Embodied simulation, empathy and social cognition: Berlin School lessons for film theory

ROGER F. COOK

The Berlin School is an alternative German film movement that since the late 1990s has evolved unevenly, and to some extent in spite of itself. The directors who belong to the School have often rejected the notion that their filmmaking actually constitutes a school or a movement. Nonetheless, when the German directors Thomas Arslan, Christian Pitzold and Angela Schanelec, who had all studied at the Berlin Film and Television Academy, started to make films in a similar but by no means homogeneous style in the mid 1990s, the contours of a new direction in German filmmaking began to take shape. The name 'Berlin School' first appeared in a review of Schanelec's 2001 film Marseille and gradually came to be adopted by other German film critics. As use of the name spread, this newly labeled group began to grow organically, and by the first years of the new millennium a second wave of young German and Austrian directors were making films that resembled those of the original three 'Berlin' directors.

The designation, and the increasing number of filmmakers linked to it, however, did not, however, lead to widespread recognition or success, either at home or abroad. French critics acknowledged the films in their proclamation of a nouvelle vague Allemande, but did not single them out from what they considered to be a more general revival in German cinema, and their mention in the pages of Cahiers du cinéma, Le Monde and Positif did not generate comparable attention at home. The Berlin School has also been slow to spur the kind of interest among Anglo-American critics that New German Cinema enjoyed in the 1970s and that helped boost its reputation in Germany.
Only when a small group of German film scholars in the USA began to focus on these directors around 2007 did others start to take notice, and the Berlin School gradually became a hot topic within German Studies in North America and then the UK. Although their films have yet to gain much traction in the broader Anglo-American film community, they have attained a certain regard, as evidenced by a recent exhibition at New York’s Museum of Modern Art. In conjunction with the exhibition, Deutsches Haus at New York University sponsored a two-day conference featuring six of the Berlin School directors – Arslan, Benjamin Heisengberg, Christoph Hochhäusler, Ulrich Köhler, Petzold and Schumacher – as well as the cinematographer Reinhold Vorschneider. Bolstered by the appearance of the first three books on the Berlin School in the months leading up to the MoMA screenings and its catalogue, these events can only enhance the group’s profile among film scholars and critics as well as cineastes.

The challenge that the Berlin School poses for all these groups, and that makes it a fitting subject for the purposes of this study, is perhaps best reflected in the domestic response to its films. Many German film critics and some well-known German filmmakers, most notably Doris Dörrie and Oskar Roehl, have criticized the films for alienating viewers with their uncompromising focus on form. A few top film critics in the German media have praised the aesthetic artistry of Berlin School films, but in doing so they have come under attack from representatives of the German film industry, who complain that they are bestowing acclaim on small-budget films that fail to attract an audience while spinning German productions that succeed at the box office and help to revive German cinema. The recognition by these leading domestic critics has also not appreciably improved the group’s standing among the German public. For the most part the films have premiered at film festivals and have shown only on television; as of 2010, only Petzold’s Die innere Sicherheit/The State I Am In (2000) and Maren Ade’s Alle Angemessen/Everybody Else (2010) had been viewed by more than 180,000 cinemagoers.

The limited popularity of the Berlin School filmmakers is hardly surprising. Their films reflect the expectations that the film industry produces in the viewer for narrative closure. There is, as Marco Abel indicates in the title of his book on this group, a “counter-cinema” that displays fierce opposition to the global dominance of Hollywood. They adamantly reject the way mainstream narrative film exerts a tight control over viewer responses, characterizing the practice of linking every scene and image to a controlling narrative, in the words of Arslan, as an Überwältigungsdrangmaturgie, or “dramaturgy of overbearing”. Driven by their discontent with the current state of the global film industry, these directors have developed a distinctive style that is marked by its resistance to many of the basic principles of classical narration. To this end, they deliberately avoid cues that signal the significance of events with respect to the unfolding story. Plot structures that normally convey meaning and generate intensity are reduced to a minimum, and filmic strategies conventionally employed to build narrative intrigue are avoided. Their films...
consist of frequent long takes without a central event or climax to serve as a dramatic focal point. They give the viewer the sense of occupying the film world together with the characters, experiencing first-hand its usually mundane events and dialogue. Scenes often show characters engaged in activities that are unrelated to the plot, and the camera may linger on a scene for no discernible reason. Minimalistic styles of acting further dehumanize the plot, and the films provide little background information that might help the viewer understand the characters' motives or goals.

This list of defining features puts the Berlin School at odds not only with proponents of the German film industry but also with cognitive film theorists who deem the narrative strategies of classical cinema to be the apex of a highly evolved film form. In this essay I call on recent studies in cognitive neuroscience to explain how this style of film can engage the viewer in an alternative fashion. The discovery of neural systems associated with mirror neurons has shown that empathy can be invoked directly via embodied simulation, and I apply this model to Berlin School films. The broader concept of embodied social cognition, which also stems from the study of neural mirroring mechanisms, then serves to explain how the nonclassical narrative strategies employed by these directors engage viewers at the level of embodied spectatorship.

In taking this approach, my analysis runs counter to the dominant cognitivist account of empathy and exposes how the alternative style of the Berlin School poses a fundamental challenge to cognitivist film theorists. Grounding their theory in models of the mind stemming from evolutionary psychology, these scholars consider those classical elements of narrative construction rejected by the Berlin School to be essential features of competent filmmaking. In their view, the ability to attract and hold the attention of a viewer is the test of whether a filmmaker understands, and has adapted her filmmaking to, the way the human mind processes feature films, intentionally rejecting the industry practice of using narrative in this way, the Berlin School is part of what has been described as 'slow cinema', with critics characterizing its films as not only slow and even turgid, but indeed boring. Nevertheless, even as they deemphasize plot and downplay the strategies conventionally employed to aid in its comprehension, Berlin School films for the most part have narratives that can be described in straightforward, deceptively simple terms. As narrative films that have failed to generate much interest among the film-going public, they would be vulnerable to vigorous, perhaps even dismissive, criticism from cognitivist critics.

The cognitivists do allow for certain alternative forms of narrative within mainstream cinema, but they characterize these as exceptions to the evolutionarily best-adapted style of classical cinema. David Bordwell says of the hegemony asserted by the integrative function of classical narrative, "so powerful is the classical paradigm that it regulates what may violate it." They also acknowledge that there are other styles of films that diverge in essential ways from the dominant narrative form. They refer to abstract or experimental films that belong more to the art world than to cinema in the
The Berlin School, however, does not fit any of these categories, as its films are neither experimental nor abstract, nor do they overtly foreground their aesthetic techniques. Broadly speaking, they present real-world scenarios and construct situations that replicate our everyday experience without drawing attention to their constructedness. The following characterization of the classical style also applies to the Berlin School: 'Manipulation of mise-en-scène (figure behavior, lighting, setting, costume) creates an apparently independent profilmic event, which becomes the tangible story world framed and recorded from without.'

According to the cognitivist taxonomy of film styles, the Berlin School directors' lack of success might suggest an unwillingness or inability to adapt their narrative structures to the ways in which humans interpret and understand others on the basis of an initially acquired Theory of Mind. From this point of view, the president of the German Film Academy and commercial film pioneer Günter Rohrbach's denouncement of film critics who lauded Berlin School films as 'autistic' could also be applied to the filmmakers.

I am not of course suggesting that cognitivist film critics would level such a charge against these directors; to my knowledge none has even touched upon this group of filmmakers. Rather, this provocative account of how the Berlin School style defies cinematic norms serves to illuminate the kind of challenge it presents to critics and film scholars in general, and to cognitivist film theory in particular. To understand the larger strategy of these filmmakers it is necessary to see how it evolved in opposition to the dominant trends in postmodern German cinema. In a polemical piece, 'Why I don't make political films', Köhler defends the openness, ambivalence and complexity of Berlin School films against charges of obscurantism. He argues that the most effective form of political cinema avoids specific political content and relies on the filmmaker crafting a creative personal portrayal of individual experience in the current society.

Köhler cites Hans Weingartner's award-winning Die fassbaren Jahre sind verheilt/The Educators (2004) as an example of what tends to happen when filmmakers take on political issues directly in mainstream narrative film. Noting the film's enthusiastic endorsement across the political spectrum as evidence, he deems it 'a feel-good political movie' whose ostensibly critique of capitalism is betrayed by its alliance with the film industry. By contrast, Berlin School directors avoid direct political contextualization of the generally uneventful episodes that comprise their films. Their filmmaking features something akin to what Shohini Chaudhuri and Howard Finn have described in relation to independent Iranian cinema, and in particular the work of Abbas Kiarostami, Mohsen Makhmalbaf, Samiú Makhmalbaf and Jafar Panahi, as the 'open image'. Employing some of the same techniques as their Iranian counterparts, as well as others that they share with Bresson, Italian neorealism, the
second-generation filmmakers of the French New Wave (such as Maurice Pialat, Jean Eustache or Philippe Garrel) and contemporary independent filmmakers from various other countries (Apichatpong Weerasethakul, the Dardenne, Kelly Reichardt and the new Romanian cinema). Berlin School directors adhere to the cardinal principle for this style of filmmaking, namely that the image enjoys 'a relative autonomy from the surrounding narrative'. However, they do not employ this approach in order to evade political engagement; tacit political issues hover over, and form a silent backdrop to, their freely evolving stories, such that, in the words of Chaudhuri and Finn, 'the ostensibly apolitical aesthetic form of the open image' affords an 'open-ended politicization of the image'.

In the case of the Berlin School, part of this tacit politicization of the image involves its juxtaposition with a recent popular genre in German cinema, one for which Köhler reserves his harshest criticism. Without even mentioning the titles of this genre's international hits – Untergang/Dawnfall (Oliver Hirschbiegel, 2004) and Das Leben der Anderen/The Lives of Others (Florian Henckel von Donnersmarck, 2006) – he decries their exploitation of German history by declaring, 'export champions thanks to Hitler and the Stasi! These two films are perhaps the best known from a wave of commercially successful German movies of the post-unification period that address troublesome episodes in the national past: the Nazi era, the devastation of the postwar period, the divided Germany. Building on a British paradigm, the so-called German heritage film addresses the persistent shadow of history that hangs over all of German culture. Since the end of the Nazi period, German cinema has been confronted with the dilemma of how to avoid being overwhelmed by national history while still learning its lessons. This group of films typically has as its heroes ordinary people who are struggling to do the right thing in troubled times. Köhler categorically condemns what he sees as an effort to normalize the German people's relation to its past through heart-warming stories: 'Contemporary cinema exploits German history and is, in doing so, at best apolitical, but most often reactionary.'

Berlin School cinema has to some extent evolved as a direct counterpart to these German heritage films. Its virulent opposition to them is clearly based on the indirect way that they offer the nation a restorative view of its past. The primary issue for Berlin School directors, however, may be not so much how these heritage films represent the past, but that they exploit that past to produce large commercial films in the narrative idiom of Hollywood. That is, the rehabilitation of the German past in their eyes may be more a byproduct of a film style that diverges from the here and now, from the reality of the present. In opposition to the aesthetics of representational realism that dominates mainstream cinema, the Berlin School filmmakers practice what Valeska Griesbach has called a mode of 'radical observation'. In this approach the political thrust stems from the refusal to foist a particular view or position on either a character or the viewer. The camera is never positioned in a condescending perspective that deems to know better. Avoiding conventional modes of seeing and understanding that have

15 Chaudhuri and Finn, 'The open image', p. 45.
become a cinematic cliche, this aesthetic strategy enables the viewer to resee the film world and her own contemporary reality in a way that is not predetermined. This ‘open-ended politicization of the image’ also relies more on the viewer’s presupjective, embodied responses, a fact that is key to my argument.

In his polemic against German heritage films, Köhler rails in particular against their tactic of choosing common, everyday people as their heroic protagonists. Again, without mentioning them by name, he lambasts the same two films for employing the classical narrative formula for generating empathy with a hero who has something big and dramatic to do: ‘And the East German masses are rehabilitated by the Oscar. The little man is cleared of all guilt. Now, united Germany can bowl! It wasn’t us, Hitler and Mielke did it.’ In a similar vein, Aimée & Jaguar (Max Färberböck, 1999), Sophie Scholl: Die letzten Tage/Sophie Scholl: The Final Days (Marc Rothemund, 2005) and Das Wunder von Bern/The Miracle of Bern (Sönke Wortmann, 2003) also feature protagonists who act heroically in the face of evil or hardship. According to the classical model of agency, the hero believes in progress, is goal-oriented and is fighting to solve the problem at the heart of the film. This is part of what Jacques Rancière has called ‘the contract between the director and the audience in classical cinema’. This contract promises the viewer that there will be things that need to be done and that the hero will do them. The empathy felt for these heroes tends to kindle a comparable feeling with respect to contemporary unified Germany, producing a sense that there is also something big to do here. There is no concrete vision of what this might be, but a feeling that it is something more than just living well and prospering in a wealthy first-world nation – something that counters injustice in the world – and there is the sense that this is indeed being done. In conveying this indirect message, these films also situate contemporary, unified Germany on the right side of Germany’s troublesome recent past.

In defiance of the heritage films, Berlin School films feature protagonists who by their very nature subvert this central principle of classical cinema. They too turn to ordinary Germans for their protagonists, but they offer a steady diet of pugnacious individuals who neither have nor seek anything to do. The central figures in Berlin School films such as Murnau, Max and This Very Moment (Christoph Hochhäusler, 2003) and Bungalow (Ulrich Köhler, 2002), to name just three, are unexceptional middle-class Germans who have one thing in common: no sense of direction in their lives and little interest in searching for any. In these and other cases, the protagonists prefer to remain disengaged from the social order they inhabit and the life paths it offers. Thus rather than countering this ‘reactive’ mode of filmmaking head-on with narratives that contest their view of history or offer an explicitly critical view of contemporary Germany, Berlin School filmmakers turn to open-image filmmaking. Their films do not depict an alternative reality, but instead shun representation in favour of a more immediate, intensified engagement with the image. Abel describes how this method can exert an alternative political force.
The task the Berlin School sets itself is not to create immediacy with reality but with the reality of the image, so that the depicted world becomes aesthetically autonomous, abstracted from empirical reality. It is, however, just this aesthetic abstraction from empirical reality that affords viewers an intensified encounter with their own social reality.

The open image of the Berlin School is not merely given autonomy from the narrative but is extracted from the diegetic reality of the film world, such that the viewer is subjected to its full force.

To observe how this works with respect to the unconventional protagonists of their films, I focus on the issue of empathy. Köhler's Bungalow epitomizes this style of open-image filmmaking, and its central figure, Paul (Lennie Burmeister), is perhaps the archetypal Berlin School protagonist. The opening scene shows his lackadical decision to leave his army unit without authorization. When the unit members climb back into their military transport after a break at a highway rest-stop, Paul simply remains at the patio table where he sits with another patron, calmly watching the trucks as they leave without him (figure 1). He then hitches a ride back to his hometown, an anonymous mid-size town somewhere in the middle of Germany. We learn nothing about why he does this, and are given virtually no indication of what he might be thinking or feeling; he simply shows up at the empty family house referenced in the film's title and moves back in as if he has no care in the world. Much of the action--or, more to the point, inaction--takes place in the small area on the patio around the bungalow's swimming pool (figure 2). The style of mise-en-scene marks it as a familiar place that the viewer inhabits casually rather than in anticipation of an event that is part of the story. As the film progresses without any compelling action, the viewer assumes the posture of simply being there on the patio with the characters and gradually abandons the idea of the bungalow being a location for a story.

The easy, free-flowing transition between interior and exterior (a prominent architectural feature of the bungalow) creates a space well
adapted to Paul's languid mental and physical bearing. As the viewer settles into the diegetic environment, the tendency is not to identify with Paul as a character. As Heiseberg says of the Berlin School style, 'the camera does not allow the viewer to identify with the characters, but it's not really distancing us from them either.' The uneventful time spent sharing the space around the house and town with Paul leads the viewer to assume his physical demeanour and bodily rhythm. As this happens, affective and motor mimicry shapes the viewer's empathetic responses to him, while any knowledge about his intent, goals or emotional state that cognitivists deem necessary for empathetic engagement with film characters remains sparse. In its place, the sense of being present in the diegetic reality of the film produces a somatic empathy with Paul and the other characters. A brief sketch of the standard cognitivist account of empathy will indicate the difficulty it would face in explaining how <i>Bungalow</i> evokes such a response in the viewer.

In Engaging Characters Murray Smith describes in detail how films evoke empathy with their characters. He works from the platform of a version of simulation theory that takes the conscious process of projecting oneself into the situation of another to be the default mode of understanding and simulating intentions and emotions. Smith draws from cognitive psychology to elaborate his version of how emotional simulation functions in film viewing. He explains that emotional simulation involves more than mere recognition or understanding of a character's emotion; instead the observer centrally imagines it, experiencing it as if in the position of the character. However, cognitivist film theory tends to downplay the distinction in simulation theory between explicit and implicit modes of comprehension. In the case of Smith, he uses the cognitive psychology concept of affective mimicry to characterize the motor responses that lead to empathy. Nonetheless, he asserts that the implicit understanding of empathy is already structured according to culturally manifested forms of emotion, such that 'both emotional simulation and affective mimicry function within the structure of sympathy'. This is no mere formal
circumscription; he maintains that embodied affective responses are corralled and subsumed by the overriding push towards context and meaning: "The structure of sympathy usually acts centripetally, "pulling in" the insights of simulation and mimicry and affording them no privilege over more cognitive assessments." 

As evidenced in Smith's account, cognitivists adhere to a Theory of Mind that is grounded in folk psychology. Their explanation of empathy deals almost exclusively with conscious emotional experience and ascribes no significant role to sensorimotor responses that occur at an embodied or pre-reflective level. Noël Carroll embraces this view explicitly with respect to emotions in his book-length study of horror movies. 

Citing the appraisal theory of emotion that was introduced in cognitive psychology in the 1960s, he contends that a first and necessary step in the arousal of emotion is an appraisal of the situation. According to this model, for pre-reflective emotional states to be notable they must lead to the decisive act of appraising the context and imagining oneself in simulated situations that make up the fictional film world. As a consequence, analysis of empathy is restricted to conscious emotional understanding. This remains the case, despite growing evidence that affective and motor responses can generate a direct understanding of emotion. Appraisal theory has expanded, since Carroll's application of it to horror films in 1990, to accommodate the increased scientific emphasis on the physiological states and responses that precede appraisal. This includes consideration of how emotions are conveyed through vocal patterns and bodily or facial expressions. Nonetheless, in the 2011 volume *Empathy: Philosophical and Psychological Perspectives*, the essays by Smith and Carroll offer theories of empathy in film viewing without discussing the pre-reflective activation of shared motor representations. Carroll includes embodied simulation when he cites the different definitions of empathy in his introduction, but does not employ it in the film analyses that follow. Smith distinguishes between *central* or *personal imagining* (in which we imagine ourselves going through the experience) and *acentral* or *imperceptual imagining* (in which we imagine what another person is experiencing), but limits his account to the complex cognitive process of perspective-taking. In short, the cognitivist model insists that the viewer must have reached a conscious understanding of the situation before emotion can play a significant role in film reception.

Direct, pre-reflective arousal of empathy thus serves only as a form of sensorimotor cueing to narrative situation and meaning. Research in cognitive neuroscience suggests alternative ways of understanding how the viewer might establish empathy with Paul. The discovery of mirror neurons in monkeys and related mirroring mechanisms in humans has shown how we can experience empathy with others automatically, without consciously having to reconstruct the person's state of mind. Research in this area suggests that we are able to understand the emotions and grasp the intentions of another directly through observation. When we observe an action or the expression of an emotion in another person, mirroring systems in the brain activate the same neural circuits...
involved in performing those actions and generate an understanding of the intentions and emotions of the other without the aid of explicit, reflective awareness. Embodied simulation mechanisms that depend on the automatic activation of shared neural circuits are now accepted by a growing number of cognitive scientists as both the evolutionary and ontogenetic systems that underpin the human capacity for empathy.  

As scientific data about human mirroring systems accumulate, the evidence suggests that these brain mechanisms not only feed our cognitive understanding and interpretation of complex events but also enable a direct mode of social cognition. Vittorio Gallesse, whose collaboration with Giacomo Rizzolatti led to the discovery and elaboration of mirror neuron systems, has argued this point forcefully. His theorization of how embodied simulation directly produces social cognition can help to clarify the stakes involved in developing a more comprehensive theory of how empathy functions in film viewing. Grounding his account in “a continuum of the evolution of social cognition,” Gallesse paints a broad picture of how mirroring mechanisms led to a multiplicity of bodily states shared with others and to a uniquely human form of intersubjectivity. “The possibility of mirroring and being mirrored from the praxis of the other,” he proposes, the necessary precondition for the evolution of the social self. He conceptualizes this mode of being-in-the-world as a ‘shared manifold’ that is innate yet also shaped by social experience. It enables social cognition and interaction with others on three levels: the subpersonal level of automatic responses, the functional level of self/other distinction, and the phenomenological level that enables mind reading. Empathy occurs at all three levels, he argues, although in most cases we do not need to explicitly attribute intention to the other. According to Gallesse’s theory, the ‘phenomenal state of “intentional attunement”’ that exists at all three levels is itself a form of social cognition. Other scientists working in this area have posited that this direct mode of understanding produces more intense empathic impulses than emotional simulation. According to their arguments, mirroring mechanisms are embedded in the limbic system, an evolutionarily anterior region of the brain, and function with only secondary intervention from cortical processes. There is, then, a more intense activation of shared emotions in embodied or somatic empathy than in cognitive empathy.” Rejecting the cognitivist view that emotional simulation, and empathy in particular, depends on Theory of Mind, Gallesse asserts: “Social cognition is not only “social metacognition” … Embodied simulation is not metarepresentational.” Following this line of reasoning, the reach of mirroring mechanisms is such that they can produce embodied social cognition: that is, an unmediated grasp of a social context that does not require conscious awareness of the situation and the various contributing factors.

In contrast to this account of mirroring systems, cognitivist film theory tends to relegate direct, embodied responses to a secondary position. Relying on a model of simulation based on mind-reading, cognitivists consider the shared emotional experience produced by mirror neurons as a
mechanical operation that is superseded once explicit awareness of the other’s mental state has been achieved. The cognitivists began to formulate their opinion of empathy in film viewing before research on the automatic activation of shared emotional experience burgeoned in the 1990s. In their more recent work, they mention these new findings, and mirror neurons in particular. However, they do so only cursorily and without reassessing their broader significance. Smith has mentioned mirror neurons ‘in passing’ in connection with his model of emotional simulation, but has not altered his explanation of how affective mimicry works in film reception. He ignores the crucial point that the primary way of understanding others is direct in nature and assigns mirroring mechanisms only an inconsequential role, stating merely that ‘the simulation of higher-order states can work from the platform of motor and affective mimicry’. This approach takes mirror neurons as just one more piece of evidence in support of a critical method restricted to conscious modes of understanding the emotions and intentions of film characters. Bordwell acknowledges this when he writes of mirror neurons: ‘It seems that we have a powerful, dedicated system moving swiftly from the perception of action to empathetic mind-reading’.

The cognitivists’ marginalization of mirror neurons would limit their ability to explain the Berlin School’s pattern of establishing direct, embodied empathy with its phlegmatic heroes. The failure to give mirroring mechanisms their full due is rooted in their adherence to Theory of Mind and its emphasis on perspective-taking as a key factor in the evolution of human cognition. In the application of this theory to cinema, narrative takes centre stage as the essential form that enables the viewer to make a cognitive appraisal of a character’s situation and thus simulate her state of mind. In particular, the cognitivists favour the classical style because of its proficiency in establishing clear situation models that enable the viewer to understand complex emotions and motivations of the characters even in the most intricately structured stories. Films made in this style cue the spectator on the potential significance of the characters’ decisions and actions by directing attention and expectations to what is to come. As the audience accumulates information about the characters’ backgrounds and psychological states of mind, explicit understanding of the emotions involved in their actions increases. In this way classical cinema facilitates the cognitive act of emotional simulation and mind-reading. In the terms of cognitivist film theory, the classical style functions to present the viewer with a well-defined situation model for relating to the feelings, desires, motives and concerns of the characters. To the extent that a film follows this basic principle, somatic empathy and embodied social cognition, as described by Galles, are largely subsumed within an already elaborated narrative. Any sense of what characters’ emotions tell us about the world we live in follow from higher-order, cortical modes of understanding the context and interpreting motivations and intentions.

Cognitivists have brought cognitive psychology to bear on film criticism in a productive fashion, but they do so almost exclusively at the level of what Galles calls ‘social metacognition’. In their theoretical scheme, emotional...
simulation requires sufficient contextualization of the gestures, speech and actions of the characters. According to Ed Tan, in order to establish cognitive empathy, the objects, events and characters in a film must be represented in a situation model, a fictional world that corresponds to real-life situations. Moreover, he adds that this situation model contains most of the information relevant for traditional narratives, such as the character’s intentions and goals. Smith goes further in tying empathy to narrative, maintaining that initially empathetic responses are tentative, acting “as a searchlight or probe in our construction of the narrative situation.” As the viewer becomes more secure in her emerging feelings towards the characters, “they function as `attuning’ the spectator to the emotional tenor of the narrative.” This scenario, “intentional attunement,” which in Galles’s explanation of mirroring gives us direct, embodied understanding of the characters’ emotions, is eclipsed by the explicit cognitive process of associating them with the narrative. Pushing the cognitiveist integration of empathy and narrative to its logical conclusion, Carl Plantinga stipulates narrative unity as the prerequisite for an effective engagement of the viewer via affect. Taking a prescriptive stance, he declares “the overarching and unifying principle of a text is its narration, and the affects in a film should be located at the level of narrative rather than in the affective experience.” In this schema no provision is made for somatic empathy or the direct social cognition that, according to Galles, is generated by automatic, prereflective modes of response both in real environments and during film viewing.

This insistence on an explicitly elaborated and cognitively grasped narrative context for conveying emotion creates a blind spot with respect to certain alternative modes of cinema, including that of the Berlin School. In films where the image’s autonomy from the narrative is an essential element of the viewing experience, the cognitivist practice of folding it back into a situational context dictated by the narrative cannot do justice to the film. If the dominant image of a film functions not in spite of a missing situation model but precisely because it has been avoided or dismantled, then assessing empathy through the lens of emotional simulation seems to disregard the primary force of the image. Such is the case with Bungalow. Köhler refuses to provide any substantial context for understanding the motivations and actions of not only his disengaged protagonist but of the other characters as well.

Köhler and his fellow Berlin School filmmakers devise other means to fill the void created by a sparsely delineated narrative and to spur affective responses that are not automatically linked to either the story or the characters’ psychology. As one of the more radical Berlin School practitioners of open-image filmmaking, Scheinert often provides only the most tenuous narrative context for an image, relying instead on direct embodied responses to what at times seems like superfluous audiovisual information. A notable instance occurs in her early feature film, Main langsam erwachen Leben/Passing Summer (2001), when the protagonist’s lover, Thomas (Andreas Patton), having just returned from Paris, meets with
business partner at a café. The two talk about an interview Thomas has conducted with an elderly, well-known photographer. In keeping with Schanelec’s usual practice of providing no supplementary information about characters or events, the viewer knows nothing of Thomas’s trip to Paris other than what is revealed in this short exchange with his colleague, who appears only in this one scene. Thomas plays for the colleague an eighteen-second excerpt from a recording of the interview to illustrate what he had reported as they walked to the café – namely, that the interview had produced nothing. In the background of the recording there is a constant chorus of what sounds like a large flock of birds. When he stops the tape, his colleague asks ‘What’s with the birds?’ Thomas, who seems not to have given them much thought, explains that they were in the trees outside the apartment window, even though he had not actually seen a single bird.

No further mention of the interview or its role in Thomas’s work is made in the film. This scene has no connection to any other, with one exception. The last shot of the film is a twenty-second stationary view of a single vertical row of apartment windows, with trees in full leaf filling the right half of the screen (figure 3). On the soundtrack we hear the same chirping of birds as on the tape. As occurs often in Berlin School films, the sound from the final scene continues as the credits roll on a blank screen. Only through the audio link to the earlier scene can the viewer gain some context for the final shot in the film, which shows the apartment building in Paris where the interview took place. By ending with this shot, Schanelec highlights the nonsignificance of the dialogue and events for the narrative and instead directs attention to the ambient sound. Berlin School filmmakers often eschew the mainstream practice of relegating audio to a supporting role in a visually constructed film narrative, preferring to direct the viewer to audio and visual signals that lie outside the normal regime of cinematic attention. In this case the image has not only gained autonomy from the narrative but has also established its aesthetic abstraction from habituated patterns of perceiving empirical reality. The effect is that the viewer becomes able to see, hear and feel with new authority.
The discussion so far has emphasized how radically Berlin School filmmakers resist the conventions and strategies of mainstream narrative; recently some have also applied the alternative techniques developed in their earlier work to films with more conventional stories and more expressly formulated plotlines. These include, among others, Schlafkrankheit/Sleeping Sickness (Ulrich Köhler, 2011), Der Räuber/The Bandit (Benjamin Heisenberg, 2010) and Gold (Thomas Arslan, 2013). This should not, however, be seen as a retreat from the open-image style of filmmaking that has defined the movement. The Berlin School aesthetic has never been at odds with narrative per se, and some of the directors have practiced it while also working with traditional forms of cinematic narrative. This approach has been taken most notably by Petzold, the most critically acclaimed of the group, who has won the Best Film award of the Association of German Film Critics five times between 2001 and 2012. While his films fit the Berlin School bill of slow cinema, they have also employed more dramatic storylines and at times addressed social and political themes more explicitly than those of the other directors; though when Petzold engages with popular forms, it is certainly not in a conventional manner. While recognizing the power of genre films to distil and capture individual moments with the intensity of a studied, proven form, he declares that such genres have been deployed, reworked and ultimately overworked, to the point that they serve now as little more than an ineffectual shell. His approach, as famously expressed in an interview with Abel, has been to ‘make films in the cemetery of genre cinema, with the remains that are still there for the taking’. Practising what he has termed an ‘archaeology’ of genre, Petzold employs the empty shell of the genre as an eviscerated form within which the individual moment—that is, the image—can stand in its own right. Whereas most Berlin School directors extract the image by deconstructing narrative in a sweeping fashion, he excavates it from longstanding generic contexts that have become too weak to hold sway over it. This enables a more intense embodied engagement with the image, because the ‘physical intensity can shine through (and partially because of) the drama of narrative’. In employing this method he relies on modes of embodied social cognition that are not tied to empathy or the emotional disposition of a character but rather encapsulate the broad themes of the movie.

Petzold uses this strategy to great effect in Yella (2007), a film that he has said was inspired by Herk Harvey's 1962 cult horror classic Carnival of Souls. In this third installment in what he has called his ghost trilogy, Petzold regularly generates in the viewer embodied social cognition that is inflected with a ghostly aura. An early sequence produces this effect in a way that reverberates throughout the rest of the film, establishing a central theme without ever addressing it explicitly or consciously. At the beginning of the film, Yella (Nina Hoss), the eastern German protagonist of the movie, leaves the former East Germany, escaping the dual failures of her marriage and a joint business venture with her now ex-husband Ben (Hinmerk Schönemann). She inexplicably allows Ben, already shown to be angry and
unstable, to give her a lift to the railway station, during which he becomes increasingly enraged and deliberately drives the car off a bridge and into the river Elbe (the former border between East and West Germany). Having apparently survived the crash, Yella then takes the train to Hanover, where she is set to start a job in the western world of venture capitalism. As she walks along a street from the station, still wet and dazed from the accident, she slows down and looks around her warily, as if overcome by a strange feeling. Eerie music and the sound of birds are heard on the soundtrack as she turns to face what has obviously stirred this uncanny feeling in her. The camera shows her looking into the courtyard of a large manor house as a wife greets her clearly wealthy husband and daughter, both emerging from a Jaguar parked in the driveway. Yella stares at the scene intently with an expression on her face that perhaps signals dread or foreboding (figure 4). After the husband and child have gone into the house, we see the woman in a subjective camera shot gazing back at Yella, a similar look of anxiety on her face (figure 5).

This scene generates a sense that something significant is happening, but the perplexed expressions of the two women suggest that it may remain simply a moment of intense apprehension that has no further function in the plot. Indeed, as Yella begins her eventful new life in Hanover, this isolated experience is left behind. It is only much later that we are reminded of it in a confusing and unsettling manner. When Yella becomes involved in a get-rich-quick scheme of her new business partner and lover, her path crosses once more with that of the family she glimpsed in Hanover. First we encounter the husband, who becomes the victim of Yella’s attempts at blackmail. The viewer may not initially recognize that it is the same man, as he appeared only briefly in the earlier scene and had not looked towards the camera. But when Yella goes to his home to pressure him, provoking his suicide, we see that his wife and child are unmistakably those from before, though they now live in a rural setting, surrounded by woods. When Yella arrives we see a replica of the earlier scene: husband and daughter coming home, getting out of the same Jaguar and going into the house, while the
wife, wearing the same elegant robe, turns and looks at Yella. Uncertainty exists on several levels. Is it the same family? If so, why had Yella encountered them by chance in Hanover? Did they move? Do they have two houses? And why did the film show them in the first scene? From the perspective of cognitivist film theory, we would conclude there is no good reason for the first scene.

The film does in the end make the connection, or at least reveals enough about what has been happening that viewers may be able to make it themselves. At the end of the film, after Yella’s foray into the capitalist world of high finance has come to a tragic end, we return abruptly to the scene on the bridge, just before the car crashed into the Elbe. This time the viewer has the necessary information to deduce that the entire string of events in the West was a dream or vision that Yella had in the few seconds before the crash. The first scene in Hanover was a psychically charged moment within this dream and was marked as such by the soundtrack, though at that point the viewer lacked enough information to understand this. It is a momentary vision that foreshadows the calamity that Yella’s business scheme will inflict on this family, and it occurs as part of the longer cautionary vision of her disastrous foray into western capitalism. The denouement makes it possible for the viewer to piece together all the elements in the plot to create a comprehensible and thematically rich story, which may be condensed as follows: apprehensive about what her life in the capitalist West might be like, Yella has a vision of how everything will play out just before the car plunges into the river, and makes the conscious decision not to try to stop the crash that will end her life.

By postponing completion of the full narrative context for Yella’s life in the West until the very end of the film, Petzold enables the viewer to experience its events more openly and gives freer rein to the affective responses that they generate. The scene discussed here provides a compelling example of how embodied simulation, when given room to operate by this form of narration, can generate direct social cognition. The
uncanny feeling expressed through Yella’s gaze at and into the domestic life of this well-to-do family reflects a whole complex of social considerations. The microcosmic glimpse of family life captured in the moment when the father returns from work mirrors all that Yella was perhaps hoping to gain through a career in western finance. This isolated visual moment contains in itself the fundamental moral question contained within Yella’s plans: do the ethical compromises required for a career in venture capitalism justify what is to be attained—a domestic and family life endowed with material wealth? It also encompasses the historical backdrop of the social systems and values that structured life in the former East Germany as opposed to life in the West, and shown that their difference continues to reverberate in a unified Germany. Although all of this can be recapitulated at a metacognitive level, as I have done here, this single moment in the film generates this complex of meaning as direct social cognition early in the film. By delaying the metacognitive explanation until the end, Petzold enables the viewer to react to Yella’s experiences in the West on the level of embodied simulation. Moreover, it is probable that in most cases the full thematic thrust of this scene, and possibly much of the action, asserts itself only as embodied cognition without the viewer being able to make the connections consciously.

As my analysis of their films has argued, the Berlin School directors seek to stir discontent and evoke a political consciousness primarily through embodied simulation and direct social cognition. This strategy can function only to the extent that the image maintains a certain autonomy from narrative and generates its effect largely through automatic responses produced by neural mirroring mechanisms. This style of filmmaking constitutes a blind spot for a cognitivist theory that depends on conscious mechanisms of emotional simulation and perspective-taking to explain how emotions and empathy work in film viewing. While cognitive psychology has been fruitfully employed by the cognitivists to explain how narrative film engages the mind, it lacks the theoretical foundation to explain how the image can produce the direct, embodied forms of cognition that are key to Berlin School films. This also raises the question of whether the theory’s grounding in evolutionary psychology limits its usefulness not only for alternative film styles that rely heavily on embodied spectatorship but also for mainstream narrative film.

As recent findings in neuroscience continue to demonstrate the expanded reach of embodied experience, cognitivist film theory finds itself under increasing pressure to accommodate new perspectives. The task of shoring up positions grounded in classical cognitivism has fallen largely to Torban Grodal, whose work is heralded by his fellow cognitivists as the missing link between their cognitive approach and newer, more comprehensive views of brain function. In *Embodied Visions*, which explains how cognitivist film theory has incorporated recent neuroscience research, Grodal offers his own account of how our brains coordinate the interactive processing of sensorimotor responses, emotions and cognition. His "PECMA flow model", originally introduced in his 1997 book *Moving Pictures*, describes...
how processing takes place in a linear fashion from lower-level modules upwards into higher-level cognitive processing and back down again and through the distinct phases of Perception—Emotion—Cognition—Motor—Action responses to an event. Describing both top-down and bottom-up directional flows through this series, he claims to provide the definitive account of how cognitivist film theory addresses embodied spectatorship. Grodal’s focus is ostensibly on embodied responses to film, but his model enables him to consider them only to the extent that they are fed by lower-level modules into higher-level cognitive processing from the bottom up, and are controlled by it from the top down. In at least two key regards his explanation contradicts the revised picture of brain function currently emerging from cognitive neuroscience. First, contrary to his description of a sequential chain of discrete neural processes for each function, recent models suggest that the mental processing of sensory data occurs as a comprehensive synchronicity among brain systems across disparate regions and diverse functionalities. Second, neuroscience studies continue to refute the idea that there are dedicated brain modules for particular sensory, affective or motor functions. Grodal’s PECMA flow model is a classic product of what Susan Hurley has famously labelled the “Classical Sandwich” model of cognition. It takes perception and action to be distinct input and output systems, with the brain processes responsible for cognitive control “sandwiched” in between them and serving central executive functions.

Despite the growing refutation of key pieces of this theory from within cognitive neuroscience, Grodal holds to the same basic positions stated out by Bordwell in 1989. Drawing on the philosophy of mind of Jerry A. Fodor, Bordwell cites two ideas from cognitive science on which cognitivist film theory is based. One is the modular conception of brain function invoked in Grodal’s PECMA flow model. The second is the idea that to be meaningful, mental activity must be representational, and that representations are determinate for actions. Both modularity and the conception of mental representations employed by Bordwell have been rejected by the findings of recent embodied cognitive science. Indeed, since the 1990s ‘Fodor’s claims about central cognition have been challenged by a wide variety of researchers’. In particular, the discovery of, and subsequent research on, mirroring mechanisms has played a significant role in countering these conceptions. Rather than adjusting their theoretical base to include these new perspectives, cognitivist film theorists remain entrenched in the classical cognitivist models they embraced in the 1980s. This is evident when Bordwell invokes the PECMA flow model in a 2009 article and asserts that “Grodal continues to explain our experience of film with the help of what we know about how brain areas are activated”. To the extent that cognitivists incorporate mirroring mechanisms, embodied simulation and other recently discovered, high-order functions of automatic mental processing into their theoretical framework, they tend to treat them merely as add-ons to the same basic account of film spectatorship that has informed their critical practice since the mid 1980s.
My investigation of what the Berlin School may have to teach us about applying cognitive neuroscience to film theory is aimed at more than just the cognitivist school that has dominated this area for the last thirty years. The lessons to be had apply to any attempt to bring cognitive science to bear on cinema studies. As neuroscience continues to play a bigger role not only in the study of film but in other areas of culture, it is important to remember that it constitutes neither a uniform body of knowledge that suggests a single model of mind nor a universally valid method whose conclusions are fixed and beyond question. As our knowledge of brain function grows, newly adapted theories and models of the mind compete for validity and recognition. A film theory based on scientific accounts of mental processing must continually grapple with these new perspectives, or face the consequences of lagging behind not only cognitive neuroscience but also new trends in filmmaking and film studies.