Before or beyond narrative? Towards a complex systems theory of contemporary films

Poulaki, M.

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9. The pattern of complexity

In Part 2, I referred to pattern-based causality as a term that may better account for the complex causal relations involved in “ensemble” or “network” films. This type of causality was connected to the nonlinear dynamics and complex interrelations among many different agencies within and beyond the diegesis. Here, the spatialized texts of complex films, that are discontinuous and give the impression of being composed by multiple units, will be generally connected to pattern-based forms of organization, since patterns are always formed out of heterogeneous and ‘noisy’ ensembles of units. Complex systems theory addresses the process through which spatially distributed units form aggregates and develop in time. The aggregates of units into systems appear as patterns. I will evaluate the already existing theoretical approaches of contemporary complex films from the aspect of pattern making, and attempt to resituate the term pattern as it is used in film theory in the context of complex systems theory. Seen as complex systems, contemporary complex films participate into the formation of emergent cinematic patterns that combine contingency and order into complex adaptability.

Pattern, randomness and narrative

‘Pattern’ is a generic term that may have several meanings. In common language it might connote a “model, a copy, or example”, or “a regular or decorative arrangement”, as in the case of decorative ornaments (Oxford English Dictionary). In information theory and computation, patterns are mental models that help us distinguish regularities in the shape and sequence of perceived elements that make them unities intelligible to a perceiver, by eliminating the amount of ‘noise’ contained in them. As Katherine Hayles mentions, in the ‘traditional’ information theory of Claude Shannon, noise corresponds to randomness, while information corresponds to pattern (1999: 18). In the complex systemic strands of information theory, however, pattern and randomness are found in a productive dialectic, as systems achieve higher levels of complexity with the “infusion of noise” (ibid: 25). Therefore, through the development of information theory and chaos theory, “randomness is not “simply […] the lack of pattern” but “the creative ground from which pattern can emerge” (286).150

Complex systems theory goes a step further than this. Not only does it demonstrate that pattern is an order that is produced from randomness, but more decisively merges randomness with pattern. Thus, pattern does not come after randomness but is infused with it. Emergence in complex systems is considered to be the formation of a pattern. According to the definition provided by the New England Complex Systems Institute, a pattern is “a simple kind of
emergent property of a system [...] a property of the system as a whole but [...] not a property of small parts of the system” (Bar-Yam 2000).

From the perspective of autopoietic complex systems theory, as Francisco Varela, Evan Thompson and Eleanor Rosch point out, the constitution of patterns, which I will here call, using an informal expression, “pattern making”, is fundamental to the way a system ‘couples’ with its environment, and is associated with the way autopoietic organisms self-organize by relating and dealing with external complexity:

...over time this coupling [of a system with its milieu] selects or enacts from a world of randomness a domain of distinctions (‘odd sequences’ or ‘two successive perturbations’) that has relevance for the structure of the system. In other words, on the basis of its autonomy the system selects or enacts a domain of significance.

(Varela et al. 1993: 155-156)

The process of creating the “domain of distinctions” and “odd sequences” is a process of pattern making. To make a pattern is to create a domain of significance, and therefore a world that is meaningful to the system.

In complex systemic approaches that emphasize adaptation, such as that of complex adaptive systems (cas), pattern making is a generic name for the processes involved in a variety of mechanisms (such as tagging, internal models and building blocks) that cas use in order for their micro-agents to self-organize and create aggregates (see Holland 1995). Pattern making is necessary in order for complex systems to organize themselves. Characteristic in the cas approach is that it considers the mechanisms of complexity and adaptability not only a matter of epistemology (of how an external observer discriminates a pattern that is formed out of the aggregation of individual units), but also one of ontology, of how living or non-living systems organize themselves, by converting “patterns into changes in [their] internal structure” (31). As discussed in Part 1, complex systems “reintroduce the distinction” between themselves and their environment into their own structure, and thus the patterns they form in order to deal with environmental complexity change their own structure, making it more complex. The circle of complexity is one that connects an organism/system with its environment, and creates a world as a “domain of significance”, as Varela would have it, for the system.

The use of the word pattern in complex systems theories implies a different process of pattern formation, and to some extent contrasts the common association of pattern with a pre-existing order, with a model that is simply copied. There are scholars, among whom Hayles, who, based on the complex systemic conception of emergent organization through an interplay of pattern and randomness, compare narrative with such organization. They seem to imply that
narrative, although it can be conceived as pattern, because it has a certain order and regularity, nonetheless contains randomness and complexity. Tsoukas and Hatch, from a complex systems perspective, relate pattern making to the weaving of past, present and future that narrative effectuates (2001: 1006). Along with them, also other scholars (indicatively see Stoicheff 1991, Argyros 1992, Randall 2007) see in the flourishing of complex systems theories and their openness to randomness a chance to reevaluate the role of narrative, considering it through the lens of complexity. Narrative for them is not just a regular pattern, and it does not necessarily eliminate noise. It is rather the process through which order emerges out of randomness. Narrative couples with contingency, and is generated by it. Thus, every text is a selection out of multiple possibilities, and every choice that is made in order to tell or to construct a story is one that moves between pattern and chaos. In this context, contemporary “complex narratives”, with their openness to contingency and their hesitation to make absolute selections, could be seen as demonstrating the complexity inherent in every narrative. They become manifestations of the complex processes that take place before narrative manages to construct a finite ‘story’ with a beginning, middle and end.

There are, however, points that have not yet been explored, although many films of the complex narrative tendency raise them. Such as, when a story with a beginning, middle and end cannot finally be constructed, as it happens in Gomorrah and other complex films, are we allowed to name the process of viewing a fiction film narrative, or should we look for other terms to describe the contact between its text and the recipient? And if this process is indeed one that could be characterized as an emergent pattern, then how can we talk about this pattern without defining it as (and confining it to) narrative? Emergence, as discussed in Chapter 6, but also as broached in the beginning of the present chapter, is a pattern-based process, but the pattern it creates is not finite and it does not simply come after randomness; rather, it retains randomness, and it never becomes a decisively clear form. Complex systems oscillate from one pattern to another, from one assemblage/aggregate to another, generating in this lingering process further complexity. Narrative, no matter how emergent a process can be conceived, it always evokes “a sense of an ending”, due to its partial holding on the pole of ‘story’ or ‘fabula’—in the sense of a beginning-middle-end structure. My opinion is that following the nonlinear dynamics generated before narrative, we can move to concepts and theories that better address the complexity of the interaction between a film and a viewer, a text and a recipient, a complexity that is invited and stimulated by texts that allow a greater degree of ‘disorder’, lingering, and, indeed, ‘parcours’ in them, such as complex films.

**Pattern formation in ‘ordinary’ and complex narrative films**

The notion of pattern has been used by film scholars in different ways; indicative of
the association of pattern with a film’s form and organization, as well as with narrative, is Bordwell’s and Thompson’s account of the term. The whole process of film viewing is a pattern making process according to Bordwell and Thompson, as they use the word pattern for everything that means “form”, a shape that elements take when they are related. As they note in *Film Art: An introduction* (2008), “form is a specific system of patterned relationships that we perceive in an artwork” (71), and films are no exceptions to this rule. Pattern for Bordwell and Thompson is a system; it is a way to organize perceived elements so that they become meaningful (intelligible) to a human observer/beholder. As a representative of cognitive narratology in film theory, Bordwell here too relies on cognitive theories that relate perception to preexisting schemata, which he and Thompson call patterns.

The mind is never at rest. It is constantly seeking order and significance, testing the world for breaks in the habitual pattern. Artworks rely on this dynamic, unifying quality of the human mind. They provide organized occasions in which we exercise and develop our ability to pay attention, to anticipate upcoming events, to construct a whole out of parts and to feel an emotional response to that whole. (Bordwell and Thompson 2008: 54)

Bordwell and Thompson make a rather generic use of the word pattern. From the perspective of the viewer and his or her cognitive activity, they use the term pattern to refer to cognitive schemata against the backdrop of which the viewer tests every new stimulus given by the film.151 As far as the textual characteristics of the films themselves are concerned, Bordwell and Thompson again find pattern a useful term. They thus mention that films offer a “patterned experience”, that a film’s style is a pattern, and that narrative is also a pattern (style and narrative are according to the writers the two organizing principles of the overall form of a film). Everything that becomes an intelligible form may be called, according to Bordwell and Thompson, a pattern.

The approach of Bordwell and Thompson to film is systemic—as long as they refer to the composition of wholes out of elements—and a useful place to start off with for the study of narrative films as systems. However, this common ground with my approach makes even more striking the difference between the conceptions of ‘system’ at play. I find that even though Bordwell (in *Film Art* with Thompson) sets off from a systemic theory of film viewing, he tends to focus on the way complexity is gradually ‘domesticated’ with the help of familiar schemata, rather than on the way complexity grows; his approach is centripetal, while I see the need for a centrifugal and complex systemic approach to films, and especially those that have been characterized as complex.

Bordwell and Thompson relate the neuropsychological human tendency towards...
pattern making with an “urge for form” that film viewers have (56).

Why does an interrupted song or an uncompleted story frustrate us? Because of our urge for form. We realize that the system of relationships within the work has not yet been completed. Something more is needed to make the form whole and satisfying. We have been caught up in the interrelations among elements, and we want to develop and complete the patterns. (56)

This tendency towards pattern making is acceptable by contemporary neuroscience, but the point I disagree with Bordwell’s and Thompson’s application is on their insistence to link the pattern making cognitive processes with a ‘completion’ schema that bears similarities with that of (classical) narrative. Thus, especially when it comes to the narrative form, Bordwell and Thompson translate this “urge” for completion of the patterns into a need for narrative closure. Narrative is according to them a pattern with a beginning, middle, and end:

Typically, a narrative begins with one situation; a series of changes occurs according to a pattern of cause and effect; finally, a new situation arises that brings about the end of the narrative. Our engagement with the story depends on our understanding of the pattern of change and stability, cause and effect, time and space. (75)

As it might have become apparent, for Bordwell and Thompson pattern is not specific to any specific kind of film or genre, nor of course to complex films.

Nonetheless, a more specific application of the word pattern in the context of complex films is attempted by Bordwell in his article “Film Futures”, which, as I mentioned in the Introduction, set off the debate on the complex narrative tendency in contemporary cinema. In this article Bordwell refers to pattern making in order to show how ‘forking-path’ films (i.e. films with branched stories such as *Sliding Doors*, *Run Lola Run*, *Too Many Ways to Be No.1* and *Blind Chance*), which initially appear more complex than the standard narrative films, do not differ so much from any other narrative film in terms of the cognitive processes they evoke. Here Bordwell makes particular reference to the spatial patterns put forth by these films, although he sees them as ‘serving’ the beginning-middle-end ‘pattern’ of narrative.

In forking-path films, according to Bordwell, the viewer’s handling of the narrative’s complexity becomes an easy task, because the alternative versions of the story are constructed to be very similar, except for some striking differences that highlight the parallelism between the different versions of the characters’ destiny. Thus, he notes, “forking-path plots can bring parallelisms to our notice quite vividly, thereby calling forth well-practiced habits of sense-making” (2002: 97). The recurrent return to the crucial moment from which the three stories begin and develop as alternative branches, for instance in *Run Lola Run*, becomes a pattern
that once developed, makes it easier for the viewer to follow the film, and moreover, to integrate this pattern into the overarching “narrative patterning” (92). The forking-path pattern can be “enacted” every time that we encounter a film that uses it, in order to help us deal with narrative complexity. Thus, Bordwell concludes, “artists should test the limits of story comprehension, but those very limits, and the predictable patterns they yield, remain essential to our dynamic experience of narrative” (2002: 103; emphasis mine). Narrative may be a dynamic process but it is always a cognitive activity that seeks closure—once the separate elements constituting it fall into place and become intelligible in their pattern. As Bordwell shows, the intense presence of parallelism in forking-path films and their spatial patterns ultimately falls into place in the larger pattern of narrative, with its sequential, beginning-middle-end, form.

This extensive discussion of the—rather generic—use of pattern by Bordwell and Thompson wants to show how pattern making in narrative film theory, even though ‘systemic’ and ‘emergent’ to the extent that it presupposes a dynamic cognitive process, is nonetheless not really complex, as it is associated with the closure of meaning, the order and the ending that narrative implies. The combination of pattern making with narrative ends up being less emergent and open-ended than it sets off to be. In the continuation of this chapter I will focus on the spatial patterns that prevail in complex films and evaluate different takes on the connection between them and pattern making.

Pattern and spatial form

I will now clarify what I think is the specific connection of pattern making with complex films and why this lies in the spatialized form of their texts. According to literary scholar Gabriel Zoran “a spatial pattern is any pattern perceived solely on the basis of the connection between discontinuous units in a text, demanding therefore a perception of the whole text or part of it as given simultaneously in space (which is for example, the case of analogies)” (1984: 311). I think that this definition of pattern fits the case of contemporary complex films. According to this definition, textual discontinuity triggers the creation of patterns, as far as the aspect of perception is involved. Yet, in my opinion, pattern making cannot be conceptualized as a function of the perceiver alone. It rather involves, from a complex systemic perspective, two different systems: the textual system and the cognitive system of the recipient. Pattern making may be evoked by the text’s structure and by its mode of discourse, particularly description, as discussed in the previous chapter, with the relations it creates between units through juxtaposition or contiguity.

The genealogy of the theoretical connection between textual pattern making and emergence of meaning can be traced back in the work of Joseph Frank, whom I have
mentioned in other parts of this dissertation as well. Frank’s discussion of the “spatial form” in poetry and literature up to a point follows the tradition of Lessing (even though turning it upside down), in the sense that Frank tends to create a binary opposition between space and time that has become redundant, and for which Frank has been heavily criticized (among others, by G. Giovannini and Frank Kermode). However, I find that his insights should not be easily dismissed, as Frank was aware that the spatial form has its own different “chronicity”, which he called spatial in order to distinguish it from the linear (sequential) chronicity traditionally assigned to literature. Referring back to his original 1945 essay Frank explains:

I merely stated what has since become a platitude—and what I can now put in more precise linguistic terminology—that the synchronic relations within the text took precedence over diachronic referentiality, and that it was only after the pattern of synchronic relations had been grasped as a unity that the “meaning” of the poem could be understood. (1977: 235)

Although the object of Frank’s theory had been modernist poetry and literature, he later saw the spatial form having a potentially broader application, being inspired by French structuralism and its prominent narratologists such as Todorov and Genette.

The spatial form is a pattern, according to Frank. He points out that the spatial form has its own “logic”, the “space-logic” of reflexive reference, as he calls it, which makes it necessary “to suspend the process of individual reference temporarily until the entire pattern of internal references can be apprehended as a unity” (1977: 232, citing himself from the original essay). As William Holtz comments,

[for Frank the] spatial form is not, as we might guess, necessarily “descriptive” writing aimed at the mind’s eye but rather a form that grows out of the writer’s attempt to negate the temporal principle inherent in language and to force apprehension of his work as a total “thing” in a moment of time rather than as a sequence of things.

Here Holtz refers to the association of the spatial form with the “descriptive”, but also emphasizes its being a result of the conscious negation, on behalf of the writer, of linear sequentiality—a consciousness that has been attributed to modernism. In modernist texts, and according to Frank’s theory, “the sequential or temporal principle is replaced by the principle of ‘reflexive reference’: that is, suspension of meaningful reference until the whole pattern is perceived” (Holtz 1977: 272-273). Meaning is for Frank a spatial pattern—in the sense that it connects and helps unify distributed and disconnected elements.

A similar suspension of meaningful reference and negation of sequentiality is the case in many of the contemporary films discussed as “complex”. Through the analysis of
Gomorrah in Chapter 7 I emphasized the obscurity of the film’s world, its avoidance to name places and its discontinuous and ‘shifting’ view upon the surroundings. This obscurity could be interpreted as a ‘suspension of meaningful reference’, until the ‘whole pattern’ is perceived or ‘faced’ in the end, through the last disclosure that the film makes.

Moreover, in Gomorrah as well as in other contemporary complex films, we find a characteristic ‘bottom-up’ perspective on place, or a ‘spatialization of place’ as I called it in the previous chapter. This is one more feature connecting these films with the spatial form. The example of the city of Dublin in Joyce’s Ulysses, turned into an emergent pattern in the way it is analyzed by Frank, might remind us Gomorrah’s Naples or Run Lola Run’s Berlin. In Holtz’s words:

To illustrate this concept [of reflexive self-reference], Frank ranges over a wide variety of works. In Ulysses, for example, the narrative is so fragmented, the key allusions and symbols so scattered, that the reader must continually suspend reference until he imperceptibly gains a sense of Dublin in its entirety: Joyce demands that the reader achieve “the same instinctive knowledge of Dublin life, the same sense of Dublin as a huge, surrounding organism, that the Dubliner possesses as a birthright. It is this birthright that, at any one moment of time, gives the native a knowledge of Dublin’s past and present as a whole; and it is only such knowledge that would enable the reader … to place all the references in their proper context. ... Joyce ... proceeded on the assumption that a unified spatial apprehension of his work would ultimately be possible.” (1977: 273, citing Frank in The Widening Gyre, 1968)

The obscurity of place, and the disorienting parcours through it in complex films such as Gomorrah and Run Lola Run, gives way to an emergent pattern to be formed, as a world created out of the disparate pieces.

In Chapter 8 I mentioned that Frank considered description to be an expression of the text’s spatial form. Taking his insight as a starting point I would argue that description is a mode that creates synchronic relations between textual elements so that patterns emerge. The feeling of lingering and temporal suspension that description creates, serves, according to a text’s “space-logic”, the formation of patterns. Patterns, in the complex systemic view, are emergent ‘wholes’, not reducible to the sum of their parts. A necessary condition for their formation is the existence of relations that connect the disparate elements into a unity, marking a shift to a higher level of organization.

Despite description’s association with metonymy, the whole-part relationship prevailing in metonymy is often transcended, and this becomes particularly apparent in the
case of cinema, when description, or “the descriptive”, becomes a way to loosely connect elements in space—the way that Chatman showed using examples from Antonioni. In complex systems, the connection between pieces and their aggregates is nonlinear, as soon as these aggregate ‘wholes’ do not preexist but emerge out of the interrelations between the units. Thus, the units that constitute the emergent wholes are not ‘parts’, because they are by no means subtracted from a preexisting whole. In this line of thinking, description’s focus on individual and heterogeneous elements points at the potential emergence of wholes in the sense of complex, emergent systems, and not in that of a preexisting system or schema.

It is a cognitive process that the theory of the spatial form points at when it refers to the way the discontinuity of a text and the synchronic relations between its elements bring to the forth patterns. Holtz notes:

For the “spatiality” he [Frank] finds in literary form is not the spatiality objectively present in a painting or a sculpture (except for “shaped” poems and other such typographical devices); rather, this literary spatiality seems to be an operation of the mind synthesizing data which may (in some instances Frank cites) form a visualizable image with communicable spatial dimension but which (in most of his examples) do not necessarily cohere in any demonstrably spatial way. […] Thus the spatial order of a painting and the “spatiality” of *The Waste Land* are of different ontological orders, and the critic should not confuse them. (1977: 274)

Where is then the ‘space’ of the spatial form? As Holtz argues, it lies in the pattern, and does not have the objective dimensions and spatial relations that a painting has. But Frank himself is explicit connecting the spatial form with a cognitive process, when he points out that spatial form is a pattern through which meaning is produced. This pattern, however, has a clear, even though not direct and ‘linear’, connection with the text’s form. It is not a pregiven, ‘natural’ cognitive process of pattern making that is here at hand, but one that emerges from the text and its discontinuous ordering and triggers a cognitive response from the recipient.

The theory of spatial form, as John Tolva argues, finds application in hypertext literature, to which the plot structure of complex films has been compared. Hypertext connects story-chunks through links that are followed in a non-sequential order. Using the example of the “Mola Web” (a hypertext created by the collaboration of several hypertext authors, among whom Michael Joyce), Tolva refers to the way the hypertext reader may perceive the “implicit and dynamic designs” of the text as “patterns, juxtapositions or recurrences” (Joyce, cited by Tolva 1996: 69). Tolva explains how the experience of such designs becomes meaningful: “As in a splatter-painting by Jackson Pollock, what emerges from seeming chaos is distinct, though random, pattern—what [Michael] Joyce calls ‘contour’” (71). The process of going from one
link to the other and the relations between the units of a text thus created, generates space:

Rather than disrupting the concept of spatial form […], links generate it, thwarting temporal flow and opening a space for the reader’s mind to construct the extra dimension needed to rationalize the act of “traveling” a link in a Euclidean universe that physically, logically disallows it. We think space, therefore it is. (Tolva 1996: 73)

The juxtapositions and recurrences found in hypertext and its spatial form have similarities to those of complex films. Space is generated by the film’s discourse and by the cognitive effort of the viewer to accommodate to it and to follow the discontinuous syuzhet. The links that Euclidean space disallows are those that the viewer has to generate in order to connect the disconnected units of complex films; (when these units are temporally separated, the effect might be the ‘time-juggling’ I referred to in Part 1). ‘Fractal’ films, such as Run Lola Run, and their characteristic features of “multiplicity, simultaneity and fragmentation”, realize, according to Everett (2005: 160), Slavoj Zizek’s assertion that cinema will evolve by creating through its fiction films experiences similar to those that cyberspace hypertext generates. Zizek saw hypertext as an expression of that sense of fragility, contingency and multiplication that characterizes both contemporary life and contemporary science; he also observed a clash between hypertext and the linear forms of literature and cinema (2001: 206). This sense of uncertainty and contingency, with which any emergent order has to couple, is also a core element of contemporary complex systems science and theory. Thus, the spatial (and for some hypertextual) form of contemporary texts might be an expression of an uncertainty that makes all pattern making processes generated by these texts emergent and incomplete, drifting rather than closing.

**Ready-made patterns**

The privileging of spatial forms of reception, such as those triggered by parallelism, analogy, recurrence and juxtaposition of units (and could be considered to be the ground of pattern making), are not at all a new characteristic of texts. Manovich refers to the way similarly spatial types of processing were prevailing before the expansion of industrialization; later on, the linear modes of industrial production put forth more sequential modes of processing (2001: 232). The resurfacing of spatial textual modes in contemporary culture is found in a certain tension with the classical narrative form. Particularly, the ‘spatial form’ of contemporary films is not as easily compatible with narrative as Bordwell would have it. Rather, as I would argue, it shows the gaps, inconsistencies and limitations inherent in
narrative. Thus, contemporary complex films cannot be placed in a smoothly continuous narrative tradition.

Pattern may be considered as emerging out of the dynamics and internal relations of the filmic text. To study the specifics of pattern making in either the textual system of the film or the cognitive system of the viewer, a bottom-up approach would be required, that would focus on the dynamics generated, without presupposing that every text ‘naturally’ creates patterns, just like every brain does. Having talked about pattern making as an emergent process, one could argue that in contemporary complex films there is pattern but it is not emergent but somehow ‘pregiven’. For instance, in *Gomorrah* one could argue that the ‘pattern’ that emerges in the end allowing the disparate stories contained in the film to form a unity under the name of Camorra, is not constructed by the viewer but somehow provided ‘ready-made’ by the film. This function of pattern, which resembles but also contrasts (in its consequences) Frank’s conception of it, is one point of criticism that Sean Cubitt addresses to films of the contemporary complex narrative tendency.

Cubitt has a different stance from Bordwell regarding the recent phenomenon of complex films, tending to emphasize the discontinuities these films introduce, rather than their seamless adjustment to the traditional narrative form and the corresponding cognitive processes. Likewise, Cubitt gives a special importance to the function of pattern in the groups of complex films that he calls, after Marsha Kinder, “database”, and after Angela Ndalianis, “neobaroque”—the latter being for him the Hollywood (sometimes blockbuster) counterpart of database narratives. Cubitt uses a spatial notion of pattern, and emphasizes that it is the spatialized modes of presentation in database and neobaroque films that make pattern particularly relevant in them. Yet, Cubitt offers a critical perspective to pattern making in relation to these films. On the one hand, in contrast with Bordwell, he considers the spatial patterns of database and neobaroque films to be radically different from narrative and not easily integrated into the narrative order. On the other hand, like Bordwell, Cubitt also associates pattern making with a certain kind of ‘closure’, which is different from the narrative closure. The spatial patterns that contemporary films contain do not suggest, according to Cubitt, openness to the contingent but rather the closure of an ordered and ‘pre-calculated’ universe. Pattern, as Cubitt perceives it in contemporary complex films, leans towards order and regularity rather than chaos, noise and contingency; it is not a matter of emergent self-organization but of a pre-given model or copy, the sense that the word pattern has in common language and not in science and theory of complex systems.

Cubitt argues that in database and neobaroque films, the diegetic world might appear fragmented and disordered, but its coherency is not achieved by the viewer’s own ‘free wandering’, but, in a way, it is ‘imposed’ to him or her ‘ready-made’ by the film. The
coherence and meaningfulness of the film lies in a preexisting pattern, which, once revealed, turns the film into a “self-enclosed world”. Thus, as Cubitt states, “the purpose of subjectivity is fulfilled at the moment in which it is absorbed entirely into the pattern of the world”. Referring not only to the level of narrative but also to that of shot composition, Cubitt continues: “as image becomes composition, [neobaroque films are extremely graphical] narrative becomes pattern, and the whole comes to a moment of gestalt coherence” (2004: 240). The spatialization of texts suggests for him a shift from narrative to pattern, but this shift does not point at the direction of emergent self-organization through contingency, but rather eliminates contingency. Even though Cubitt does not call this predestined path “narrative” (rather, he sees it as its opposite), he certainly finds contemporary complex films more ‘closed’ than Bordwell does. Thus, Cubitt observes how narrative seems to become a micro-element in a neobaroque spectacle, composed by eventful worlds, ‘miniatures’ of the classical plot, succeeding each other. Cubitt finds this ‘logic’ being pervasive in contemporary film production, and functioning in a wide range of films from blockbusters to titles of ‘complex’ films, such as The Usual Suspects, Sixth Sense, Memento, Snatch and Dark City. The multiple chunks that constitute the storyworld in these films makes Cubitt consider pattern making, rather than narrative, becoming the primary ordering principle in them. Pattern spatializes time:

the construction of the database narrative is modular, encouraging games with flashback (Memento), Time Travel (Twelve Monkeys), and temporal dislocation (Pulp Fiction) to demonstrate with even more brilliance the command over events enjoyed by the pattern-making impulse. The effect is to make the narrative, like the diegesis, spatial. (2004: 239)

As long as their diegetic ‘worlds’ are constituted by loosely connected units, and events open to multiple interpretations, contemporary complex films might create to the viewer the impression that they are exploring the filmic universe more freely. However, what in fact happens, according to Cubitt, is the reverse: “Locking into a pattern at its conclusion, the database narrative reveals its gestalt. The task of the protagonists is to realize themselves as elements of an infinitely repeatable, enclosed horizon of rule-governed patterning” (2004: 240). For Cubitt, pattern making seems to be the way to approach and construct the filmic world both intradiegetically—by the protagonists—and extradiegetically—by the viewers. In both cases, it is a seemingly miraculous and passive absorption into a ‘rule-governed’ whole that is effectuated by these complex films.

Cubitt’s approach to contemporary films of the complex narrative tendency appears rather pessimistic. It is infiltrated by the way image, shot and narrative composition works in
commercial neobaroque films and does not take as a starting point more alternative and independent films. Still, as I wrote in the Introduction, we cannot ignore the fact that complex modes of narration now become the norm rather than the exception, and that Hollywood and independent cinema mutually affect each other. Thus it is important to take Cubitt’s remarks into consideration. At this point I would like to highlight two aspects of his theorization that I find fruitful and relevant to my theoretical approach to complex films. On the one hand, as I already broached, Cubitt certainly disagrees with the stance represented by Bordwell, that pattern making in films of the complex narrative tendency is ‘business as usual’, that it can be easily integrated into the narrative form or that it works in all films in the same way. Cubitt sees in contemporary complex films a break with the modes of narration and interpretation promoted by classical Hollywood films. He emphasizes the ‘spatial’ effect that pattern has on narrative form, and also makes the observation that the latter tends to be succumbed to the pattern making impulse, which now becomes prevalent. This is in accordance with my own conclusions in Chapter 8. On the other hand, in his criticism on the spatialization of narrative and the pattern making impulse, Cubitt seems to dismiss the—other than superficial—connection between the contemporary “database narratives” and the modernist texts in which Frank saw pattern becoming the emergent product of their spatial form. Modernist theory and structuralist narratology, under which Frank’s theory may also be classified, drew useful conclusions about complex texts and distinguished them from other literary forms. Although some of these conclusions, especially those that have to do with discourse and spatialization, are applicable to contemporary complex films, they should nonetheless be contextualized in the current complex environment of cinematic production.

The spatialization to which Cubitt refers is different in its means and its purpose from the one of modernist novels or even that of Godard’s films. In many contemporary complex films, spatialization might be present inside the shot, with techniques of image composition—the digital equivalent of the descriptive mode—that bring all details to the foreground, as pointed out by Manovich. It is also present in the baroque-like proliferation of pieces in the image or the sequence of shots, and the pastiche techniques found in film such as *Run Lola Run*, but also in the character and plot-thread assemblages of network films, discussed in Part 2.

In my view, complex films do not always promote passive absorption in their emergent worlds. The films I took as starting points in this dissertation are open-ended and not self-enclosed universes. An important factor always remains the function of each film within its own ecosystem, i.e. its embeddedness in a certain film tradition, a genre, a social and political context. In some non-commercial films, a process of world emergence similar to the one criticized by Cubitt may actually function as a call for critical reflection and active
engagement, as is (potentially) the case in *Gomorrah*, in which, from a totally different perspective, we have a process analogous to the one that Cubitt criticizes: a ‘locking’ of its world into a closed horizon (and it is hard to imagine an horizon that feels more closed than the one we literally see at the end of this film), and a ‘rule-governed’ failure of every attempt for individuation on behalf of the characters. Moreover, almost all films classified under the complex narrative category demand a laborious cognitive activity on behalf of the viewer, which could be pictured as a cognitive mapping (suggesting spatial juxtaposition) of elements either disconnected and out of order, or complexly interwoven and dense. The spatialization of the diegesis, and the ‘exploration’ it performs and also demands on behalf of the viewer, has already been highlighted in this dissertation in different ways: through the multiplication of characters, each of whom offers a different perspective upon the film’s diegesis; through methods of filming that invite the viewer to orientate themself in a world that seems incomprehensible and perplexing; through plot twists, usually requiring a shift of perspective (or ontological level) that reveals hidden dimensions of the film’s story world.

In contemporary database narratives, according to Cubitt, viewers are led to identify with worlds, not characters (2004: 236). This emphasis on pattern-governed, according to Cubitt, ‘worlds’ seems to be a market demand, apart from a stylistic or formal tendency. Even when worlds or ‘patterns’ ultimately make their appearance in the end of a film like a gestalt or a magic picture, taking the viewer by surprise, most of the time there is something missing and left to the viewer (and not always to the film’s sequel) to decide—a viewer who is constantly, as I pointed out in Chapter 2, addressed by the deictic markers of the diegesis and explicitly called to participate in its construction. This feature of complex films does not allow us, however, to exaggerate the degree of ‘interactivity’ in them. As it is the case in other, more ‘properly’ interactive works of the contemporary media art sphere, where it is the algorithm that controls the degree of interactivity, in complex narratives too, the piece of the puzzle that might be missing in the end is one carefully calculated to do so.

Two different conceptions of pattern and pattern making have been contrasted in this chapter. The one considers pattern to be a noise-eliminating regularity, a ‘world’ that becomes meaningful by forming a closed system, and the other an emergent whole that can be coupled with contingency rather than eliminate it. The latter is closer to the complex systemic sense of the word pattern. However, according to criticism such as that of Cubitt, even though the films of the contemporary complex narrative tendency seem to be challenging or even surpassing the narrative form by being increasingly spatial, discontinuous and open-ended in their textual structure, nonetheless fail to trigger emergent patterns. Cubitt seems to be arguing that (classical) narrative has this potential in a much greater degree than the contemporary tightly
calculated and ‘neobaroque’ cinematic constructions—which are not narrative, this being their demise.

In my view, complex films combine the two different versions of pattern, and at times lean towards the ‘emergent’ one. Moreover, their potential for emergent pattern making is not incompatible with their divergence from narrative. On the contrary, the fact that they subsume narrative under another, complex systemic type of organization, reveals openness and not closure, to which contemporary cinema as a complex system is in a way ‘doomed’, as I pointed out in the Introduction. What is needed is a shift of level, or a combination of analytical levels, the one of individual films and the other of the institution cinema, in order to see how openness, contingency and uncertainty of the latter (the institution cinema) may ‘masquerade’ as closure, structure and self-enclosed ‘pattern’ in the former (certain individual films of the complex narrative tendency).

**Emergent patterns and cinematic adaptability**

*Gomorrah* is certainly not the average case of contemporary ‘complex’ films. Although, as I showed in Chapter 7, it shares some common characteristic with other complex/network films, *Gomorrah* could not be easily classified as a ‘neobaroque’ film, the film category to which Cubitt mainly addresses his criticism. Its embeddedness into very diverse filmic traditions makes *Gomorrah* an incarnation of pattern and randomness. On the one hand, the pattern of the classical Hollywood gangster film, the bleak atmosphere and doomed protagonists inherited from the *Godfather* tradition, exerts its influence on *Gomorrah*’s narrative pieces, which have a certain beginning-middle-end structure. On the other hand, the lack of a single narrative focus, the episodic structure and parcours through different characters, places and perspectives, features drawn from its neorealist roots, suggest openness to contingency.

Neorealism did not reject narrative, but it opened it up to the “fragility and contingency of life in the aftermath of war” (Shiel 2006: 13). The Italian director Luigi Comencini considered as the reason for neorealism’s unpopularity with the wider audience the fact that the public wanted to be told a story, while neorealist films ‘illustrated a situation’. Taking as a starting point his comment, film theorist Christopher Wagstaff observes:

Neorealist cinema was *not* the heroic narrative of a society that, through armed resistance, had achieved a victory over chaos. It was the far, far more profound thinking of a society that had to give up the infantile illusion of a heroically vanquishing anything, and instead had to discover the garden in what it had been living with along. (Wagstaff 2007: 64)
Gomorrah is an amalgam of different ‘patterns’ in the cinematic tradition, one that tends towards order and another than opens to contingency. But the final contrast that Gomorrah creates between contingency and order does not happen at the level of narrative, but between its already contingent enough ‘mini-narratives’ and a higher level of order, the ‘world order’ of Camorra, as well as the one of the actual network of economy, and the networks of interrelated complex systems that contemporary society consists in. This order is of a different kind than the one of narrative, and seems to be for good or evil subsuming all forms of ‘linear’ organization, signification and anthropomorphic meaning. This order couples with contingency but also tries to tame it by taking forms of organization that allow it to adapt to the volatile conditions of contemporary ‘reality’. Thus, in Gomorrah the dialogue between contingency and structure takes place not only inside narrative, i.e. through an interplay between the ‘classical’, sequential ordering of events and contingent happenings, as it usually happens in other ‘complex’ films, or, even in the loose narratives of neorealism, but also beyond narrative. This reflects what seems to be the case for contemporary ‘narrative’ cinema, which of course continues to produce stories, but does so by reproducing within these very stories its own observing distance.

Apart from the different patterns of storytelling that Gomorrah embodies, it also embodies the different poles of the notion ‘pattern’ that the complex narrative tendency combines. One that goes towards contingency, openness to the unknown, and ‘free’ parcours, and the other towards ‘rule governed’ reproduction of carefully calculated diegetic worlds. It seems as if the pattern that Gomorrah reveals at the end, which is not just Camorra but, as I pointed out in Chapter 7, the world economy, is the one that governs the ‘domestication’ of the once emergent complex narrative tendency by transmedia market forces. Complex films, just like the protagonists of Gomorrah, exhaust the degrees of freedom given to them by means of performative agency, and in the end they are defeated by the ‘rules’ that govern the game of systems that lie beyond their reach. No matter how bleak this ‘observation’ sounds, it is however made from a spot located inside these systems. Gomorrah is a product of a new world order in ‘post-narrative cinema’; as such a product, and by its ability to ‘observe’ the structures of distributed control in contemporary globalized society (and here this structure is Camorra, while in Burn After Reading it was the CIA), it suggests that the tendency of complex films, despite the top-down patterning, still leaves seeds for bottom-up evolvement and transformation.

The complex narrative tendency may thus be considered itself to be a pattern, a temporary organization that combines order and chaos, narrative and non-narrative, and a sign of cinema’s own working as a complex system, which follows a pattern making ‘drift’ in order to deal with the complexity of its environment. In complex systems theory, pattern making is
the process through which a system moves from pattern to pattern, from one organization to the next. Varela described this drift as a “selfmovement” that characterizes all “complex, nonlinear, and chaotic systems”. In them, “there is never a stopping or dwelling […] state, but only permanent change punctuated by transient aggregates” (Varela 1999: 291). Emergence is pattern-based as long as it ‘transits’ from one aggregate to another. Pattern-based self-organization thus couples with contingency; it always weaves certain new ‘ordered’ areas, new patterns, but these are never stable; they are always in transit. The contingency they contain transforms these patterns at the very same moment that they become discernible, bringing new fluctuations, and allowing further bifurcations. Such fluctuations might be coming from inside the group-‘pattern’ of complex narratives, from their ‘borderline cases’, such as the one of Gomorrah.

Although emergent patterns appear as ‘indiscernible’ and ‘noisy’ to external observers, as cognitive philosopher Daniel Dennett puts it, “in the root case a pattern is ‘by definition’ a candidate for pattern recognition” (1991: 32). The complex narrative tendency was itself an emergent pattern in the 1990s, but later this pattern was recognized by big studios which imitated the modes of narration that certain complex films introduced. However, shifting the scale of analysis, both the complex narrative tendency and Hollywood can be seen as different organizational levels of the complex system of cinema, which through bifurcations, such as the one created by the complex narrative tendency, builds further complexity, adapts to its far more complex environment, but also constitutes this environment.

As it can be observed in individual films, narrative seems to become a relatively smaller component in the complex organization of cinema production than it has been in the past, and this facilitates the workings of the growing transmedia market. Thus, the fact that, in individual films, narrative becomes multiplied and miniaturized (as in the mini-narratives of network, ‘thread structure’ or even neobaroque films), an internal component in the larger network of a film’s diegetic world, might serve, at a different scale, the larger self-organization of a media system in which the ‘cinema-system’ participates. Hence, the way that the textual/filmic space of individual films is constructed, affects—and is affected by—the broader space in which cinematic production develops. Cinema thus displays a fractal-like (self-similar in different scales) architecture, which is so characteristic of complex systems. And, as it happens with fractals, “understanding how a system works at one scale might lead to understanding how it works [at] other scales” (Manson 2008, referring to Mandelbrot 1977).

Self-organizing systems form patterns both in space and in time. They are adaptive as long as the aggregates they form change without losing their organization. Complex adaptive systems remain coherent under change (Holland 4). As they evolve to further complexity, they
are never the same as before, but they are self-similar, in the sense that they maintain their coherence, which consists in their *organization* and not their *structure* (i.e. the form that an organization takes at a specific moment in time). The fractal-like space that a complex systemic approach to cinema reveals, might be not just a sign of cinema’s participation to wider social, technological and economic developments, but also one of cinema’s adaptive capabilities in an ever changing and increasingly complex media and social environment, and its potential to transform this environment through its own self-transformation. Carried by emergent and nonstationary dynamics that never allow it to take a stable structure, cinema is nonetheless challenged to maintain its organization in time, and to continue enabling the constitution of worlds that are cinematic, as far as they engage and surround the viewer in his/her embodied presence. To paraphrase Holland, who talks about the city as a complex adaptive system (1995: 1), “cinema is a pattern in time: no single constituent remains in place, but cinema persists.”