The Cognitive and Hermeneutic Dynamics of Complex Film Narratives
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The word ‘puzzle’ is probably derived from the Middle English word *poselet*, meaning ‘bewildered, confused’.

Marcel Danesi (2002: 27)

A colourful, multi-layered, copy-pasted composite image shows jolly couples doing the jitterbug dance. Cheering sounds replace the upbeat music, and the overexposed face of a smiling blonde woman (Naomi Watts) is superimposed on the scene. Suddenly all the fun stops. We are in a dark room and our blurry point of view, underscored by someone’s heavy breathing, slowly sinks into a red pillow ... Following the film’s credits, a violent scene unfolds: while being driven up Los Angeles’ Mulholland Drive at night, a young dark-haired woman (Laura Harring) is threatened by two men with a gun. Before they can kill her, another car crashes into their limousine, leaving the men dead and the woman in shock and suffering from amnesia. Descending into the city, she finds refuge in a vacant apartment. An aspiring blonde actress, Betty Elms (Naomi Watts), arrives at the same apartment and discovers the stranger. The confused woman calls herself ‘Rita’, although she quickly admits to Betty that she is unable to remember her real name. She can also not account for a large quantity of cash and a mysterious blue key that they find in her handbag. Plunging into the city, the two women embark on a sinister quest to find Rita’s identity and story. Through its many sub-plots that saturate the events of the search, the film dives into the shadowy abyss of LA, including an absurd film casting, a clumsy hitman, a mysterious cowboy and a terrifying dark creature behind a restaurant. First these scenes seem unrelated – excesses in Lynch’s trademark offbeat style – however they all gradually become pieces of the puzzle in Betty and Rita’s joint exploration. It turns out that Betty’s casting success is barred by the mob’s predestined choice of Camilla Rhodes (Melissa George), the hitman is actually looking for ‘the brunette’ Rita, the cowboy is connected to one Diane Selwyn about whom Rita suddenly remembers and the creature is ... well, he is most probably an utterly destitute homeless man lurking behind Winkie’s snack bar. When Betty and Rita visit Diane Selwyn’s apartment, they find only a woman’s decaying corpse, lying on the bed. The same evening, Betty and Rita sleep together and attend an eerie performance at the Club Silencio. Shaken by the powerful performance, Betty reaches for a tissue but finds a small blue box in her bag. Back home they search for Rita’s key, but before they can open the box, Betty disappears. Rita finds the key and fits it into the lock on the box, and, as the camera zooms into it, the opened box falls on the floor ... A loud knock on a door wakes up Diane Selwyn (also Naomi Watts). She is a failed and miserable wannabe actress, living in the shadow of her former lover, star Camilla Rhodes (this time Laura Harring). The urgent knock came from her neighbour, who has come over to pick up her belongings, except for a blue key that remains on Diane’s table. Living

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1 This chapter has previously been published as part of the book *Impossible Puzzle Films*, co-authored with Dr. Miklós Kiss for Edinburgh University Press (Kiss and Willemsen 2017), pp. 24-64.
alone and depressed, Diane is tormented by hallucinations of painful memories of the past, specifically about a party at Mulholland Drive where Camilla mocked her cruelly, kissing another girl (the ‘original’ Camilla Rhodes played by Melissa George) and announcing her marriage to a film director (who previously failed to cast her Betty-self). Jolting back to reality, we find Diane at Winkie’s diner getting served by a waitress called Betty (Missy Crider). She is negotiating with a shady hitman about killing Camilla. As she hands over a large quantity of cash, the hitman promises Betty that she will receive a blue key as a sign of Camilla’s death. Back at her apartment, the key is on the table; the guilt-stricken and mentally broken Diane runs to her bed, reaches for a gun and shoots herself ... An overexposed image of the smiling Betty and Rita is superimposed on the city of dreams. The soundtrack ends while a woman at the club softly whispers ‘silencio’.

If we were to attempt to illustrate the confusing effects of excessive complexity in storytelling, it would be hard to find a better (and more discussed) example than David Lynch’s *Mulholland Drive*. How to find someone’s identity in a story that repeatedly changes its characters’ names and appearances? How to tease out the film’s various strands when their exact relationship remains underdetermined, and if the events presented are cyclically repetitive, interlocked and sometimes contradictory? How (and why) should we distinguish dreams and fantasies from reality? This dissertation does not promise or aim to untangle any specific intertwined plots, nor to provide any revealing, foolproof solutions – there are more than enough analytical and interpretive attempts out there. What this study is interested in, rather, are the dazzling narrative games that such films play with us, their baffled viewers, through their subversion of the standard building blocks of narrative.

This chapter introduces an approach through which to study the *experiential effects* of formal narrative complexity. Although it does build on historical, technological, industrial-economical, media-archaeological and socio-cultural perspectives on narrative complexification, this study will not seek to address these backgrounds of the general shifts that result in *pensive* (Bellour 1987), *possessive* (Mulvey 2006), or *forensic* (Mittell 2009) modes of viewership; rather, the aim is to learn more about the psychology of viewing experiences underlying the trend of narrative complexification.

Turning the emotional and philosophical riddles of art-cinema narratives (Holland 1963) into cognitive-hermeneutic ‘mind games’ (Elsaesser 2009), contemporary complex films arguably restore the original meaning and function of puzzles. According to puzzle historian Marcel Danesi (2002), puzzles on the whole are brainteasers that resonate with the deep-seated human ‘puzzle instinct’ – a universal ‘disposition’ that is best understood as part of a general and inherent need for sense-making. If we see complex films as puzzles that problematise or test viewers’ sense- and meaning-making processes, then the (embodied-)cognitive approach, which describes human cognition as a problem-solving activity (Eysenck and Keane 2005: 1), seems to offer a particularly suitable mode to study their mental challenges. Embodied-cognitive theory aims to explain and describe the ways in which we make sense of and interact with our environment, whether with everyday real life.

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2 Among the better ones is Matthew Campora’s overview, highlighting three possible options when reading *Mulholland Drive* as ‘fragmented, subjective realist’, ‘supernatural’ or even ‘surrealist or trance film’ (Campora 2014: 78–84, 84–8, 75–8).
or with mediated fiction. Films work through a tacit dependence on viewers’ cognitive abilities and dispositions (perception, emotions, comprehension, memory), as well as on knowledge and routines that most viewers share (for example, conventions, narrative schemas, real-world knowledge). Narrative complexity, this study contends, can be understood as emerging from this relation. It is first and foremost a viewing effect – a ‘cognitive puzzlement’ that occurs when a film obstructs or suspends its viewer’s construction or comprehension of the story. The aim of this study is to understand and describe experiences of narrative complexity from this perspective: as emerging between the formal make-up of a narrative artwork and the activities of a ‘model’ viewer. Cognitive theory provides the theoretical vocabulary, models and empirical evidence to understand what processes and knowledge structures actual viewers use when making sense of narratives. This study will build on these findings, models and concepts to advance a ‘cognitive poetics’ (see, for instance, Stockwell 2002; Tsur 2008) of narrative complexity, the goal of which is to provide an insight into how formal features of an artwork are able to evoke psychological and aesthetic effects.

Contemporary cinematic complexity can be understood as a narrative instrument aiming to provide a cognitive playground. As the example of Mulholland Drive illustrates, complex films use various narrative techniques to entertain our ‘cognitive surplus’ (Shirky 2010) – from a-chronological temporalities to impossible spaces, and from unreliable and contradictory narration to convoluted metaleptic structures of stories embedded in stories. There are however also significant differences in the degrees to which these techniques are implemented in diversely complex narratives. This can range from a single, diegetically motivated technique in an otherwise classical narrative embedding (such as the black hole story logic of Interstellar) to more radical and disconcerting narrative structures (as in Mulholland Drive). How, then, might one establish any unity, or at least create conceptual clarity, across the considerable corpus of variously complex films? In this study, rather than just focusing on the various formal features of different films, we will also investigate how films use narratively complex techniques to create a range of different viewing effects. By emphasising viewers and viewing experiences, this study argues that the heart of complexity does not lie in intricate narrative structures by themselves, but in the felt experience and cognitive effect that such compositional disruptions can create.

The next three sections outline a cognitive approach to narrative complexity. First, section 1.1 introduces and elucidates the embodied-cognitive framework. Readers who are already familiar with (embodied-)cognitive theory and its contribution to study of the narrative arts can consider simply glancing over this part, or skipping directly to 1.2. There the delineated cognitive approach will be utilised to enumerate the different storytelling features of complex film narratives, and to theorise how these features work against viewers’

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3 The conceptualisation of this ‘model spectator’ aims to pursue primarily the universal and shared operations relevant to most viewers’ narrative sense-making. We thus attempt to focus here on the cognitive processes that underlie or precede individual beliefs, competences or interpretive stances. In terms of acculturation, however, we do assume a viewer who holds a worldview that is more or less in line with the scientific worldview of modern Western culture, and who is also familiar with the basic conventions of film and audiovisual storytelling (since the films that we discuss arguably also assume and address viewers educated in and familiar with mediated audiovisual environments and narratives). It should be noted that for the sake of elementariness, this model spectator is for now not gendered.
cognitive processes and routines. This section thus connects the formal and the experiential dimensions, aiming to get a grip on how various formal devices make up the ‘ingredients’ of complex narrative viewing experiences. Finally, in section 1.3, we return to the issue of ‘classifying’ different complex films (as also discussed in I.2). This section argues how a cognitive approach can help to create more clarity and precision across the somewhat muddled category of ‘complex’ films. We suggest a primarily experiential – rather than strictly formal – approach which differentiates movies with regard to their relative complexity and different viewing experiences. This ultimately also brings us to the category of what we labelled ‘impossible puzzle films’, a specific subset of contemporary complex films that offer pervasive, highly confusing experiences of complexity. These will be the focal point of Study 3.2. But first, let us begin by providing a general introduction to the cognitive approach and its embodied extension, proposing it as a suitable and advantageous framework to assess the experiences and effects of complex cinema.

1.1 Why an (embodied-)cognitive approach?

With a technical and aesthetic capacity of strong simulation, films create diegetic worlds that, in their spatial and temporal suggestion, seem analogous to our everyday reality. Cinematic realism’s illusion of reality, which manifests in near-tangible experiences, makes viewers forget that films are nothing else but rays of light and patterns of shadows (or dense digital pixels) on a flat and lifeless screen. In a similar way to music, film has no materiality, at least not on its primary level of experience. Viewers watch and hear cinematic illusions with their eyes and ears, but experience them with their bodies and minds. Films may confuse us, scare us or make us laugh. Such emotional and cognitive states are products of the combination of our own involuntary and conscious activities, facilitated by the amalgam of our universally shared, socially acquired and individually shaped experience. To put it simply, by paraphrasing the title of Joseph D. Anderson’s (1998) ground-breaking contribution to the field, the cognitive approach exchanges the traditional look at movies as illusions of reality for an attempt to come to terms with the reality of the cinematic illusion. On the other hand, films should not just be characterised as illusions, for immersed viewers do not perceive and experience them as such. In Torben Grodal’s thought-provoking words, ‘film does not possess a semblance of reality; it is not an illusion, as has been claimed by numerous film scholars and critics; on the contrary, film is part of reality’ (Grodal 2009: 10). In fact, Grodal’s ecological-evolutionary view turns inside out the traditional Coleridgean demand that characterises one’s engagement with fiction, reconsidering the long-established idea of ‘suspension of disbelief’ (Coleridge 1975 [1817]: 169) as a ‘suspension of belief’ (Grodal 2009: 154). According to this view, since our primary disposition is tied to reality perception (‘seeing is believing’), and cinema, by presenting reality-like moving images, builds on this disposition, the extra effort that viewers need to make is not suspending their disbelief, but rather suspending their belief in order to treat films as not being part of their actual reality. Hannah Chapelle Wojciehowski and Vittorio Gallese similarly claim that ‘[t]he aesthetic

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4 Of course a lot depends on how we define and conceptualise illusion. For one, Murray Smith (2011) would argue that even the most immersed viewers still remain aware (however latently) of the illusion of representation.
experience of art works [is] more than a suspension of disbelief, [and] can be thus interpreted as a sort of “liberated embodied simulation” (Wojciehowski and Gallese 2011: 17).

The cognitive approach to film attempts to deliver explanations about how viewers resonate with cinematic ‘illusions’, about how they suspend their default reality-beliefs and create meanings out of the combination of their spontaneous and conscious reactions to audiovisual stimuli. Its main scientific interest is to investigate how a viewer’s perceptual and cognitive systems facilitate comprehension and emotion during the viewing of a film. This approach is about understanding the way one experiences and understands movies, analogous to the way one engages with other aspects of the environment. The cognitive study of film aims to offer descriptive models about behaviourism’s ‘black box’ – about the functioning of the mind and other meaning-making faculties. More precisely, it focuses on how viewers’ involuntary and rational-practical problem-solving processes shape understanding and interpretation in aesthetic and mediated contexts. The approach is scientific, but not ‘scientistic’; a certain science-based rigour is part of the cognitivist method, but it should remain careful to avoid deterministic or reductionist claims. It is not in opposition to cultural and other interpretive approaches; on the contrary, it aims to provide a solid ground for such inquiries. Its bio-cultural scope is neither universalist nor cultural-relativist (Grodal 2007; Boyd 2009; Boyd et al. 2010). A bio-cultural approach acknowledges both influences of nature (given embodied and cognitive properties) and nurture (learned skills and developmental adaptations). It stresses both common evolved understandings and our human ability to refine understanding through our evolved capacity to share so much via culture (Boyd 2009: 253). Moreover, when applied to film studies, the results of any naturalistic, evidence-based inquiries also need to be evaluated and interpreted in light of traditional film-scholarly concepts and expertise. The cognitive-based approach to film can thus be summarised as a science-based mode of observing, describing and interpreting how the relation between artworks and viewers’ ‘works’.

Through its in-depth study of midrange problems, the ‘piecemeal theory’ of the cognitive approach (Carroll 1988) initiated a general shift of investigative focus within film studies: it directed interest towards viewer activity, while moving away from an exclusive focus on the material aspects of works of art as well as from the ‘sweeping’ hermeneutic programmes of cultural studies and speculative social-constructivist views that characterised the dominant theoretical tradition of film studies in the 1970s and 1980s. Despite its ambition of changing analytical gears, its mode of inquiry is not a full changeover of approaches but a mere extension of methods. Cognitive approaches advocate a naturalistic, rational and sometimes empirical study of both the perceptual and the hermeneutic activities of viewers. In describing the novelty of the approach, David Bordwell uses the label naturalistic to ‘signal the effort to draw on evidence and research frameworks developed in domains of social science: psychology, but also linguistics, anthropology, and neuroscience’ (Bordwell 2013: 47). In a rather energetic effort to distinguish the cognitive perspective from the previous theoretical tradition, Gregory Currie identifies the approach as a rational one. For him ‘rationalism names a movement which values argument and analysis over dogma and

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5 ‘Rational’ should not be misread as ‘conscious’, as the cognitive approach is of course equally interested in the unconscious and cognitively impenetrable aspects of the meaning-making process.
A Cognitive Approach to Contemporary Complex Cinema

rhetoric’ (Currie 2004: 170). As for being empirical, in the introduction of their Cognitive Media Theory anthology, Ted Nannicelli and Paul Taberham importantly note that ‘the method by which cognitivists typically analyse and critique hypotheses is not empirical testing, but rather “testing” against experiential evidence – in particular, our intuitions – as well as logical reflection’ (2014: 16). Indeed, a cognitive inquiry, even when ultimately geared towards empirical verification, does not always have to be an empirical study itself. Cognitive studies can be (and frequently are) theoretical, as theories and models are first needed to provide the basis for further experiential or experimental verification. This study too is not an empirical study itself, but in its analytical method and scholarly attitude, it does aim to be in compliance with the above views, drawing on and applying findings from cognitive sciences to conceptualise the processes of viewers’ engagement with narrative artworks in a rational and partially naturalistic manner.

Although it is not incompatible with formalist and structuralist investigation, the cognitive approach also changes the primary, object-oriented question of the formal-structural mode of study from its ‘What is it made of?’ to the more viewer-oriented ‘How does it work?’. While formal and structural analyses describe fixed and objective structures in film texts, the cognitive mode takes a step back and also considers the flexible and transient mental processes that precede and enable formal-narrative viewing and analysis in the first place.

The revised inquiry of the cognitive perspective has consequences not only for the mode of study, but as noted, also for the definition of the objects studied. Concerning our primary interest in narrative complexity, the change in scholarly approach has an effect on the way one looks at both ‘narrativity’ and ‘complexity’. Starting off from the former, in Edward Branigan’s cognitively versed explanation, narrative can refer both to the result of storytelling or comprehension and to the process of perception and construction (Branigan 1992: 3). This view of narrative as a cognitive process, rather than an object property, has risen to prominence in the study of narrative since the 1980s in particular. In the words of Branigan, we can consider ‘narrative’ a way of perceiving: ‘an attitude we adopt when confronted by something that is a representation of something else’ (ibid.: 3), and a cognitive strategy for ‘organizing spatial and temporal data into a cause-effect chain of events with a beginning, middle, and end’ (ibid.: 3). As Nitzan Ben Shaul summarises,

[t]he cognitive psychological approach maintains that popular narrative films engage viewers because they invite them to witness and experience as satisfying a process akin to that of knowledge construction. Carroll [1985], for example, suggests that beyond the relative ease with which we understand film sounds and images, the narrative spatial and temporal organization of audiovisual stimuli into a cause-effect chain leading to closure appeals to us, because it caters to our cognitive perceptual mode of making the world intelligible through a question-answer process. In his view, narrative films are particularly appealing because, unlike real-life situations, these movies use framing, composition, and editing to raise clear questions and provide upon closure full answers to all of the questions raised, a process that hardly gets satisfied in real life. (Ben Shaul 2012: 20)
If we follow this understanding, then complex film narratives appear as audiovisual stimuli that pose a challenge to this default viewer activity of moulding experiences and information into an intelligible form. Complex films hinder viewers in their routine of constructing a coherent and determinate causal chain of events (as one is likely to experience when watching *Mulholland Drive*). Hence, when we suggest defining complexity as a felt experience, we mean a confusion that follows when a story seems to block or problematise (in whatever way) our mental construction of it, or at least demands from us significantly more cognitive effort than usual to make sense of it. Moreover, as we will see, this reception-oriented reconceptualisation allows us to establish some conceptual clarity among different types of complex films.

The embodied extension of the cognitive approach has become one of the most significant additions of the ‘second generation’ (Lakoff and Johnson 1999) of cognitive sciences. By challenging early computational and disembodied views of first-generation cognitivism, the embodied approach acknowledged and scrutinised the human body’s and the lived environment’s formative role in cognition. In essence, the current generation of cognitive sciences thus asserts that our minds are embodied, and that our bodies are situated. Let us first explain what these claims mean in general and, consequently, what they entail for a cognitive approach to film and narrative specifically.

Firstly, our brain is embodied in the sense that cognition depends upon experiences of a body with specific physiological characteristics and sensorimotor capacities. Differences in bodies and sensorimotor capacities result in different perceptual systems, which ultimately lead to different cognitions. As Warren Buckland aptly summarises Thomas A. Sebeok’s (1994) theory of the biosemiotic self: ‘[d]ue to the variation in the biological make-up of each species, it is plausible to argue that different species live in different sensory worlds’ (Buckland 2003a: 95). In embodied cognition, proprioception describes one’s feeling and understanding of one’s own specific, bodily determined existence, allowing for grasping basic spatial relations (like ‘back-front’, ‘centre-periphery’, ‘part-whole’, ‘inside-outside’ and so on). Second-generation approaches have drawn links between what they called these basic ‘embodied image schemata’ and the formation of higher-order abstract concepts in human language and thinking. As Mark Johnson notes, basic ‘image-schematic structures of meaning … can be transformed, extended, and elaborated into domains of meaning that are not strictly tied to the body’ (Johnson 1987: 44–5). As we will soon see, this claim also holds relevance with regard to narrative.

Our embodied brain is also fundamentally situated; as we do not live in a vacuum, our surrounding space is vital to cognition, assigning reason and meaning to our proprioceptive awareness in terms of our personal dimensions, movements and possible actions. The term ‘exteroception’ refers to one’s awareness of one’s own environmental situatedness, which is a bodily understanding of the actual environment’s physical limitations, allowing for understanding elementary spatial affordances (such as ‘up-down’, ‘links’, ‘paths’, ‘forces’ and so on). This exteroceptive extension of the embodied mind has given rise to an understanding of cognition as ‘enacted’ (Thompson 2010: 13–15) through a mind fundamentally embedded in an environment that offers concrete affordances and stimuli.

According to Vittorio Gallese and Michele Guerra, there are ‘at least three types of
embodiment related to cinema: i) film style as embodiment; ii) acting style as embodiment; iii) viewer’s responses to filmed bodies and objects as embodiment’ (Gallese and Guerra 2012: 206 – emphasis added). Beyond the more plausible and well-researched bodily resonance with acting agents that results in simulated identification with fictional characters, there are also less apparent, often pre-conscious engagements through which one can make embodied contact with cinematic stimuli. In a contribution to Maarten Coëgnarts and Peter Kravanja’s anthology on the cinematic impact of the embodied cognition thesis (Coëgnarts and Kravanja 2015a), Miklós Kiss (2015) has added a fourth type to the possible co-operations: by exposing the relation between narrative form and embodied cognition, we have been specifically interested in answering Richard Menary’s vital question of ‘how the thoughts, feelings, and perceptions of the minimal embodied and ecologically embedded self give rise to narratives’ (Menary 2008: 75). This argument is based on the so-called image schemas, on the kind of bodily rooted dynamic patterns that internally organise our experience and on their influential role in the initiation and maintenance of narrative schemas, as formal gestalts through which one gains comprehensive access to different forms of (film) narratives.

Continuous motoric and bodily interactions with the environment result in a certain regularity within one’s perception. Such recurring world-explorations assemble into predictable patterns, even at an early age, and thus create a sense of coherence and structure. Habitualised bodily interactions reinforce this sense of coherence and structure, and give rise to clustered knowledge frameworks of mental schemas. By building on available (originally rather disembodied and propositional) psychological theories of schemas (Bartlett 1932; Rumelhart 1975), frames (Minsky 1975) and scripts (Schank and Abelson 1977), cognitive linguist George Lakoff and philosopher Mark Johnson have coined the term kinaesthetic image schemas (Lakoff 1987: 271–5), or simply image schemas (Johnson 1990 [1987]). Following Johnson’s (1990: 23) guideline, this study uses the terms schema, embodied schema, image schema and kinaesthetic image schema interchangeably. Propricioptive (the feelings of one’s own body) and exteroceptive (the kinetic affordances that the body allows in the physical environment) explorations mentally solidify as CONTAINER, SOURCE-PATH-GOAL, LINK, FORCE, BALANCE, UP-DOWN, FRONT-BACK, PART-WHOLE and CENTRE-PERIPHERY image schema constructions. In the bodily determined human mind, these skeletal structures function as top-down governing filters for one’s perception, and as primary organisational frames for comprehension.

Additionally, invoking Johnson’s renowned phrasing, ‘image-schematic structures of meaning … can be transformed, extended, and elaborated into domains of meaning that are not strictly tied to the body’ (Johnson 1990: 44–5). This study contends that the same holds with regard to narrative. By this, we mean that elementary embodied image schemas are blended (Fauconnier and Turner 2002), bined (Lakoff and Johnson 2003) or transfigured

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6 The theory of viewers’ bodily resonance with onscreen characters is based on the neuroscientific evidence for a particular class of ‘mirror’ neurons (first discovered in the pre-motor cortex of the macaque monkey). ‘Mirror neurons are premotor neurons that fire both when an action is executed and when it is observed being performed by someone else (Gallese et al. 1996; Rizzolatti et al. 1996) … The same motor neuron that fires when the monkey grasps a peanut is also activated when the monkey observes another individual performing the same action’ (Gallese 2009: 520). In essence: ‘[a]ction observation causes in the observer the automatic activation of the same neural mechanism triggered by action execution’ (ibid.: 520).
(Spolsky 2007) into narrative schemas. As a next step, these narrative schemas may turn into higher-order, conventional story schemas, such as those described by Algirdas Julien Greimas’s Proppian *canonical narrative schema* (1966), Jean Mandler’s *story schema* (1984), Jerome Bruner’s notion of *narrative structures* (1987) or Edward Branigan’s understanding of *narrative schemas* as recurring arrangements of knowledge in films (1992: 1–32). The following sketch (Figure 1.1), borrowed from a previous discussion of the process (Kiss 2015: 54), outlines the hierarchy between elementary formal schemas and higher-order story schemas, as well as the development from the former to the latter.

![Figure 1.1](image-url)

**Figure 1.1**

How can this embodied extension of cognitive theory be a useful approach in describing the effects of complex film narratives? If one’s comprehension of various narrative forms and stimuli is based on a top-down governance of bodily rooted image schemas, then narrative complexity can be understood as a hindrance of this nexus. A strategic, formal-structural complexification can problematise one’s reliance on image schemas as primary organisational frames. If ‘*an image schema is a recurring dynamic pattern of our perceptual interactions and motor programs that gives coherence and structure to our experience*’ (Johnson 1990: xiv), then formally and structurally complex film narratives threaten this coherence by thwarting viewers’ ingrained dependence on these deep-seated schemas. Radically complex story structures may not only interfere with our use of higher-order, memorised and conventionalised story schemas (level 3 in Figure 1.1), but can also problematise our reliance on more fundamental narrative building blocks (level 2) and habitualised patterns of elementary bodily experiences (level 1) on which these narrative schemas are modelled by origin. In this sense, narrative complexification can be achieved through, for example, formal or diegetic over-complication (testing our PART-WHOLE schema through shattered plot structures), in ontological ambiguation (challenging the CONTAINER schema by metaleptic structures transgressing the boundaries of stories within stories) or through narrative strategies that dismante chronology or disrupt causality (which

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7 For a detailed description of the correspondence between image schemas and narrative schemas, see Kiss 2015.
problematise our reliance on the SOURCE-PATH-GOAL schema, such as in non-linear or forking-path stories. Intensely embedded and metaleptic stories, like Christopher Nolan’s Inception, can intensify and actually play with one’s reliance on their CONTAINER schema (in determining what happens inside one narrative level and outside of another, or the ways in which they are embedded), while confusingly warped causality, like in Christopher Smith’s endlessly looping Triangle, may challenge the governing value of our SOURCE-PATH-GOAL schema (see also Kiss 2012; Kiss 2013; Kiss & Willemsen 2017: 98-103).

In sum, in light of the theoretical insights of cognitive approaches, we will argue that complex films are best defined as varyingly difficult cinematic experiences. Different types of films can complicate the reliance on different cognitive faculties and skills. If protocognitivist film philosopher and psychologist Hugo Münsterberg was right in claiming that the cinematic ‘photoplay’ is ‘designed to facilitate the exercise of our faculties’ (Bordwell 2009: 357), then complex film narratives not only facilitate such exercises, but push them to their limits. Complex films’ overt and salient formal-structural experimentations can be easily studied (and subsequently classified) as variations of playful textual constructions; yet in order to fully appreciate their core function, we need to understand and describe the puzzling effects they exert on the experiences of engaged and active viewers. The embodied-cognitive approach does not only examine the processes underlying viewers’ experience of puzzlement, but can also explain the coping and rationalising mechanisms by which viewers tolerate and handle such psychological confusion. This is particularly pertinent, as complex movies’ perplexing mediated strategies play (and prey) precisely on perceptual capabilities and embodied-cognitive processing habits that viewers utilise in their general real-life meaning-making exploration, as well as on acquired and conventionalised interpretive viewing competences they pick up through their media socialisation. These embodied-cognitive and acculturated dimensions are not in opposition, but exist on a continuum which allows for their interaction, as human experience is fundamentally shaped by the higher-order cognitive patterns through which we engage with the world.

This view thus acknowledges that there are variable degrees of ‘competence’ in viewers: individual viewers possess various degrees of acculturation as well as different cognitive capacities to deal with a given story’s complexity. As a result, fixed and ‘objective’ boundaries of complexity cannot be set: after all, whereas one viewer may experience a film to be highly complex, another might have the interpretive tools, literacy and experience to swiftly make meaning of the story. However, such variations of handling the experience do not imply that one cannot make useful generalisations as to how different storytelling experimentations can seek to challenge viewers’ sense-making. Focusing on the latter, the various categories that we propose below aim at corresponding to the various degrees to which contemporary complex films undermine traditional narrative film viewing and comprehension.

The embodied-cognitive inquiry is advantageous not only in revealing the processes behind the viewing of complex films, but (as a consequence) also in reassessing the findings of more traditional formalist-structuralist analyses. In the following two sections, we invoke the
embodied-cognitive method in order to catalogue different types of ‘general’ complexifying strategies that films use, and provide alternative, reconceptualised categories that will emerge by sorting out the different cognitive effects of various complexities. Thus, in the next section we move on to our cognitively informed approach to complexity, where complexity’s measure is its effect on viewers’ narrative sense- and meaning-making processes, which will lead us to a reassessment of complex cinema’s traditional categorisations in section 1.3.

1.2 Various Forms of Complexity and Their Effects on Sense-Making

For a simple but clear conception of viewers’ meaning-making processes, we can follow David Bordwell’s four-tier definition of cinematic meanings. In his book Making Meaning, Bordwell (1991: 8–9) distinguishes four types of meaning: referential meanings stand for viewers’ spatio-temporal world-constructions; explicit meanings are directly expressed ‘points’ of the story (Bordwell’s example is Dorothy’s famous line ‘there is no place like home’ at the end of Victor Fleming’s 1939 The Wizard of Oz); implicit meanings can be associated with ‘themes’ or ‘issues’ that can be construed by viewers’ indirect or symbolic readings (the book’s example is Hitchcock’s Psycho, in which one of the implicit meanings could be that ‘sanity and madness cannot be easily distinguished’ (1991: 9)); and finally, repressed or symptomatic meanings are assigned by the viewer to the film beyond those that are supposed to be intended and expressed referentially, explicitly and/or implicitly (‘Psycho as a worked-over version of a fantasy of Hitchcock’s’ (ibid.: 9)). While in traditional mainstream cinema’s classical narration referential and explicit meanings tend to be concrete and unambiguous, and hence part of viewers’ basic comprehension, implicit, and most of all symptomatic meanings are less exact or universally shared and thus prone to interpretive differences. These latter types of meanings are most sensitive to the specific individual and socio-cultural background and horizon of interpretations that a given viewer brings in. It is then easy to agree with Brad Chisholm’s conclusion, according to which viewers, in general, ‘will largely agree about the referential meanings, will agree less about the explicit meanings, and so on’ (Chisholm 1991: 395). However, he goes on to argue that ‘[i]n difficult texts … merely grasping the preferred referential meaning can be a struggle’ (ibid.: 395). Chisholm’s lucid reasoning further highlights the ambition of most of the contemporary puzzle films: these films often hinder meaning-making already on the lower, explicit and referential levels, while the function of Norman N. Holland’s puzzling art movies is to provide ambiguities on the higher, implicit and symptomatic, levels of meaning. We will come back to this idea in Study 3, when we examine this distinction between contemporary complex and modernist art-cinema puzzles more closely.

As for playing with viewers’ comprehension efforts already on the lower, explicit and referential levels of meaning, the following typology is an inventory of different formal strategies that are in use to create narrative complexity in contemporary cinema. To provide a backbone for our further investigation, we connect these to corresponding cognitive operations. As noted, we will understand ‘complexity’ as a reception effect that follows from a viewer’s (temporary or ongoing) inability to coherently integrate the narrative information into a causal, chronologic and determinate structure of events and other explicit and referential meanings.
1.2.1 Problematising narrative linearity

First (and, in terms of prominence in narrative experimentation, perhaps also foremost), films may play with temporal structures to suspend or problematise narrative linearity. Whether occurring through a dismantling of chronology or a disruption of causality, such strategies will often require a heightened concentration from viewers, as well as retrospective reading and mental reorganisation to overcome their cognitive puzzlement.

_Dismantled chronology_ concerns the arrangements of plot events in a non-chronological order. Whether deceptively integrated in the narration or more explicitly marked, this strategy calls for a conscious temporal rearrangement on behalf of the viewer. Manipulations of the time structure force viewers to piece together the film’s narrative – as happens, for example, when viewing the seemingly randomly shuffled plot segments of Tarantino’s *Pulp Fiction*. Of course, achronological story presentation is widely used in mainstream cinema, and will remain relatively unproblematic most of the time. After all, techniques like flashbacks and flash forwards feature regularly in classical narrative plots, where their temporal disruptions do not endanger viewers’ cognitive and hermeneutic work; on the contrary, when clearly signposted, they may even support their efforts. After all, in classical narratives, chronology is often subordinated to narrative logic; what should be shown first for the sake of the story trumps the chronological order of events. The ‘right order of time’ is subservient to the ‘right order of events’. As Mieke Bal puts it, ‘[p]laying with sequential ordering is not just a literary convention; it is also a means of drawing attention to certain things, to emphasise, to bring about aesthetic or psychological effects’ (Bal 1997 [1985]: 82). Ecological cognitivist Joseph D. Anderson underlines Bal’s hunch about achronology’s psychological effect:

> If presenting material out of order makes it more difficult to recall, then why do we do it? Why are stories not always told in chronological order? The reason is, of course, that in some cases stories may create a more dramatic effect, greater emotional impact if rearranged. (Anderson 1998: 149 – emphasis added)

These effects range from the most minor and elementary plot manipulations, giving rise to basic changes in viewing attitudes – described by Meir Sternberg (1992) as _curiosity_, _surprise_, and _suspense_ – to more complex narrative experiences. As much as flashbacks (and, less frequently, flash forwards) are common and unproblematic chronological manipulations, more radical dismantlings of the sequential order of events might have serious consequences on the narrative and aesthetic, as well as on the emotional experience. While _Memento_’s inverse chronology, for instance, is motivated as providing viewer-identification with the film’s anterograde amnesiac protagonist, thus exemplifying the heightened dramatic effect of the achronological narrative, the inversion in Gaspar Noé’s _Irréversible_ (*Irreversible*, 2002), reversing the temporal order between the film’s emotionally loaded scenes, causes greater emotional impact (as seeing a happy couple’s terrible future in advance puts their joyful relationship in a completely different emotional perspective).

More radical forms of non-linear temporality, however, can also distance the film experience from its viewer’s everyday, ecologically grounded, real-life perception. While the _duration_ of time might be a subjective and relative experience, temporal _direction_ is
universally perceived as a more or less straight and continuous flow on a linear timeline (although, on a more abstract, higher-order scale, cultural conceptions of time can of course also be cyclical or layered). As Torben Grodal points out, ‘linearity is not a product of Western metaphysics but it is based on fundamental features of the world, action and consciousness. An experiential flow – unless totally unfocused – is a linear process in time’ (Grodal 2009: 145). Temporal direction is a universal experience because it is based on humans’ proprioceptive bodily existence and exteroceptive engagement with the surrounding environment. It relies on basic bodily rooted image schemas such as the SOURCE-PATH-GOAL schema (when moving from a source, through a path, to a goal), by which we tend to map plots as linear, chronological experiential paths with a certain continuity and teleology (from the beginning, through a middle, to an end). Whereas realism and its classical mimetic narration in film offers scenarios that imitate temporal linearity and thus maintain fundamental schemas of temporal progression and action, extreme achronology disrupts viewers’ universal reliance on these intrinsic schemas, and heavily problematises such temporal ordering to hinder habitual comprehensive routines.

**Disruption** – or at least loosening the close adjacency – of causality in story logic is often a consequence of a non-linear chronology (as is the case, for example, in *Memento*). To reconstruct chronological and causal relations, viewers need an intensified reliance on basic cognitive competences such as recollection from memory and mental narrative rearrangement. Non-linearity’s challenge to memory plays on the relation between story structure and causal comprehension. As Anderson, paraphrasing Jean M. Mandler (1984: 47), remarks,

> experimental research indicates, in fact, that as material is presented out of sequential order and one is asked to hold events or ideas in memory for longer periods of time before they are resolved or connected to other events or ideas, one’s capacity for recall suffers. (Anderson 1998: 149)

Mental rearrangement is an important problem-solving skill in real-world cognition too, associated with spatial reasoning, cognitive mapping and situation-model updating (for example, Morrow et al. 1989; Zwaan and Madden 2004; Radvansky and Zacks 2011). An appropriation of such real-world competences to viewers’ temporal and causal rearranging abilities in mediated experience results in ‘mental narrative rearranging skills’, which can be described as a mental reorganisation of chunks of story particles (scenes and sequences) on a chronological timeline or causal chain, involving such complex (mnemonic and creative) cognitive tasks as retroactive revision, mental rotation, displacement and restructuring.\(^8\)

However, disrupted causality can also be the primary strategy to create non-linear narrative experiences in itself, as is exemplified by more experimental ‘multiple-plot’ films like Kar-wai Wong’s 1994 *Chung Hing sam lam* (*Chungking Express*) or Tom Tykwer and the Wachowski brothers’ 2012 *Cloud Atlas*. Causality is, after all, mostly a matter of

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\(^8\) On the application of cognitive mapping, situation models and mental rotation to literary and film narratives see, among others, Björnson 1981; Ghislati 2009; Kiss 2013; and Coegnärts et al. 2016 (regarding the relation between real-life skills of orientation and navigation, and cinematic comprehension, section 6.2 will also provide more details).
inference-making; establishing causal connection between events is paramount to narrativity. Stories that leave uncertainty or ambiguity over causal connections between events may thus problematise viewers’ narrative construction on a fundamental level, leaving them wondering, or attempting to infer, how the presented events might be connected. While Wong’s film ‘links’ its disjointed plots through mere spatial contiguity, Cloud Atlas exchanges the traditional event-driven causality of a single story for a narrative unity created through thematic coherence and character continuity among multiple stories. As we will see in Study 3, loosening causality on the level of plot has been one of the key strategies of complexification in the tradition of art cinema (see also Bordwell 1979).

1.2.2 Complicating narrative structures and ontologies

Somewhat similar to these techniques, which break the linearity of chronological and causal order, there are other strategies that can subvert one’s smooth experience of narrative progression. Modular forking paths (parallel presentation of two or more separated events splitting from a single ‘forking point’), multiple drafts (subsequent presentation of two or more outcomes from a single forking point) or a multiplicity of embedded plotlines may go far in complicating narrative structure. Obfuscating the clarity of their intricate narrative organisations, films with complex story structures might reach beyond viewers’ comprehensive accommodation range. While early modular forking-path films like Peter Howitt’s 1998 Sliding Doors or trendsetter multiple-draft narratives such as Tom Tykwer’s 1998 Lola rennt (Run Lola Run) only carefully experimented with the option and did not really endanger comprehension (see also Bordwell 2002a), contemporary complex versions of these narrative structures became more convoluted, and therefore more cognitively demanding – see, for example, Jaco van Dormael’s 2009 Mr. Nobody or Doug Liman’s 2014 Edge of Tomorrow, representing both the more alternative and the mainstream end of the (post-)classical spectrum.

As for embedded plotlines, the hierarchical separation between ‘telling’ and ‘told’ is as old as the act of storytelling itself. An intensified play with the contained logic of embedded plotlines, however, can cause unique and perplexingly intricate structures featuring complex, many-layered hypodiegetic levels of stories within stories (Figure 1.2).9 Examples can span from more signposted and sequentially embedded (and thus cognitively more manageable) structures, like John Brahm’s 1946 flashback within a flashback within a flashback The Locket, to less consistently nested (and hence confusingly subtle) variations, such as Nolan’s The Prestige.

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9 The analytical distinction between embedded narrative levels comes from Gérard Genette (1980 [1972]). However, the term ‘hypodiegetic’ was coined by Mieke Bal (1977: 24, 59–85) and was meant to replace Genette’s confusingly loaded term of ‘metadiegetic’.

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Moving on from strategies that relate to storytelling to complexities that can be located on the level of the storyworld (that is, in the told), the disruption of a singular ontological reality in narrative fiction forms another strategy by which films can complicate viewers’ sense-making. Some films present multiple – interrelated, parallel or contradictory – worlds as different parts of their fictional universe. Building on Janet H. Murray’s (1997) seminal work, Matthew Campora highlights the ontological multiplicity of multiform narratives as a mode of narrative complexity, which is different from the complications of multi-strand narratives in storytelling (2014: 27–8). The parallel or conflicting realities of multi-layered, multiform possible worlds require the viewer to keep track with two or more simultaneously existing diegetic universes. Such worlds put viewers’ comprehension routines to the test, not only by pushing the degree of their required working memory use, but also by challenging their habitual worldview, as parallel and malleable reality-scenarios corrupt one of our deepest ontological experiences – the notion of our shared reality’s ontological singularity and spatial and chronological rigidity.

Time-travel stories often play with possibilities of alternative and altering universes. Focusing on their time travellers’ subjective linear experiences, however, most of the time such fictions do not present storyworlds that actually co-exist. While traditional time-travel films – like Don Taylor’s 1980 The Final Countdown or Robert Zemeckis’s Back to the Future trilogy (1985; 1989; 1990) – remain within a narrative logic of linearity (and, in case of the latter, only pose a challenging paradox to the viewer by way of a cunning title), complex multi-layered ‘slipstream’ fictions – such as John Maybury’s 2005 The Jacket, Tony Scott’s 2006 Deja Vu, Duncan Jones’s 2011 Source Code or Nolan’s 2014 Interstellar – present multiple simultaneously existing (often incompatible) worlds within a single diegetic universe. The latter category provides a potentially more confusing experience, taxing both their viewers’ mnemonic capacities and fundamental ontological notions about possible worlds.¹⁰ Furthermore, beyond intensified versions of traditional flashbacks or flash

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¹⁰ ‘Slipstream fiction’, a term coined by Bruce Sterling in his text for the fanzine SF Eye (1989), is more than magic realism, fantasy or science fiction. It is actually not a genre, but rather an effect triggered by our confrontation with a subtle disruption of a singular ontology. According to Warren Buckland, ‘[t]he key to
forwards’ temporal disintegration, *flash sideways* represent an alternative strategy that combines temporal complexification with a diegetic disruption of viewers’ default ontological notions of a single actual reality. The final, sixth, season of J. J. Abrams et al.’s television series *Lost* (2004–10) introduced such a narrative technique, presenting events as both alternative and co-existing, thereby suggesting two simultaneous timelines that not only run parallel, but also – through characters’ mysterious sensations and other déjà vu-like experiences – subtly seep into each other.

**Metalepsis** is a special case that combines the last two categories of *complicated narrative structures* and *disrupted singular ontological reality* (and through that potentially accumulates the cognitive effects that characterises these). Metalepsis was defined by Gérard Genette as a contamination between embedded narrative levels; or in his words ‘any intrusion by the extradiegetic narrator or narratee into the diegetic universe (or by diegetic characters into a metadiegetic universe, etc.), or the inverse’ (1980: 234–5). One common metaleptic strategy, for instance, occurs when fictional readers or authors (who usually belong to distinct ontological levels) show up in their read or authored fictional storyworld (for the first option see, for example, Cortázar’s short story *Continuity of Parks*, briefly discussed in introduction of Kiss and Willemsen 2017: 1-3). Two distinct types of such level-contaminations must be discerned. As Marie-Laure Ryan has noted, drawing from the work of John Pier, there are the unintended, covertly ‘unnatural’ level-contaminations that are ‘rhetorical metalepses’ and there are deliberate, overtly playful transgressions that are ‘ontological metalepses’ (Ryan 2006a: 247); ‘the one based primarily in the (rhetorical) effects produced by representation through discourse or other semiotic means, the other in the problems of logical paradox encountered by modern science’ (Pier 2011, section 11). Whereas the former relates mostly to an effect in the discourse of a literary narrator, the latter is an effect of the storyworld and can be found in several contemporary complex films (see also Kiss 2012: 36). Therefore, in this book, when we speak of metalepsis, we will be referring to the second, *ontological* kind.

Complex films, like Spike Jonze’s 2002 *Adaptation* or Marc Forster’s 2006 *Stranger Than Fiction*, feature ontological metalepses (like writers appearing in their stories; or characters appearing to their writers), and, by entangling the levels of the telling and the told, often run into a kind of logical paradox. In the cases of *Adaptation* and *Stranger Than Fiction*, for example, metalepsis happens by employing characters that are both a writer or character and a protagonist of the very same story, which they create themselves, and which is the story that the viewer, in turn, actually witnesses. Presenting puzzling transgressions between conventionally isolated levels, metalepses conflate viewers’ real-life categories, but also challenge ingrained experiential models. Metalepses specifically exploit viewers’ reliance on their bodily determined CONTAINER schema – the inside and outside logic that emerges as an awareness of the build-up of their bodies, and regulates the boundary between the subordinated narrative layers in fiction (that is, determining what happens ‘inside’ or ‘outside’ a framed story). This elementary logic is challenged by metaleptic effects as a complexifying technique that upsets these boundaries.
Nolan’s *Inception* represents a peculiar example within the specific case of metalepsis, as it adapts the narrative idea of level-contamination to its storyworld’s diegetic logic. The film actually does not offer a ‘proper’ example of metalepsis, because the transgressions between its levels are neither ontological nor rhetorical, but rather a motivated part of the fictional storyworld. *Inception* presents a fantastic world in which people can transgress the private thresholds of each other’s dreams – a storyworld logic that in fact fictionalises the storytelling logic of metalepsis by embedding dreams within dreams.\(^1\) This does not mean, however, that his film is not challenging; on the contrary, one could even argue that it is precisely *Inception*’s vague delineation of the nature of its illusory metalepsis that causes the film’s ultimate ambiguity. More specifically, what can frustrate viewers’ meaning-making efforts is the difficulty in overviewing the story-related consequences of how the film diegetises a narrative idea of metalepsis. Altogether, *Inception* is a prime example of an ‘unconventionally conventional’ (Bordwell 2012) case of ‘mainstream complexity’ (Kiss 2012), maintaining a calculated balance between challenging but cognitively manageable intricacies.

### 1.2.3 Understimulation and cognitive overload

Diegetic narrative under- and overstimulation can also lead to a variety of puzzling viewing experiences.

Diegetic *understimulation*, on the one hand, is less of a concern for us here, as this storytelling strategy appears mostly in art-cinema narration, and does not lead to the same kind of cognitively complex experience on which we focus. In art films, the main function of understimulating or underdetermined narration is usually to divert the viewers’ attention away from the minimal action that these films present and towards the psychological or philosophical registers that underlie the narrative. A quintessential example is Chantal Akerman’s 1975 *Jeanne Dielman, 23, quai du Commerce, 1080 Bruxelles* (*Jeanne Dielman, 23 Commerce Quay, 1080 Brussels*). For over three hours, Akerman’s film presents only a minimal amount of plot, and within that plot even omits the few key narrative moments. Instead, the film focuses on long stretches of ‘temps mort’, offering a moment-by-moment and often real-time examination of the life of a single mother and housewife in Brussels, without explicitly determining the salience or point of this narrative approach. Such diegetic understimulation is obviously not the same as the disorienting or deceptively constrained knowledge distribution of unreliable narratives: understimulation does not disorient or mislead viewers, but revokes access to essential story elements and provides an alternative to the traditional narrative experience that is driven by a dense cause-and-effect logic. For example, through slow action or obscured causality, narrative understimulation provides viewers with a different, more perceptual or attentional challenge than the kind of cognitive problem-solving type that characterises contemporary mainstream complex cinema. On this note, we have to disagree with William Brown’s conclusion, according to which Nolan’s *Inception* would be ‘less complex’ than Abbas Kiarostami’s 2003 *Five Dedicated to Ozu*

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\(^1\) Such extreme reciprocity between storytelling mode and represented story logic is a recurring drive behind Nolan’s cinema. See, for example, his *Memento*, where the narrative inversion is motivated by the protagonist’s anterograde amnesia, or *The Prestige*, where magicians’ double-crossing rivalry gets mirrored in the film’s unreliable and twist-laden storytelling.
(Brown 2014). Beyond the fact that Brown’s approach (as well as his somewhat fuzzy definition of complexity, borrowed from physics and mathematics) does not help in comparing the differently complex experiences that Nolan’s and Kiarostami’s cinema evoke, the main problem with his argument is that it mistakes elementary narrative comprehension for perceptual and interpretive domains: it confuses the cognitive effort of narrative comprehension (that is, the construction of referential and explicit narrative meaning) with the variety and richness of simple or complex perceptual and interpretive responses to these films (also involving more implicit and symptomatic meanings), and in conclusion labels *Inception* as a ‘simple’ and *Five* as a ‘complex’ film. One can of course argue for such a difference, but then the type of ‘complexity’ being discussed should be clearly distinguished (for example, narrative, interpretive, emotional or perceptual – even though these domains can of course be interconnected).

On the other hand, other movies, from Howard Hawks’s famously entangled 1946 film noir *The Big Sleep*12 to the gleefully overcomplicated psychedelic neo-noir plot of Paul Thomas Anderson’s 2014 *Inherent Vice*, have challenged viewers’ comprehension through cognitive overload. Such ‘overstimulating’ stories bombard viewers with too many events, too many plotlines, too many characters or too many relations between characters, and can thereby seriously challenge comprehension.13 The genres of film noir and neo-noir seem particularly prone to this strategy. In his *Screening Modernism*, András Bálint Kovács argues that one of the specificities of the film noir genre is that it has a transitional role between classical and modern art-cinema narration: ‘it breaks up classical narrative logic while maintaining classical narrative structures’ (Kovács 2007: 246). While modernist art-cinema narration challenges classical logic by decreasing its narratives’ causes and effects, (neo-)noir does practically the same from the other extreme, overcomplicating classical cinema’s dominant causality – think, for instance, of the intricate storylines in a script like Roman Polanski’s 1974 *Chinatown*. Notwithstanding the abundance of examples, diegetic overstimulation is not limited to the noir genre, and can be found throughout platforms and genres. Through, for example, constantly opening up and extending plot trajectories – as in Mark Frost and David Lynch’s 1990–1 television series *Twin Peaks* – or by endlessly complicating and exceedingly obscuring the web of character relationships – as is the case in Tomas Alfredson’s 2011 *Tinker Tailor Soldier Spy* or Stephen Gaghan’s 2005 ‘hyperlink movie’ *Syriana* – overstimulation offers extreme information load in the form of ‘overabundance of facts’ (Chisholm 1991: 392), resulting in a compl(exif)ication mode that

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12 In his book dedicated to the film, David Thomson recalls the curious case when ‘at some moment amid the mayhem of *The Big Sleep*, more to make conversation than in search for meaning, Bogart asked who had done one of the killings in the story. No one had the answer, not Hawks nor Jules Furthman, his favoured “on-set” writer. So they asked [screenplay writers] William Faulkner and Leigh Brackett – no dice. Then they called [Raymond] Chandler [the author of the novel] (never far from the production), and he didn’t know either’ (Thomson 2010: 34).

13 As D.E. Berlyne argues, a high or dense amount of stimuli is prone to create conflicts in cognition, even in aesthetic, artistic contexts. ‘We may suppose’, he notes, ‘that a complex stimulus field will create conflict among the divergent receptor-adjusting and attentive processes that its various units instigate. And in general the more numerous and the more dissimilar the units are, the greater the resulting conflict among the various kinds of response tendencies, overt and internal, associated with them, since they will not only be mutually incompatible and thus competitive, but also threaten to overstep the nervous system’s limited information-processing capacity’ (Berlyne 1971: 150).
can put viewers’ comprehension abilities to the test. Such ‘detail overload’ (ibid.: 392) can take up most of our available cognitive resources, as it calls for heightened attention and intensifies reliance on both short-term (or working) memory and long-term memory work.

Diegetic overstimulation is a technique that can encourage second (or more) viewings. As much as additional viewing may increase comprehension, however, excessive detail overload can also be the intended effect of a particular film that does not need to be tackled by multiple concentrated viewing. This can be the case with many art-cinema narratives, some classical film noirs (for instance, according to Roger Ebert, *The Big Sleep* ‘is about the process of a criminal investigation, not its results’ (Ebert 1997)) and some threshold (post-)classical cases like David Fincher’s 2007 *Zodiac*, Anderson’s *Inherent Vice* or Gaghan’s *Syriana*. The latter, depicting the extremely complex (read ‘deeply corrupt’) case of oil-driven politics in the Middle East through an exceedingly entangled plot, refuses to offer simplified explications; on the contrary, in order to represent the misty intricacies of the global oil business, the film deliberately keeps its intertwined plot knotted. As a result, Gaghan does not only represent complexity, but also creates an experience of it. As Roger Ebert concluded,

> [t]he movie’s plot is so complex we’re not really supposed to follow it, we’re supposed to be surrounded by it … I liked the way I experienced the film: I couldn’t explain the story, but I never felt lost in it. I understood who, what, when, where and why, but not how they connected. (Ebert 2005)

Pondering the question of how to represent, cope with and, ultimately, explain multi-faceted issues of our complex world, Ien Ang has pleaded for a kind of ‘cultural intelligence’ that could aim at ‘sophisticated and sustainable responses to the world’s complex problems’ (Ang 2011: 779). If we agree with her on the point that an apt way of representing complexity needs to avoid simplistic solutions that are ‘unsustainable or counter-productive’ (ibid.: 779), then Gaghan’s diegetic overstimulation can be seen as one good example of how to turn abstract ideas like ‘complexity’ into an uncompromisingly complex cinematic representations and experiences.

### 1.2.4 Contradictions and unreliabilities

**Contradictions** in a story often form logical insolubilia or paradoxes. For philosopher Nicholas Rescher, a paradox ‘arises when a set of individually plausible propositions is collectively inconsistent’ (Rescher 2001: 6 – emphasis added). Logical contradictions

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14 As for the case of *Inherent Vice*, this recognition points to a next logical question: ‘Should Critics See Films More Than Once?’ (Gilbey 2015).

15 Roger Ebert called *Syriana* a hyperlink movie: ‘[t]he term describes movies in which the characters inhabit separate stories, but we gradually discover how those in one story are connected to those in another’ (Ebert 2005).

16 In her book about novel strategies in resolving paradoxes, Margaret Cuonzo offers an exhaustive overview of different definitions, according to which there are ‘three ways of defining paradox, namely as (1) a set of inconsistent statements, in which each statement seems true (Rescher 2001), (2) an argument with seemingly good assumptions, seemingly fine reasoning, but an obviously false conclusion (Mackie 1973), and (3) an unacceptable conclusion derived from seemingly good premises using seemingly good reasoning (Sainsbury 2009)’ (Cuonzo 2014: 17).
between ‘individually plausible but collectively inconsistent’ story elements can thus result in paradoxical scenarios, evoking a dissonance that can block viewers’ narrative construal (as it is the case with slipstream fiction’s effect – see above). Logical contradictions and strong incongruities in narratives can entail confronting reflections for viewers by giving rise to dissonant cognitions that ask for a resolution of the conflict. They can block the habitual ease of viewers’ inferential reasoning, and may consequentially lead to a deautomatisation of narrative experience. Paradoxical contradictions and incongruities in narrative fiction can also heighten the amount of cognitive labour required: paradoxes prompt viewers to revisit their gathered knowledge and, by re-evaluating the individual plausibility of mutually inconsistent propositions, to revise their primary hypotheses. For a more elaborate discussion of the cognitive effects of incongruities and logical contradictions in – and related techniques such as *denarration* (Richardson 2001: 168) or *unprojection* (Ghosal 2015) – see Kiss & Willemsen 2017, pp. 71-86.

Finally, *unreliability* – as a narratorial discourse strategy (Shen 2013) that plays with the veracity of the presented information or that cleverly ambiguates potential readings of the same story – can also be a source of complex story experiences. Although there are different ways to achieve unreliability, or, more precisely, there are different methods to make one consider a narrative as unreliable, it must be noted that not all of these techniques lead to complex – that is, cognitively challenging – viewing experiences. Two primary strategies of unreliability can be discerned. These are, first, providing an objective but restrictive (in terms of the narrative’s *communicativeness*, see Bordwell 1985: 59) view on the events of the storyworld; or, second, offering seemingly highly communicative (apparently undiminished) access that is later revoked as having been a *concealed-subjective, falsified or distorted view* on the diegetic events.\(^{17}\)

As for the first case, through cleverly controlled information distribution, movies like Jean-Pierre Melville’s 1962 *Le doulos* or M. Night Shyamalan’s 1999 *The Sixth Sense* aim to put viewers on a wrong track. By presenting only restricted fragments of their storyworlds’ objective reality, these films do not ‘lie’ to their viewers, but encourage them to set out on misguided inferences and draw erroneous conclusions from the presented information. Their challenge to meaning-making, if there is one at all, is often momentary and retroactive, concentrated in the moment of recognising the misguidance – the ‘twist’.\(^{18}\)

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\(^{17}\) A third type of unreliability could be added here, namely unreliability concerning morals or ethics. This can occur when a narrating or focalising character misrepresents, distorts or justifies events or acts that the viewer would, from a different (or more objective) perspective, consider morally reprehensible. As Jan Alber has noted, ‘it makes sense to discriminate between cinematic forms of *normative* unreliability on the one hand, and, cinematic forms of *factual* unreliability on the other (see also Laass 2008: 30–2). In both cases, we are invited to see that the character-narrator’s norms differ significantly from the norms of the film, and our hypotheses about intentions and motivations obviously play a crucial role’ (Alber 2010: 172). Since the potential confusion that normative unreliability causes is usually of a moral-evaluative or normative kind (rather than being related to narrative comprehension), its discussion falls outside of the scope of our book.

\(^{18}\) Covertly restricted information distribution in storytelling is always a question of degree; and as such one could wonder whether all narrative movies are partly unreliable, or perhaps none of them are at all, as playing games with the viewer through toying with the strings of communicativeness is just an intensified and highly strategic version of a traditional, elliptic mode of storytelling. Again, a cognitive take on unreliability, which considers the effects of narrative misguidance, will provide a more precise understanding of this storytelling strategy (see the next subsection).
On the other hand, next to such restricted communicativeness, highly communicative narration can also host unreliability. Films like Alfred Hitchcock’s 1950 *Stage Fright* or Ron Howard’s 2001 *A Beautiful Mind* obscure the differences between their narrative’s diegetic reality and their narrator’s subjective – disguised as objective – reality. Such unreliability often hides behind ‘subjectivity’; that is, these films often cue viewers to take the represented as an objective access to the diegetic world, which will later be revealed as only a subjective reality – a lie, fantasy or hallucination originating from one of the focalising characters’ point of view. Throughout film history, subjective realist narration has been a rather popular storytelling strategy to deliberately blur epistemological boundaries by ‘disrupting the voyeuristic transparency of the classical style’ (Campora 2014: 9). While subjective realism in art-cinema narration is an overt strategy that plays openly against objective and realistic representation (Bordwell 1979), in (post-)classical cinema it also takes the form of covert manipulation that regulates – and mostly maintains – viewers’ false beliefs about the objectivity and thus the reliability of the presented information. By playing with the ‘voyeuristic transparency,’ and ambigating the border between subjective and objective representation, contemporary complex films may not only confuse viewers with regard to figuring out what is real and reliable and what is not, but can also work on a meta-level, reflecting on the functionality of such boundaries in narrative manipulation and comprehension (see also Panek 2006) (Figure 1.3).

**Figure 1.3**

As hinted at already, these narrative strategies do not necessarily always challenge viewers’ meaning-making processes; they sometimes only mislead them. While cognitively challenging and disorienting unreliabilities often result in rationally incoherent and logically inconsistent scenarios (think about the puzzling effect of incoherencies in Lynch’s *Mulholland Drive*, or the subtle but significant inconsistencies of Leonard’s memories in Nolan’s *Memento*), deceptive unreliability’s concealing strategies exactly avoid such confrontation with viewers’ habitual comprehensive logic (examples go back as early as Robert Wiene’s insane narrator in his 1920 *Das Cabinet des Dr. Caligari* (*The Cabinet of Dr. Caligari*) or to the lying flashback in Hitchcock’s *Stage Fright*). In the next section we come back to these categories when further detailing and exemplifying the crucial distinction between disorienting and deceptive unreliabilities, and relating their different aims, practices and effects to our cognitively informed concept of complexity.
In conclusion to this section, it must be noted that the strategies discerned above do not function as isolated modes of narrative manipulation. Intensely complex experiences happen exactly when these narrative tactics are combined, allowing their cognitive effects to accumulate. For instance, the combination of the disruption of unalterable reality with a diegetic achronology can result in somewhat logical yet highly complex scenarios, rendering viewers’ coherent and causal meaning-making efforts practically impossible (as happens, for example, in Jack Heller’s 2011 Enter Nowhere, in which viewers most likely face difficulties in fully grasping the plot, which presents three protagonists’ dreams as flash-forwards of their not-yet-lived futures). As an all-out version of such an amalgamation, Lynch’s Mulholland Drive simultaneously features subjective unreliability, multiple ontological levels, contradictory and paradoxical elements, a non-linear progression and an overstimulating amount of information. The result is an experience that, undoubtedly, most movie viewers will label as complex. The strategies discerned above should thus be seen as the ‘ingredients’ that make up variously complex narrative experiences.

1.3 A Cognitive approach to classifying complexity
With the above taxonomy and cognitive approach in mind, we can reassess complex cinema’s traditional categorisations. Our reconceptualisation can help to bring more specificity to often used, but generally under-defined labels like ‘complex’ or ‘puzzle’ films. First of all, it may be helpful to detach the term ‘puzzle film’ from its historical specificity (which could restrain the term to either modernist or contemporary trends). In the following we will use it to label the general overarching category of (post-)classical complex cinema, mainly because the cognitive consequences of narrative experimentations appear mostly as ‘puzzles’ to be deciphered. Within this main category of complex puzzle films, it is necessary to distinguish between two types of complex cinema. On the one hand (1.3.2), there are films that hinder viewers’ narrative sense-making in some way, but which ultimately also offer (or at least allow the viewer to infer) satisfying resolutions to their temporarily ‘puzzling’ scenarios. We will call these disorienting but solvable puzzle films. On the other hand (1.3.3), there are films that do not grant such a way out, but rather evoke confusing effects more pervasively throughout their narration. We will call such permanently confusing movies impossible puzzle films (by which we do not mean that viewers cannot formulate interpretive solutions to these stories’ ‘impossibilities’). However, before introducing this twofold classification, we first need to address a problematic category in the traditional taxonomy of complexity, namely the case of the deceptive unreliable film (1.3.1). The chart in Figure 1.4 might be helpful in keeping track of these categories and their relation to the cognitively defined concept of cinematic complexity.
1.3.1 Deceptive unreliability and the twist film

As part of unpacking the differences between our main categories of (1.3.2) complex but decipherable and (1.3.3) impossible and pervasive puzzles, and in order to make our definitions perfectly clear, let us start with a perhaps somewhat surprising claim. If we define narrative complexity by its potential to evoke temporary or enduring cognitive puzzlement in the viewer, then many of the traditional unreliable ‘twist’ movies – which normally occupy a prominent place in exemplifying the trend – should not be considered as part of the category of complex cinema. In one of the first studies that addressed the ‘difficult viewing’ experiences of complex narratives, Chisholm equally notes that

[m]ysteries and narratives that trick viewers in the manner of Stage Fright (Hitchcock, 1950) or House of Cards (Mamet, 1987) might seem models of difficulty, but they are not inherently so … [M]ost narratives that deceive viewers are designed to be readily understood in such a way that the eventual revelation of the deception will come as a complete surprise. (Chisholm 1991: 391)

Deceptive unreliable films, like Bryan Singer’s 1995 The Usual Suspects, M. Night Shyamalan’s 1999 The Sixth Sense or Ron Howard’s 2001 A Beautiful Mind, do not really complexify the viewing experience. On the contrary, as the prototype of this kind of cinema, Hitchcock’s Stage Fright, proved as early as in 1950, a smooth distribution of misleading information is actually a prerequisite for the operability of these films’ unreliability. Chisholm argues for something similar when he states that the primary function of these films lies not in problematising the viewer’s comprehension of a story, but in providing a temporarily deceived understanding, an unreliability which misinforms one’s narrative comprehension up to the point when new information – the surprising ‘twist’ – offers a new hypothesis by which previous knowledge needs to be re-evaluated. Edward Branigan, who has called these films ‘flip puzzles’, writes similarly about a ‘flipping’ moment of recognition as a realisation of ‘how enormous successions of small mistakes in judgments lead to fundamental miscalculations’ (Branigan 2014: 248).
Daniel Barratt’s (2009) article, ironically one of the highlights in Buckland's first *Puzzle Films* anthology, concentrates on the deceptive strategy of unreliability in *The Sixth Sense*. Barratt’s main question is: ‘How does Shyamalan make the first-time viewer “blind” to his film’s narrative twist?’ To sum up the film’s story and narrative idea: the unreliability operates by presenting a forking point (Dr Malcolm Crowe (Bruce Willis) gets shot by a patient), from where the film highlights a likely option (he survives the gunshot and keeps practising as a child psychologist) and hides this option’s alternative (the gunshot is fatal, the doctor dies and walks around as a ghost). The film’s deceptive narration encourages the viewer to go for the first option; it is only upon its twist that the narration reveals that the latter option is in fact the actual diegetic reality, exposing how the film is actually a supernatural story. It is important to realise that even though throughout its narrative development the film maintains its deceptive unreliability by offering ‘clues at two levels’ (Currie 1995: 25); these two contradictory levels never confront each other (the doctor never appears alive and dead at the same time). Establishing a ‘surprise gap’ (Sternberg 1978: 245) – which is the wide story-territory between the forking point and the revealing twist – deceptive unreliable films elicit a surprising effect, but not a perceived ambiguity or sensed puzzlement. Rather, in order to maximise the effect of the surprise, the primary strategy of such films is to keep their inherent ambiguity hidden. Consequently, there is no confusion in the ‘online’ viewing experience besides the single moment *during* the twist, when viewers are invited to switch between the two outcomes. Because up to the moment of the twist, misled ‘viewers do not even know that there is some relevant thing they do not know’ (Klecker 2013: 131), no one is supposed to have doubts about the reliability of the first option. Likewise, after the revealing twist, few people will have difficulty accepting the new alternative scenario.

According to Cornelia Klecker, Shyamalan’s film, together with films like Fincher’s *Fight Club*, make up a ‘small genre’ of mind-tricking narratives. Contrary to our view, Klecker claims that these films form a subtype within contemporary complex cinema. She argues that the narrative techniques of mind-tricking films ‘deliberately play with the viewers’ experiences, responses, and expectations during the viewing of a film and feature an utterly surprising outcome in the end’ (Klecker 2013: 121 – emphasis added). Even though we tend to agree with Klecker’s dissatisfaction with the vagueness of Buckland’s complexity definition, the indiscriminate list of puzzle films and the category’s misty description (ibid.: 128 – see also our discussion in section I.2), we see a similar risk in her concept too. If the experience of mind-tricking plot-twist films is smooth, and the viewer’s meaning-making practice remains unhindered, then why should one categorise them under the general label of complex cinema in the first place? Again, one has to wonder what the substantial criteria of ‘complexity’ are. Is it about formal-structural experimentation, and about (co)vert playfulness and surprising narrative punches? Or is complexity, as we aim to suggest, measured by films’ capacity to evoke confusing sensations and to hinder straightforward comprehension? Although both *Fight Club* and *The Sixth Sense* undeniably pull off a brilliant plot twist (Ryan 2009)), we would argue that their overall viewing processes, as well as their moments of sudden, anagnoristic revelation, are ultimately experienced unproblematically. They are in any case not comparable to the steady narrative and mental confusion that films like, for example, *The Prestige* or *Primer* evoke and maintain throughout their entire plots. Returning
to our emphasis in Klecker’s definition, we agree that mind-tricking (that is, deceptively unreliable) plot-twist films do play with viewers’ hypotheses and expectations during their unfolding misleading strategy, but, since they do so in a totally unmarked and covert manner (viewers are not aware that these films are playing games with them), we do not think that deceptive unreliable films like *Stage Fright*, *Fight Club* or *The Sixth Sense* genuinely challenge viewers’ sense-making processes. That is, they do not challenge the ‘online’ process of making sense of the narrative *during* the viewing, and therefore, in our cognitive definition, do not provide any complex, let alone confusing, experience beyond the surprise effect.

One could argue that the magnitude of the revealing turning point’s effect in deceptive unreliable twist films might reach beyond a momentary psychological confusion. According to this claim, movies like *Fight Club* or *The Sixth Sense* may be considered complex insofar as their twists – by introducing a new causality to their plots – call for a complete retroactive rearrangement from memory that requires reasonably high cognitive effort. Adopting Sternberg’s term, one could say that mind-tricking films represent ‘an extreme case of a surprise gap’ (Klecker 2013: 131). In Klecker’s view, such extremity distinguishes mind-tricking cinema from similar strategies in more classical narratives. After the instantaneous punch of the revealing twist in *The Sixth Sense*, one needs to revisit one’s memories about the details of the entire story and reinterpret previous clues and hidden possibilities in accordance with the just-revealed truth. As Erlend Lavik lucidly argues,

> *The Sixth Sense*’s fabula is certainly coherent up to the turning point, but with the introduction of the twist it is liable to break down, and it is not easy to immediately piece together a new one where everything adds up. There is simply too much previous syuzhet information that appears to contradict what we are now being asked to accept. (Lavik 2006: 55–6)

Relating this retrospective – or re-reconstructing (Klecker 2013: 139) – puzzlement to the definition we provide for the experience of complexity could, as a matter of fact, be a reasonable assertion. Gregory Currie (1995), for instance, sees a direct proportionality between the amount of interpretive re-evaluation (between the misleading and true versions of an unreliable story) on the one hand, and the degree of experienced complexity on the other. Accordingly, he claims that the greater the surprise in the surprise gap, the more complex the experience.

True as these objections may be, we are not convinced by their implications, as these claims lead to linking film narratives with very different experiential qualities. Although ‘the filling in of the surprise gap is likely to cause an intense shock’ (Klecker 2013: 131), this shock, we believe, is of a very temporary nature. Usually, the new information will make immediate sense and lead to an instantly comprehensible new coherence among the narrative events. The narration often also instantly reinforces the acceptance of the new resolution by briefly revisiting earlier key moments in light of the new knowledge (as happens in *The Sixth Sense* through the flashbacks after Dr Malcolm’s final realisation). This sudden psychological effect of a shock offers, in our view, a rather dissimilar viewing experience compared to the more enduring hindrances of problem-solving cognition.
A Cognitive Approach to Contemporary Complex Cinema

All in all, if one determines complexity by its impeding effect on viewers’ cognition and meaning-making, then it becomes apparent why one needs to distinguish between different types of narrative (created by a variety of formal narrative strategies). We believe that the effect of covert and momentary disorientation through deceptive knowledge distribution in traditional twist films (1.3.1) is dissimilar to the effect of overt and lengthy – and by that temporarily or permanently disorienting – complexification in complex puzzle (1.3.2), and impossible puzzle films (1.3.3).

1.3.2 Disorienting but solvable puzzle films
While deceptive unreliable plot-twist movies do not pose any problem to comprehension during their misleading narrative actions, disorienting complex narratives do problematise – and, in our view, truly complicate – the viewing experience by taking their audience through lasting moments of puzzlement. Therefore, disorienting but solvable puzzle films do not only purposefully delay, but also deliberately muddle meaning-making efforts throughout parts of their unfolding experience, and consequently do belong to the cognitively defined class of complex cinema. These films strategically hinder viewers’ rational meaning-making efforts through a variety of techniques - suspending or problematising narrative linearity and causality, complicating narrative structures, disrupting their diegeses’ singular and unalterable reality, employing perplexing metalepses, providing under- and overstimulation of diegetic scenarios, presenting conflicting logical contradictions or disorienting unreliabilities - in order to complexify the experience. Disorienting puzzle films present lasting moments and situations of puzzlement by establishing and maintaining ‘curiosity gaps’ (Sternberg 1978: 244–5) throughout the viewing process. Curiosity gaps, in contrast to the camouflaged surprise gaps, are overt and therefore invite the viewer to bridge their clearly presented mysteries and other perplexing disturbances through continuously generating hypotheses. However, being puzzles with solutions, at the end of their perplexing ride these disorienting puzzle films will often close their curiosity gaps (in the form of a twist or other, less powerful, resolution), or will at least provide sufficient clues to allow the generated confusion to be resolved.

Many of the disorienting puzzle narratives elicit temporary confusion by obscuring their storyworld’s reality status through an unmarked blending of the film’s objective realm and its characters’ subjective realities. These focalised stories of psychologically fallible and sometimes morally dubious protagonists – for instance, the disturbed Jacob (Tim Robbins) in Adrian Lyne’s unreliable Jacob’s Ladder, the inventively hallucinating Henry Letham (Ryan Gosling) in Marc Forster’s Stay or the troubled Su-Mi (Su-jeong Lim) in Jee-woon Kim’s staggeringly intricate A Tale of Two Sisters – can disorient viewers by confronting them with conflicting truths, paradoxical scenarios and other apparent narrative impossibilities during the viewing. As the viewer’s access into these films’ diegetic worlds is restricted by an untrustworthy character’s mind’s eye, the resulting focalised reality is often distorted to a great extent. Prior to a certain moment in the narrative development, the viewer of these films will usually encounter difficulties in making coherent sense of the presented world. Up to that ‘flipping’ point, the contradictions and other strange and unnatural elements in the narrative ask for conscious inferences and hypotheses from the disoriented viewer – like inferring a fallible narrator, or assuming an incoherent or illogically organised storyworld (more on such
strategies will follow in Study 2) – anything, in fact, that can help the viewer come to terms with the experienced oddities and incomprehensibilities. Often, as for example in Kim’s *A Tale of Two Sisters* or Brad Anderson’s 2004 *The Machinist*, the mentally unstable focaliser ultimately breaks down under the psychological weight of the presented lie, or collapses due to the intolerable repercussions of an illness. As the character’s subjective reality crumbles, the process culminates in apparently nonsensical, inconsistent or irrational scenarios that ultimately debunk the representation’s subjective nature.

Lyne’s, Forster’s, Kim’s and Anderson’s mentioned films all provide a perfect inside-out version of the aforementioned category of misleadingly unreliable deceptive plot-twist narratives: the main function of their twists is not to deliver a surprising revelation, but mainly to fix an otherwise irrational and incoherent story into which the plot got gradually tangled up by presenting a subjective realist view of some untrustworthy, hallucinating, mad or simply fallible character. In these films, in contrast to Singer’s or Shyamalan’s deceptive unreliability, the narrative twist is not a sudden switch between two plausible scenarios, but a revealing moment that closes the film’s curiosity gap, restores rationality and coherence, and discloses the focalising character’s irrational story as the result of a mental breakdown, hallucination, lie or dream. If, following Aristotle’s traditional definition, complication ‘extends from the beginning of the action to the part which marks the turning-point’ (Aristotle 1902: 65), then the primary role of the resolution in deceptive unreliable plot-twist narratives is to *surprise* the viewer about the misleading truthfulness of the narration. For disorienting complex stories, on the other hand, the resolution’s function is to *unravel* the untenable confusion that followed from the narrative’s disorienting action.

In order to maintain the category of ‘mind-tricking films’, Cornelia Klecker downplays the dissimilarity between the above cognitive effects – that is, between those triggered by ‘surprise gaps’ and those that are formed through ‘curiosity gaps’. Moreover, instead of disclosing the distinctive impacts that surprise and curiosity gaps evoke, she introduces Meir Sternberg’s third possibility of ‘mixed gaps’ (Sternberg 1978: 244), and presents Nolan’s *The Prestige* as a film that combines deceptive and disorienting strategies. Although we agree that such a combination can be accountable for eliciting a highly perplexing experience, we would also argue that in such combinations it is not the surprising shock of a revealed deception, but rather the narrative’s continuous and overtly disorienting design that maintains viewers’ puzzlement and curiosity. Therefore, we would identify this puzzlement as the key ingredient of the narrative’s complexity.

We would like to stress that disorienting unreliability is just one of many complexifying techniques, which should not be given the privileged status it has often received in previous conceptualisations of cinematic narrative complexity. Technically, it does not matter which formal-structural strategy and experiential path leads to viewers’ cognitive puzzlement. Once again, what we aim to explore in this study is the general experience of temporary or pervasive confusion: in many cases unreliability results from this: as a viewer inference, attributing unreliability is one a way of dealing with perceived complexity (rather than a device that actually creates complexity). Moreover, there are plenty

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19 On the different narrative strategies, textual and audiovisual markers, and experiential outcomes regarding untrustworthy, mad, fallible and other unreliable characters see, among others, Yacobi 1981; Currie 1995 and 2004 (Chapter 7); Nünning 1997 and 2005; Olson 2003; Hansen 2007; and Barratt 2009.
of disorienting but solvable puzzles that provide cognitively challenging experiences without employing any of the storytelling strategies connected to unreliability. In many complex narratives there are no curiosity gaps that could be closed by a revealing twist, or that would otherwise be exposed as a misleading or subjective realist scenario. These films’ playfulness is not about a misleading or lying narrative communicativeness; instead, their appeal is based on a deliberate, consistent and narratively motivated complex story logic. *Inception*’s multiple-embedded narrative structure, for instance, or the subtly interwoven hierarchy among the six stories of *Cloud Atlas*, are not part of any unreliable agenda, but examples of complex forms and structures that are motivated by the stories and storyworld concepts they envelop: while *Inception*’s hypo-hypo-….diegetic Russian doll structure is motivated as a narrative rendition of the film’s fantastic option of descending into characters’ embedded dreams, *Cloud Atlas*’s highly entangled but delicately connected plot trajectories give rise to the film’s ambitious overarching concept concerning the cyclical nature of life (the ‘universal and everlasting kindness, through which we are all connected, and which ripples across ages, genders and centuries”).

Looking beyond the above examples, a next logical question is whether are any kind of puzzle or complex (post-)classical narrative films that evoke serious forms of confusion in the viewer, but do not provide a resolution through any kind of gap-closing conclusion. Movies that set up a puzzle without providing diegetic closure or other clear motivational solutions have commonly been considered to be examples of art-cinema narration. Art-cinema, according to András Bálint Kovács, has used two major strategies to compensate for its lack of solutions: ‘[w]hat makes a modern investigation film different from a classical one is the lack of focus on finding the solution to the initial problem. This occurs either because no solution exists, or because other equally or more important problems arise’ (Kovács 2007: 99). Kovács’s examples are films like Bernardo Bertolucci’s 1962 *La commare secca* (*The Grim Reaper*) and Michelangelo Antonioni’s 1960 *L’Avventura*. However, one the central claims of our book (Kiss and Willemsen 2017) has been that next to art cinema and its deliberately open-ended ‘solutions’, there is also another set of (post-)classical films that do plant, play with and ultimately refuse to fully close complicated curiosity gaps. These films, through their complex stories and storytelling modes, frustrate referential and explicit meaning attributions without explicitly providing any reassuring resolution. In the next section we introduce this distinct sub-category and argue for its complexity as operating somewhere between art-cinema and classical narrative modes.

### 1.3.3 Impossible puzzle films

Our approach, which defines and evaluates narrative complexity through its capacity to evoke variously demanding cognitive effects, marks out another option beyond disorienting but decipherable puzzles. Even though we agree with Bordwell, Staiger and Thompson’s claim that ‘if temporality and causality did not cooperate … the spectator could not construct a coherent story out of the narration’ (Bordwell et al. 1985: 44), we do not think that this stipulation is an exclusive rule for all manifestations of (post-)classical, even ‘mainstream’ modes of narration. Complex narratives that do deny coherent story-construction – and thereby create lengthy or even permanent confusion through seemingly irresolvable puzzles –
can form a distinct class of films within the (post-)classical narrative paradigm. This group of films – and the argument for their distinct category of viewing experiences – are the primary focus of our book (Kiss and Willemsen 2017). Impossible puzzle films are movies that never fully close their curiosity gaps, but still aim to sustain viewers’ narrative interest. Although these films deliberately maintain a constant sense of narrative disorientation, they still keep viewers hooked and encourage their attempts at making sense of the puzzling scenarios. Examples include Michael Walker’s Chasing Sleep, Emmanuel Carrère’s La moustache, Lynch’s ‘Los Angeles trilogy’ of Lost Highway, Mulholland Drive and Inland Empire, Richard Kelly’s Donnie Darko, Csaba Bollók’s Miraq, Shane Carruth’s Primer, Duncan Jones’s Source Code, Jack Heller’s Enter Nowhere, Denis Villeneuve’s Enemy, Quentin Dupieux’s Reality, Christopher Smith’s Triangle, Nacho Vigalondo’s Timecrimes, Isti Madarász’s Loop, Thomas Jane’s Dark Country, Michael and Peter Spierig’s Predestination and James Ward Byrkit’s Coherence.

In our choice of this particular term, we followed Edward Branigan’s (2014) classification, applying his ‘impossible puzzle’ label to cinema that seems to occupy a specific niche within contemporary complex films. Branigan’s term provides an instantly clear idea about the topic of our book, as well as an interesting starting point for a definition. “[I]mpossible” puzzles,’ Branigan notes, are picture puzzles and films that ‘appear perfectly correct but whose largest perspectival representation proves impossible’ (ibid.: 234). In his choice of examples, Branigan apparently does not distinguish between (post-)classical and art-cinematic modes of narration: he includes David Lynch’s Lost Highway and Inland Empire, Emmanuel Carrère’s La moustache, but also Carlos Reygadas’s Post Tenebras Lux or Alain Resnais’s Last Year at Marienbad. In our discussion, however, we will argue for the significance of such a distinction as part of our attempt to define the specificity of the impossible puzzle film category (see also Study 3).20

Impossible puzzle films tend to evoke enduring states of confusion, ensured by their persistent ambiguities, paradoxes, irreducible uncertainties, counterintuitive events, character multiplications or other features of complex storytelling. Impossible puzzles differ from other disorienting but resolvable complicating cinematic puzzles in terms of their genuine breach with the ‘cooperation of causality and chronology’, which – although experimented with and played upon in many contemporary complex films – still characterises classical and post-classical cinema (as Bordwell also maintains). Returning to our earlier example, if

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20 Specifying his definition of impossible puzzles, Branigan further argues, ‘this type [of picture puzzles and cinema] includes puzzles in which the parts are impossible, but new possibilities emerge in the whole’ (Branigan 2014: 234). In this respect, impossible puzzle films seem to comply with the criteria that complex systems theory postulates on a complex experience, which is beyond mere complication. While a simple system (and a simple film narrative) offers a close and transparent relation among its constituting (story) elements, the complication of such a system creates distanced but still lucid connections. However, complex systems (and, accordingly, complex film narratives) present (story) elements that are all part of the same (narrative) agglomeration, but the aggregate of which is more than the sum of their parts. Whereas chaotic systems do not form any connection among constituents, in a complex (narrative) system elements do relate to each other, respond and interact, but do not allow for a coherent and lucid overview to their perspectival complexity. Complex (narrative) systems are open ended to the extent that they evolve and function without any comprehensive equilibrium or endpoint. While we do not follow this explanatory model, a comprehensive application of complex systems theory to complex cinema is provided by Maria Poulaki’s 2011 dissertation, Before or Beyond Narrative? Towards a Complex Systems Theory of Contemporary Films. For Poulaki ‘complex films do not reflect complex systems, but function themselves as such’ (19).
Shyamalan’s deceptively unreliable *The Sixth Sense* works with ‘clues at two levels’, which are never contradicted in the film (the doctor is never alive and dead at the same time) and which are clearly resolved after the twist, then impossible puzzle films do the exact opposite: not only do they play games with explicitly contradicting clues, but also they do not offer (at least not explicitly) any relieving resolution to their created incongruities. Impossible cinematic puzzles often give up on (post-)classical narration’s trusted cooperation of causality, chronology, and non-contradiction. In terms of the strength of their posed cognitive challenges, these films go beyond both the disputed complexity of deceptive unreliabilities and the relatively ‘simple complexity’ of the majority of the contemporary popular puzzle films. Particularly good examples of impossible puzzle films are loop narratives such as *Timecrimes, Triangle, Loop, Dark Country* and *Predestination*, which all present paradoxical scenarios and overtly play with formal composition and classical narrative norms. Through these open-ended games, impossible puzzle films represent a niche sub-category of complex cinema, within which films strategically plant disorienting curiosity gaps in their narrative structures that they do not close. In his DVD commentary of *Triangle*, director Christopher Smith defines the distinction between puzzle and impossible puzzle films in plain and simple terms: ‘I didn’t want this movie to be a movie that ends with one twist. I wanted it to be a movie that ends like a riddle.’

Although both disorienting but solvable puzzles and impossible puzzle films can be said to offer some kind of ‘mind games’, they do offer different mental experiences. A puzzle, in general, is ‘a game, etc. that you have to think about carefully in order to answer it’ (*Oxford Advanced Learner’s Dictionary* 2000: 1076). A puzzle game creates momentary cognitive perplexity and excitement by exhibiting elements that seemingly do not make sense. Puzzles earn ultimate appreciation, however, by restoring coherency through presenting a solution (or a clear possibility of a solution) to their enigma. In cinema, this can take the form of a surprising twist, an awe-inspiring and cognitively manageable answer that no one could have been able to figure out or, if nothing else, a strong hint pointing towards a logical solution that should enable a viewer to crack the puzzle (Leiendecker 2013). While puzzles grant players (and viewers) a way out of their mazes, impossible puzzles seem to function like riddles that exhibit ‘mysterious event[s] or situation[s] that you cannot explain’ (*Oxford Advanced Learner’s Dictionary* 2000: 1144). For example, narratives like *Timecrimes* or *Triangle* contain tricky loops both in the storyworld and in the storytelling. This double-complexification, in turn, causes a pervasive sense of confusion and puzzlement.

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21 Filmmaker David Fincher’s take on the perfect twist is somewhat tongue-in-cheek (or perhaps plainly sceptical). According to him ‘[w]hat people want from movies is to be able to say, I knew it and it’s not my fault’ (Smith 1999: 62) – as if viewers would prefer to pretend to be upset because they knew what would happen, rather than being completely misled by a film (see the outcry of disappointed viewers of Hitchcock’s 1950 *Stage Fright*).

22 Following this distinction, in our earlier attempts at defining impossible puzzles we used the term ‘riddle film’ (Kiss 2013). This name was found to be problematic, primarily because riddles by their definition overlap with puzzles, implying a solution to their conundrum (which is exactly the opposite of the definition we are aiming for). This definitional complication has led to another problem, according to which the term ‘riddle film’ cannot express a specific quality and therefore it is unable to mark a distinct field of study in relation to the widely discussed domain of ‘puzzle film’. We have therefore decided to proceed from Edward Branigan’s classification and use his ‘impossible puzzle films’ label, as it covers our interest and provides an instantly clear idea about the topic of our book. For a more nuanced and detailed explanation about the distinction between puzzle and riddle (that is impossible puzzle) films, see our article (Kiss 2013).
for the viewer, who finds him or herself confronted with strong paradoxes or incongruities in these films’ diegetic storyworlds, their narrative structures and, ultimately, also in the viewing experience they offer.

It must be noted that by labelling these films ‘impossible puzzles’, we did not intend to claim that it is impossible for viewers to attain any interpretation of these films. In fact, one can find plenty of viewers on message boards and other social media platforms who feel that they have more or less cracked the underlying puzzles of films like Mulholland Drive, Donnie Darko and Primer. We do not mean to argue that such efforts would be misguided, and that these puzzles are ‘objectively impossible’ to solve. Rather, our claim only points out that on the level of narration and narrative structure, these films contain permanent gaps, ambiguities and contradictions, and, as such, they partially undermine their own narrative coherence and congruity. Their puzzles are ‘impossible’ in the sense that they are narratively contradictory or logically incongruent, and that no explicit resolution for this incongruence is being offered. This means that much of the work needed to achieve some form of narrative closure or conclusive interpretation is left up to viewers’ own analytic and interpretive skills (and willingness, for that matter). Extensive interpretation can allow viewers to (re)connect the pieces of information and (re)purpose the narrative events, and thereby support or disprove interpretive hypotheses. The ‘impossibility’ of these films should thus be located on the explicit, referential level of their narration, but not necessarily in the interpretive realm. In fact, as we will later see, the narrative impossibilities and incongruities of impossible puzzle films often also tend to function as continuous ‘hermeneutic bait’ on the level of interpretation: a key effect of many impossible puzzle films lies exactly in that they keep the game of interpretive work open, making it difficult for viewers to settle on one single, unambiguous reading of their conundrum.

Exceeding puzzle films’ relatively simple and decipherable complexity, impossible puzzles thus offer narrative scenarios that point beyond one’s everyday experiences and habitual strategies for fictional and real-world sense-making. Their narrative modes are designed in such a way that they do encourage, but do not allow, instant and easy constructions of a coherent and logical storyworld or event sequence. Engaging in multiple viewings, delving into extensive investigations and close readings, or yielding to an (online) urge of sharing interpretations with other bewildered viewers can be the results of (and compensation for) this inability to make instant and stable sense of these films. Admittedly, when acknowledging the intense negotiation between an impossible analytical effort and creative interpretive work, the boundaries of the impossible puzzle film category are often loose. Some films may appear to certain viewers to be puzzles that are disorienting but ultimately coherent, whereas the same film may seem completely impossible or incoherent to others. Some movies in particular seem to divide audiences in this respect: for example, Lynch’s Mulholland Drive, Kelly’s Donnie Darko and Walker’s Chasing Sleep represent those curious cases which could be placed in the intersection between impossible and disorienting but solvable puzzles (see also Study 3 and 4 of this dissertation). For another share of viewers, these films might even be completely excluded from either of these categories, considered as examples of art-cinema narration or even instances of experimental filmmaking that abandon narrative coherence altogether. As we will see in Study 3, impossible puzzle films share some similarities with (and arguably take inspiration from) the
art-cinema tradition in keeping their formal, narrative and interpretive games open. Although typical mainstream puzzle films – or, in Allan Cameron’s terminology, *modular-narrative films* – generally display complexity that does not achieve the disorienting effect of a Robbe-Grillet novel (Cameron 2008: 6), impossible puzzle films, on the other hand, do aim to achieve such destabilising experiences, but, for most viewers, remain within the (post-)classical narrative paradigm of cinematic storytelling and film viewing. We will argue that there are distinct features that do seem to separate impossible puzzle films from the tradition of art cinema – a comparison we will examine in more detail in the 3rd Study.