truth it is an accomplished fact:

Film scholars and aestheticians can stay in their comfort zone and pretend it is not happening, or they can look outward with an open mind as well as a sceptical eye, assessing just what neuroscience might or might not have to offer to our understanding of the arts (Smith 2017: 85).

This challenge invites film scholars to step beyond their disciplinary boundaries and take the risk of exploring a still unfamiliar territory: the relationship between film studies and cognitive neuroscience. It is not a reckless gamble, however, but a necessary phase in an ongoing epistemological shift. For some years now, research into the perceptual, cognitive, and emotional dimensions of film experience has opened dialogue with the natural sciences, gradually moving toward a

“naturalized aesthetics of film”—one that highlights the evolutionary and biological foundations of human experience.

How can the natural sciences, and neuroscience in particular, contribute to enriching the traditional methods of analysing and describing film experience? How far can cooperation between the humanities and the sciences go? What benefits and risks does this contamination entail? And how should we respond to the scepticism surrounding such proposals? Through intricate theoretical argumentation and close analysis of film sequences, Smith addresses these questions with both boldness and prudence. His work stands as a pivotal contribution to the wider debate showing that contemporary film theory is an essential front in the broader reflection on the naturalization of aesthetics.

Originally published by Oxford University Press in 2017 and reissued in 2020 with revisions, *Film, Art, and the Third Culture* is divided into two parts: the first more theoretical, outlining the principles of naturalized aesthetics; the second more applied, focusing on specific phenomena—especially emotion—through case studies. To promote his idea of “cooperative naturalism”, that is, the necessary collaboration between the humanities and the natural sciences, Smith revisits a debate that dates back over sixty years. Its starting point is the notion of the “third culture” proposed in the 1950s by British novelist and physicist C.P. Snow, who lamented that science and the humanities—“the two cultures”—had evolved along parallel, noncommunicating, and often incompatible paths. Snow’s call for dialogue, though widely quoted, remained largely a slogan rather than a concrete program, hindered—at least in film studies—by failed attempts and persistent resistance. The divide between speculative and empirical methods remains deep: only the former, it is often claimed, can grasp the mysteries of art, which would have little to do with the laws of the natural world. Smith counters this scepticism by mobilizing a substantial arsenal of arguments and concepts—theoretical construction, naturalistic interpretation, seeing-in, the subpersonal level, thick explanation, qualia—and by drawing on a rich body of analytic philosophy (Quine, Dilthey, Wollheim, Ryle, among others). His aim is to show that only an integrated, multi-level perspective can do justice to the complexity and richness of aesthetic experience and of the human mind.

Building on philosopher and neurobiologist Owen Flanagan’s proposal, Smith advocates a triangulation of three complementary levels of analysis—phenomenological (conscious experience), psychological (mental functions), and neurological (brain activity). Each level is necessary but insufficient on its own; all are of equal value and must cooperate to explain cognition and aesthetic experience. Without one vertex of the triangle, the entire structure collapses. Smith provides several applications of this model, using it to explore emotions from an evolutionary perspective. Drawing on Paul Ekman’s theory of basic emotions, he examines phenomena such as suspense, affective mimicry, and empathy, addressing the tension between universality and cultural variability in emotional experience.

2. The Grey Area

Smith belongs to that branch of cognitive film scholarship committed to bridging traditional humanistic inquiry and natural-scientific methods. A direct disciple of David Bordwell, he inherits the intellectual legacy of the “post-theoretical turn” that Bordwell and philosopher Noël Carroll initiated in the 1990s—a move aimed

at transcending the semiotic, psychoanalytic, Marxist, and poststructuralist paradigms (the so-called “Grand Theory”) that had dominated film studies with their overreaching ambitions and loosely defined methods (Bordwell and Carroll 1996; Allen and Smith 1997). Yet, as some of the critical responses to Smith’s work reveal, not everyone is convinced that neuroscience can—or should—be integrated into this project. A comparable effort can be found in the work of Torben Grodal, another major exponent of cognitive film theory. His *Embodied Visions* (2009) advanced a “biocultural” approach to film experience, later made accessible to Italian readers in translation (Grodal 2014). The publication of both Grodal’s and Smith’s books in Italy is significant: it reflects the country’s active role in rethinking the dialogue between the humanities and the natural sciences. Indeed, thanks to Italian scholars such as Vittorio Gallese and Michele Guerra (2019), the possibility of adopting methods from cognitive neuroscience to analyse the spectator’s engagement—both with characters and with stylistic and formal features—has become a central issue. Their work has been crucial in introducing into international debate the paradigm of “embodied cognition”: the idea that perception and emotion are rooted in the body’s sensorimotor capacities, rather than in disembodied mental representations.

This Italian approach, however, is far from a mere instrumental use of empirical data. It integrates experimental methods with philosophical, methodological, and meta-theoretical reflection. Neurofilmology (D’Aloia and Eugeni 2014) revisits the insights of classical Filmology, while maintaining a critical openness toward neuroscience, experimental psychology, and other disciplines that investigate mental states through empirical means. Unlike the analytic orientation of Smith’s cooperative naturalism, Neurofilmology is also receptive to continental philosophy. Rejecting the dichotomy between “mentalist” and “corporealism” models of spectatorship, it advances the concept of the *spectator-organism*: an intelligent, sentient being situated within an experiential environment that it actively helps to constitute (Eugeni 2014; D’Aloia and Eugeni 2014: 19–20; D’Aloia 2021: 14–20).

Smith’s book demonstrates that such a conception can also emerge within the cognitive tradition. Like Grodal—though with a different philosophical style—Smith contributes to what may be called a “neo-cognitivist” turn: a renewal of cognitive film theory that incorporates insights from neuroscience and adjacent fields. The early cognitive paradigm had focused on the “cold” mental processes underlying narrative comprehension; Smith and others shifted attention to the “hot” domain of affect and emotion (Smith 1995; Tan 1996; Grodal 1997; Plantinga and Smith 1999).

In *Film, Art, and the Third Culture*, Smith revisits and expands on these ideas, re-engaging the arguments of *Engaging Characters* (1995) and addressing what he calls the “grey area”—the conceptual space between mind and body that cannot be reduced to either. The brain, he argues, is not a separate or competing entity, but a mediating site between the two poles of a false dichotomy. As Smith observes:

It is hard to escape the brain these days—everywhere one turns, one encounters brain-scan images, claims about the neural basis of various human behaviours, and whole new sub-disciplines based on the application of neuroscientific ideas or techniques to traditional domains of enquiry (Smith 2017: 83).

Confronted with this pervasive “neurophilia”, which often risks degenerating into reductionist “neuromania”, Smith refuses both rejection and surrender. Instead, he ventures into this *terra incognita* with intellectual openness and critical restraint—acknowledging both the promises and the limits of a neuroscientific approach to art.

3. One, None, and a Hundred Thousand Empathies

The novelty of Smith’s triangulation model, compared with traditional approaches to film experience, lies in the inclusion of the neurological dimension—the subpersonal level of mental states that forms the foundation of our sensory, motor, and emotional imitation capacities. It is no coincidence that he focuses precisely on neural mirroring and empathy—two of the most debated and controversial topics in recent discussions. At the heart of the debate stands the function (and even the existence) of one of the most celebrated yet contested discoveries of the past quarter-century: the “mirror neurons”.

Found in the mid-1990s by a team of Italian neuroscientists at the University of Parma, including Gallese, these cells—present in both macaques and humans—respond not only when an individual performs an action, but also when observing another perform the same type of action. This mirroring mechanism suggests that when we watch someone act, we automatically and pre-reflectively *simulate* that action on a sensorimotor level, internally reproducing it in our own neural circuitry. The same mechanism applies to the perception of others’ emotions: observing an emotional facial expression triggers an analogous pattern of neural activation in the observer. Mirror neurons thus enable a direct, embodied understanding of another’s action, intention, or emotion, based on sensorimotor representation rather than deliberate cognitive inference. Accordingly, the mirroring mechanism is often seen as the neural correlate of subjective experience and as the foundation of empathy—the capacity to understand another’s inner state (Rizzolatti and Sinigaglia 2020).

Because the perceptual and interpretive resources used in film spectatorship overlap with those employed in real-world interaction, the embodied simulation hypothesis has significant implications for film theory. In the cinematic situation, the viewer is physically still yet perceptually immersed in a dynamic world of actions, gestures, and emotions unfolding on screen. While much research seeks to clarify what distinguishes aesthetic experience from everyday perception, neuroscience has extended the scope of simulation to encompass the subpersonal level of empathy itself. The embodied simulation hypothesis offers an alternative—not a replacement—to the mental simulation hypothesis, which posits that empathy arises from voluntary imaginative projection into another’s perspective.

In the 1990s, cognitive theorists debated at length the heuristic value of empathy, often finding it too vague to be analytically useful. More precise notions such as sympathy, identification, or interest were generally preferred, while empathy was regarded as redundant or unproductive (for a review, see Coplan 2012). Smith himself, in *Engaging Characters* (1995), developed a “structure of sympathy” model that described complex, conscious modes of viewer–character engagement. In *Film, Art, and the Third Culture*, however, Smith revises and expands his stance. He now places at the centre of his argument an “extended” conception of empathy. This notion is extended inwardly, toward automatic, pre-reflective, and instinctive phenomena—such as affective and motor mimicry and emotional con-

tagion—that, as Raymond Tallis puts it, “wire us into the world.” But it is also extended outwardly, toward the expansion of the mind’s capacities beyond the physical boundaries of the body, in line with the Extended Mind thesis. To capture this twofold movement, Smith coins the term *mindfeeling*, complementing the more familiar *mindreading*. If the latter refers to cognitively “reading” another’s state in order to acquire information, *mindfeeling* designates a more immediate, embodied, and affective mode of understanding—one that “feels” the other from within a shared sensorimotor framework. This distinction reframes empathy not as a passive emotion, but as a dynamic mode of embodied cognition and aesthetic engagement.

4. Neuroscepticism

Smith’s “extensions” of empathy theory have not been universally welcomed. Some of his fellow cognitivists have viewed them as risky—if not unwarranted—moves that threaten to push film studies beyond its legitimate boundaries. Shortly after the publication of *Film, Art, and the Third Culture*, the journal *Projections* devoted an entire issue to discussions of the book, featuring both praise and criticism. Among the most outspoken sceptics was Malcolm Turvey, who directed his doubts—particularly regarding mirror neurons—at multiple levels: the extrapolation of data from macaques to humans; the assumption that an observed action must belong to the observer’s motor repertoire; and the generalization of conclusions drawn from a single experiment. Such objections point to a broader concern: the potentially hazardous fusion of natural-scientific and humanistic methods. As Turvey later observed, “The apparent authority of a scientific paradigm [...] can lead scholars to cherry-pick and mischaracterize our artistic practices in order to fit the science” (Turvey 2020b: 25). In his view, neuroscientific discoveries produce only “implementing” knowledge—confirming what traditional analytical methods already reveal. Since cognitive processes can be described without recourse to neurophysiology, no empirical evidence from the brain is necessary. That empathy may have a neural correlate, Turvey argues, is irrelevant, even redundant. Recasting simulation theory on a neural basis, far from deepening understanding, risks impoverishing it: “This is a good example of how a scientific theory can distort our understanding of artistic practice—in this case, our notion of what ‘comprehending a character’ consists of” (Turvey 2020b: 35). At most, mirror neurons might account for a pre-reflective layer of filmic empathy that underpins more complex, higher-order forms of engagement between viewer and character.

Yet, as Turvey’s own remark implicitly concedes, Smith’s focus on the sub-personal level does not negate the personal level. The two are complementary, not exclusive. Setting them in opposition merely reinforces the false dichotomy between embodied and mental simulation. Instead, Smith’s cooperative model underscores the multilevel nature of film experience—its interplay between bodily resonance and conscious interpretation (D’Aloia 2021). For the more conservative wing of cognitivism, however, neuroscience remains epistemically suspect. The naturalistic turn, they argue, offers little genuine explanation of mental functioning; film scholars, therefore, should remain within the interpretive boundaries of the humanities. Nonetheless, the question is unavoidable. As Nannicelli and Taberham aptly note:

Cognitive theory's increasingly cross-disciplinary nature raises questions not only about what its boundaries are, but what they should be. In particular, we ought to acknowledge that while greater collaboration with the sciences presents enormous opportunities, it also requires us to engage in a kind of meta-theoretical reflection. That is, we need to carefully consider what sorts of questions about film and film viewing might be answered by appealing to scientific models and explanations—and what sorts might not be (Nannicelli and Taberham 2014: 3).¹

Smith's cooperative naturalism thus becomes a test case for this reflection: it invites film theory to examine its own epistemic assumptions and to renegotiate the limits of its dialogue with the sciences.

5. Neurocinematics, Psychocinematics, Neurofilmology

The resistance of certain cognitivist scholars to Smith's "cooperative naturalism" betrays an underlying anxiety—a defensive reaction to the emergence of the pre-cognitive, which threatens to destabilize the epistemological foundations of the cognitive paradigm itself. This apprehension contrasts sharply with the more open attitude of researchers willing to integrate neuroscientific methods into established empirical practices, such as eye-tracking or cinemetric analysis, for studying attention and editing patterns. In *Psychocinematics: Exploring Cognition at the Movies*, Arthur Shimamura suggested that:

With the advent of brain imaging techniques, particularly *functional magnetic resonance imaging (fMRI)*, psychological science can now link mental events with brain processes. Indeed, it is now possible to have individuals watch a movie in an fMRI scanner and record the brain regions that are active during the experience. In this way, Psychocinematics can connect minds, brains, and experiences as we watch movies (Shimamura 2013: 2).

This statement echoes Smith's triangulation model, linking the psychological, neurological, and phenomenological levels of film experience. Yet, it also reveals a certain *naïveté*: the reduction of neuroscience to the topographical mapping of active brain regions, rather than an exploration of *how* film elicits those activations. That "connection" had, in fact, already been proposed more than fifteen years earlier with the rise of Neurocinematics—a line of research investigating how different levels of narrative organization and editing structure can trigger synchronized neural responses across viewers (Hasson et al. 2008). The risk, however, was clear: to treat neuroimaging as a tool for producing scientifically calibrated filmic stimuli capable of controlling, even predicting, spectators' attention. Such deterministic fantasies miss the real opportunity: to transform neuroscience from a predictive technique into an interpretive resource—a foundation for a new filmology capable of theorizing the expressive and relational power of the cinematic experience (Poulaki 2014).

¹ David Davies (2018) had already raised objections similar to Turvey's, though he framed them on an epistemological level—shifting the focus from the description of how artworks are experienced to the normative scope of the questions that the philosophy of art is entitled to address. As Smith himself observes, neuroscience provides the scaffolding of our empathic experience: "traits, states, and history" belong to what is built upon those neurological foundations, not to the foundations themselves. Davies's "moderate pessimism," however, concedes that neuroscience may nonetheless help to correct the simplifications of *naïve* psychology in our understanding of aesthetic experience.

In this regard, Neurofilmology—a field to which the Italian school has made a particularly distinctive contribution—offers the most promising conceptual framework for a naturalized study of film. It begins with experiments specifically designed to examine film style and spectatorship, seeking to integrate the sensorimotor aspects of viewing with philosophical reflection on the “special corporeality” of cinema. But like Smith, Neurofilmology also moves beyond experimentation, recontextualizing neuroscientific findings—whether or not derived from studies of film spectatorship—within a broader methodological and epistemological reflection. The distinction between *mindreading* and *mindfeeling*, to which Smith gives prominence, mirrors this dual function: the empirical data do not replace theory; they expand its interpretive scope.

Turvey’s persistent scepticism only reaffirms a more traditional position: that the natural sciences are ill-equipped to examine the *human* meaning of theory, criticism, or aesthetic experience. Where the hard sciences explain natural phenomena, film studies, in this view, must rely on philosophy to interpret intentional acts and artistic meaning.² Yet, film theorists—regardless of their philosophical lineage—need not fear being turned into neuroscientists. The current interdisciplinarity of the field allows for collaborations that are both effective and intellectually legitimate. The integration of neuroscientific results into broader reflections on film reception does not compromise the humanities’ interpretive autonomy; it constitutes a valid extension of it.

Neurofilmology is not merely a neuroscience of cinema but rather a meta-discipline—a meta-empirical framework that transcends even the principle of triangulation to construct higher-order models of aesthetic experience. Its aim is not to offer neuroscience a playground for testing hypotheses, but to enrich the humanities’ interpretive capacity, even when that means questioning or refuting reductionist assumptions. The study of the brain, in this sense, does not replace the study of the mind; it broadens it. Its ultimate goal is to deepen our understanding of cognitive phenomena—perception, attention, memory, emotion, consciousness, subjectivity—by rethinking the relationship between mind and body in light of neurobiological insight.

6. A Matter of Thickness

If, as Turvey contends, “many of the things we want to know about cinema and the other arts can be discovered through non-scientific, humanistic methods such as analysing films and researching the context in which they were made” (Turvey 2020a; see also Bordwell 2020), and if the usefulness of the embodied simulation hypothesis is denied, then the possibility of enriching film theory with neuroscientific insights is foreclosed from the start.³ By dismissing one vertex of Smith’s triangle, sceptics effectively collapse the entire model.

² Paradoxically, a portion of the cognitivist resistance to neuroscience is shared by the dominant current of continental film-philosophy, which has traditionally regarded with suspicion the exclusive reliance on empirical science within cognitive film studies (for an overview of the debate and relevant references, see D’Aloia and Eugeni 2017: 9–28). Such criticisms have been challenged—or at least counterbalanced—by the assertion of the primacy of analytic philosophy within cognitivism (see Sluga 2020).

³ The objections raised by Bordwell and Turvey focus particularly on Gallese and Guerra’s generalizations concerning the experimentally observed higher degree of embodiment elic-

The defence of Smith's position has been clearly articulated by the very neuroscientists on whose work he builds. As Gallese explains:

Cognitive neuroscience can provide new heuristic tools linking nature and culture through the empirical investigation of the brain–body mechanisms supporting both human creative processes and the reception of their results. By studying the brain–body in relation to cultural artefacts and their reception, we can better understand the building blocks of what makes us human (Gallese and Guerra 2022: 1–2).

What protects Smith from the excesses of neuromania—the overestimation of the brain's explanatory power—is his insistence that neuroscience provides only partial, non-exclusive contributions to film theory. Neurons, in themselves, explain nothing; they are not epistemic agents. Subpersonal mechanisms acquire heuristic value only when triangulated with phenomenological experience and functional analysis. Film experience, in all its complexity, cannot be reduced to neural activation. As Smith himself reminds us, “no amount of psychology or cognitive neuroscience will substitute for the detailed exploration of cinematic technique” (Smith 2022: 16). His “internalist” approach complements, rather than replaces, the “contextualist” orientation of the more conservative cognitivists. Reconceptualizations informed by neuroscience do not seek to saturate interpretation or replace traditional explanations; rather, they “thicken” them—adding an additional layer to close analysis and making it epistemologically richer.

Empathy, once again, offers a clear illustration. Understanding another person—or a film character—through embodied simulation does not exclude deliberate inference or reflective judgment. Emotional engagement arises from the dynamic interaction between bottom-up (instinctive, embodied, evolutionarily grounded) and top-down (narratively constructed, interpretive) processes.⁴ The innovation of Smith's proposal lies in foregrounding the long-neglected subpersonal level and redefining empathy as a dynamic coupling between mind and world—a process in which cognition extends beyond the body, using environmental and representational structures as prosthetic supports for thought and feeling.

For Smith, “it is the domain of representation, and especially the practice of narration, that constitutes the ‘environmental support’ created by the mind to drive its amplified performance” (Smith 2022: 188). Narrative art, by multiplying perspectives and intensifying emotional patterns, provides a unique terrain for testing and expanding our cognitive and affective capacities—often producing

ited by steadicam shots—movements deemed closer to natural human motion—compared with other techniques, such as the zoom. Regardless of their empirical validity, such criticisms perpetuate cognitivism's long-standing resistance to Sobchack's “materialist” approach and to the related notion—closely aligned with the hypothesis of embodied simulation—that film engages the spectator not only through the viewer's corporeality but also through its own. If Smith's proposal has a limitation, it lies in not fully exploiting the opportunity to extend his conceptual insights on empathy from the spectator–character relationship to a broader relationship between the viewer's body and the “film-body” (Sobchack 1992). More than an omission, this restraint may be seen as an act of prudence, intended to avoid further attacks from the more rigid cognitivists traditionally hostile to phenomenological and embodied philosophical perspectives. On this issue, see Fingerhut 2022: 28–38. For a reinterpretation of the triangulation model in light of the embodied simulation hypothesis as applied to film experience, see Smith 2022.

⁴ On the possibility of overcoming the divide between analytic and continental frameworks in the study of film experience, see Sinnerbrink 2019 and Pisters 2014.

emotions more complex or more intense than those of everyday life. In this sense, a thicker theory—enriched by neuroscience—does not diminish the aesthetic or interpretive dimensions of film; it enhances them. Neuroscience offers not closure but depth, not reduction but articulation.

Film, Art, and the Third Culture thus contributes decisively to the ongoing dialogue between the humanities and the hard sciences, and particularly between film theory and cognitive neuroscience. Smith's subtle arguments, supported by close film analysis, demonstrate not only what neuroscience can offer to film theory, but also how reflection on scientific methods and epistemologies can, in turn, reshape the theoretical foundations of cinema studies—making them, quite literally, thicker.

Triangulating the phenomenological, psychological, and neurological levels of experience is, in this view, not just an academic exercise but a vital opportunity for the future of the humanities. Smith's naturalized aesthetics of film locates the brain as a site of genuine encounter—rather than rhetorical conflict—between seemingly opposed models of spectatorship: the “mentalist” and the “corporeal-ist.” The brain is neither a reduction of the mind nor alien to the body. And since we experience the world—including the cinematic world—through our *embodied mind*, it is indeed worth venturing into this *terra incognita*.

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