

Sabine Schenk
Running and Clicking

Narrating Futures

Edited by
Christoph Bode

Volume 3

Sabine Schenk

Running and Clicking

Future Narratives in Film

DE GRUYTER

The research leading to these results has received funding from the European Research Council under the European Community's Seventh Framework Programme (FP7/2007-2013) / ERC grant agreement no. 229135.

ISBN 978-3-11-027215-4
e ISBN 978-3-11-027243-7

Library of Congress Cataloging-in-Publication Data

A CIP catalog record for this book has been applied for at the Library of Congress.

Bibliographic information published by the Deutsche Nationalbibliothek

The Deutsche Nationalbibliothek lists this publication in the Deutsche Nationalbibliografie; detailed bibliographic data are available in the Internet at <http://dnb.dnb.de>.

© 2013 Walter de Gruyter GmbH, Berlin/Boston
Typesetting: PTP-Berlin Protago-TEX-Production GmbH, Berlin
Printing: Hubert & Co. GmbH & Co. KG, Göttingen
♻️ Printed on acid-free paper
Printed in Germany

www.degruyter.com

Acknowledgments

[Mr. Englethorpe said:] “But to me, there is no higher honor one can give to a text than to return to it and re-examine its contents, to ask of it, ‘Does this still hold true?’ A book that is read, then forgotten – that is a mark of failure to me. But to read and reread... that is faith in the process of evolution”

“Well, why dont you write one? Why don’t you collect all of your works together and write a book” Emma asked, almost exasperated.

“Perhaps” Mr. Englethorpe said thoughtfully. “I am not sure which of my works to select for this book. Or perhaps I am just scared no one will read it... let alone *reread* it and deem it worthy of revision. How do we know which texts will shape the future understanding of the world and which texts will fall into obscurity? Oh no! This is a risk I couldn’t take” (Larsen 190–91)

Writing is risky business. Writing a dissertation can be intimidating and overwhelming at times. There are many colleagues and friends to whom I owe my thanks for their advice and support.

First of all I would like to thank my doctoral supervisor Prof. Dr. Christoph Bode for making me part of the NAFU team. I could not have wished for a better dissertation adviser. I also must thank him explicitly for letting me be part of his chair at the Department of Anglistik and Amerika Institut at the Ludwig-Maximilians-University in Munich. The last three years were the most enjoyable working experience of my life. My thanks equally go to the NAFU research team PD Dr. Sebastian Domsch, Dr. Felicitas Meifert-Menhard and Kathleen Singles. Thank you all for the many conversations, comments and recommendations throughout the writing of this dissertation. I could not have wished for better colleagues to work with. I also would like to thank my research assistants, Sandra Steinke and Isabel Schneider, for their shared enthusiasm of all things NAFU. My special thanks go to Isabel for her continuous support. My thanks go equally to NAFU research assistant Heidrun Patzak for her patience and professional assistance.

Furthermore, I must express my gratitude to my colleagues at LMU. A very special ‘thank you’ is due to Yoshimi von Felbert, for helping me especially in the first stages of my work at LMU. I would have never managed without you. Thank you for being so generous with your advice and a great friend. I would also like to thank my other colleagues, Katharina Pink-Schniewind, Sabrina Kessler and Dr. Stefanie Fricke, for being the best work mates anyone could hope for. Finally, I owe my thanks to Prof. Dr. Katharina Rennhak for making all this possible.

VI — Acknowledgments

Last but not least, my thanks go out to my family and friends. I could not have done this without you. First of all, I must thank my parents for their constant support. Thank you for believing in me. Additionally, I would like to thank Scott Ewen for his patience and emotional support.

My thanks and best wishes go out to all of you.

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Preface

Life is a series of collisions with the future. – José Ortega y Gasset
(qtd. in Atkinson 242)

Academics in the field of film studies have traditionally approached their subject from many different angles. Their main concerns are critical writings on cinema, its aesthetics and specifics of storytelling, and the reciprocity between ideology and reception (Rieser and Zapp xxi). Although critical writings on film have examined various objects of study, their attitudes towards interdisciplinary attempts have been quite restrained.¹ This is due to the implicit agreement on what is meant by the term ‘film’.² Storytelling in ‘screen media’ (cf. Stewart 1) is mostly analyzed regardless of its medial form(s).³ On the other hand, storytelling in ‘new media’⁴ is analyzed mainly with its focus on the digital and interactive nature of these narratives. New and old media are generally analyzed separately in different academic disciplines and the digital divide is foregrounded.

During the development of this thesis, I have frequently asked myself whether the concept of ‘future narratives in film’ can be introduced as a new field for narratological research by limiting my corpus to the traditional subject of film studies. Early on I have realized that all kinds of storytelling in screen media have to be discussed in this study to sufficiently explain what Christoph Bode has coined ‘Future Narratives’.⁵ Therefore this study is neither restricted to readers who are particularly interested in film studies nor in narratology, but for everyone who is interested in understanding structures that allow for “ways of narrating

1 Interdisciplinarity is to be understood in a wider context that reaches outside of the area of the humanities and empirical social studies.

2 Of course, there are many discussions on the difference in usage between the terms ‘film’, ‘movie’ or ‘motion pictures’. Garrett Stewart, for example, problematizes the terms film and movie especially in its interconnections with the “encroachment of the digital”. He therefore talks about “screen narratives” instead of filmic narratives (cf. Stewart 1).

3 Transmedial approaches deal primarily with the medial characteristics of narratives and their impact on the provided narrative itself. However, transmedia storytelling is still regarded as a peripheral matter in film studies, although David Bordwell and Henry Jenkins provide a good source of the interconnection of these two fields of research in their online blogs and discussions. Bordwell also contributed to the compilation *Narrative Across Media* (cf. Bordwell, “Neo-Structuralist Narratology and the Functions of Filmic Storytelling” 203–19).

4 “What is new media? [...] The translation of all existing media into numerical data accessible through computers.” (Manovich 19–20).

5 What is understood by ‘future narratives’ will be discussed in the next chapter.

the future as still variable, multiple, and undecided” (Bode, *Future Narratives. Theory, Poetics, and Media-Historical Moment* Part 1). Welcome to the world of ‘future narratives in film’!

1 Concepts and Methodology

1.1 The Future in ‘Future Narratives’

Congratulations!
Today is your day.
You’re off to Great Places!
You’re off and away!

You have brains in your head.
You have feet in your shoes.
You can steer yourself any direction you choose.
You’re on your own. And you know what you know.
And YOU are the guy who’ll decide where to go.
Dr Seuss’s Oh, the Places You’ll Go!
(qtd. in Iyengar 111)

But the question is: how do you decide where to go? How do you manoeuvre yourself into the unknown open of time and space? In other words, how and by which means can the *future* be made attainable? How can it be *structured*, *mediated* and *simulated*? Or, is it actually possible to (narratively) do so? Identifying narratives that are able to convey such a fantastic concept as the future, describing their structures, en passant inventing a poetics to actually do so and drawing relevant conclusions for the field of narratology – this is the task of the *Narrating Futures* project (short: NAFU).⁶ Before focusing on the particular research area of this subproject, it is necessary to clarify a few terms, which serve as preliminary orientations for the further development of the *Future Narratives* (short: FN) concept.

First of all I want to shed a light on what is meant by ‘future’ or ‘futures’ for NAFU. The everyday use of ‘future’, as in ‘there will be a shortage of oil in the future’, automatically links this word to two ideas: it is *not now* and it is *different* from the present. The *Oxford English Dictionary* (short: *OED*) stresses several aspects of the future: first and foremost it is a temporal concept; it is related to a change of state, its nature is contingent and multitudinous⁷ (*OED*, *future*). This relates ‘future’ to theories and methods which try to make its multitudinousness and contingency manageable such as the meteorological

⁶ This subproject has to be seen in the context and in relation to the entire NAFU project and its five media-specific volumes.

⁷ Therefore NAFU carries the term in its plural form in its title as futures.

weather forecast, the calculation of probabilities in mathematical game theory and the development of disaster insurance schemes or catastrophe reinsurances (cf. Kneip).⁸ These varied disciplines predict and describe a future scenario by the use of calculations and, in a next step, by turning these figures into narratives. Before it is possible to explain the important connection of the ‘future’ and its ally ‘narrative’ in more detail, I want to investigate ‘the future’ as a concept a bit further.

The *OED* entry clearly emphasizes the future’s relation to *time*. Obviously, a “future event” and therefore a change of state that is “different from the present” can only occur when this is happening to *existents* in *space* (cf. *ibid.*). The interdependency of time and space and their relative relation to each other has been prominently described by Albert Einstein and his introduction of the term “space-time continuum⁹ or simply put *space-time*¹⁰ (cf. *OED, space-time*). In 1905 Albert Einstein and Henri Poincaré famously revealed that space and time cannot be separated (cf. Taylor and Wheeler 3, cf. Fischer 66–77). This discovery was made in connection with the idea of the ‘interval’ and the observation of the same events as seen by two observers in relative motion or in different states of motion.

Edwin Taylor and John Wheeler give an example in their introduction to special relativity in which one observer is standing quietly in a laboratory and the other one zooms by in a high-speed rocket. The two observers will find dif-

8 Scientific research on how contingency and unpredictability can be measured can also be found in mathematical chaos theory and climate change simulations (especially with regard to singularities). Christoph Bode focuses on these phenomena and their historical background in *Narrating Futures Vol. 1*. This study is mainly concerned with the actualization of FNs in film and will therefore only give a brief overview of various key concepts.

9 Mikhail Bakhtin developed his “chronotope” (lit. *time-space*) concept on that idea (cf. 15–25). Bode pointed out the importance of Bakhtin’s concept for the novel: “Wenn es aber andererseits zutrifft, dass (und man stoße sich nicht an der altertümlichen Ausdrucksweise) ‘Raum und Zeit korrelative ... epische ... Fügungskräfte sind, dann ist es vielleicht sinnvoll, sich bestimmte, historisch differenziert ausgeprägte *Raum-Zeit-Korrelationen* des Romans als Untersuchungseinheit vorzunehmen. Mikhail Bakhtin hat für solche *zusammenhängenden*, untrennbaren Zeit- und Raumbestimmungen den Begriff *Chronotopos* geprägt und, ausgehend vom antiken Roman, die wechselnden Konfigurationen von Zeit- und Raumbestimmungen bis weit in die Neuzeit hinein verfolgt” (*Der Roman* 303) Bakhtin’s chronotope is a useful tool for analyzing historically differentiated space-time-correlations in novels as Bode has shown. Nevertheless, it will be dismissed for my study on FNs to avoid any terminological (or just logical) confusion. The architecture of FNs will be explained by NAFU’s own terms, which work on a different level.

10 The concept of space-time and its implication for quantum physics with regard to narrative will be discussed in the second volume of this series (cf. Meifert-Menhard, *Narrating Futures Vol. 2*). For the time being, it should suffice to simply acknowledge the importance of the interconnectivity of both dimensions.

ferent space and time coordinates for the events relative to the same reference event, “but when they calculate the Einstein intervals – its independence from the choice of the reference frame – forces one to recognize that time cannot be separated from space. Space and time are part of the single entity, *spacetime*. The geometry of spacetime [sic!] is truly four-dimensional. In one way of speaking, the ‘direction of the time axis’ depends upon the state of motion of the observer, just as the directions of the *y* axes employed by the surveyors depend upon their different standards of ‘north’” (3)

Therefore our idea of time, and consequently our idea of the future, should be a *spatio-temporal* one and the inseparability of time and space must be reflected in any attempt to describe a future scenario. Space-time as a four-dimensional manifold is a complex notion of the entanglement of time and space.¹¹ This means that time (or to be more precise space-time) becomes ‘mapable’. Just like any map is an abstract model of an actual location that helps to navigate through space and to find possible routes (the route is again introducing a temporal aspect to the map itself), a ‘timemap’ enables the user to envision possible routes through space-time. If we look back at our own past we will have to acknowledge that there has always been more than one possible path to get to the present moment in time. Obviously, taking a different path would have changed the ‘now’ in many ways, but it would still be ‘now’. It would still be the location on the space-time map with the current temporal coordinates, even if all the others have changed for our current position. Equally, the future is also an open field and there are many possible paths through it. The recognition of the inseparability of space and time is the first assumption to be taken to understand what is meant by the term ‘future’ for NAFU.¹²

11 This is important for understanding the peculiarities of *spatio-temporal* storytelling.

12 This suggests a meaning of future that enables the subject to choose at least between two possible paths, even if the only choice is to do something or nothing. This, of course, implicitly indicates that the future is not set out. It remains undecided and open and the individual as agent can choose its path. Since this volume is focusing on narration and film the entire discussion on ‘free will’ in philosophical, neurological (cf. Bruner, cf. Tulving) and sociological (cf. Iyengar) studies will be omitted. The understanding of future for NAFU implies that it is open and undecided and that free will exists.

However, in narrative analysis¹³ a relatively simple, two dimensional and uni-linear¹⁴ model is most commonly used to illustrate the temporal succession of past, present and future, the ‘timeline’¹⁵ (cf. Rosenberg and Grafton 10–14). A timeline is an abstract visualization of the uni-linear progression of events in a chronological order as retrospectively concluded from the text; it is a means of portraying a simplified version of a uni-linear chronological progression of time. Furthermore, it is a very selective way of doing so as only those events are indicated which are attributed as being important (cf. *ibid.*)¹⁶ A timeline is like a route already taken through space. It is the tracing of an actual ‘walk’ that took place in time, and only the road taken is displayed in this reduced map of space-time. All other possible ways are ignored by eclipsing the surrounding space into one single route. Furthermore, the time displayed is already past and its progression into the future is visualized as uni-linear, ignoring the space around it. NAFU, on the other hand, is not interested in the road already taken but in the *architecture* of narratives that allow for staging openness or in other words – the future. The future is by definition undefined and multitudinous. Therefore a different kind

13 This is also common practice when analyzing film with regard to its plot and not its aesthetics (let alone its medium dependent specifics or technical peculiarities) (for example, cf. Korte 32, 34, 38, 40–41, 43). This can also be said for other spatio-temporal narrative realizations such as opera, theater and other types of performances.

14 Espen Aarseth distinguishes linear from non-linear texts (cf. “Non-Linearity and Literary Theory” 762–80). For clarifying reasons, NAFU uses the term ‘multi-linearity’ instead, since real non-linearity can only be realized in chaotic systems (as described in mathematical chaos theory). Therefore the term uni-linearity is used when Aarseth would speak of a linear text: “the linear text may be seen as a special case of the nonlinear in which the convention is to read word by word from beginning to end” (*ibid.* 762) Nevertheless, Aarseth acknowledges, just like NAFU, that fixed sequentiality is the identifying principle of such narratives.

15 Daniel Rosenberg and Anthony Grafton shed light on the beauty of such a reductionist concept as the timeline to merge past events into a stringent narrative. “What does history look like? How do you draw time? While historical texts have long been subject to critical analysis, the formal and historical problems posed by graphic representations of time have largely been ignored. This is no small matter: graphic representation is among our most important tools for organizing information. [...] Our claim is that the line is a much more complex and colourful figure than is usually thought. Historians will probably appreciate this aspect of the book fairly easily. We all use simple line diagrams in our classrooms – what we usually call ‘timelines’ – to great effect. We get them, our students get them, they translate wonderfully from weighty analytic history books to thrilling narrative ones” (10) However, when dealing with the future a timeline is only an insufficient illustrative concept since it can never display a *multitude* of futures. Other concepts are needed which will be discussed over the course of this chapter.

16 It is self-evident that the importance of events on the timeline can only be pointed out in their relation to the text itself.

of visual abstraction or 'narrative time-map' is needed to embrace that manifold. Consequently a new terminology is needed to describe this new kind of narrative architecture and its elementary units.

1.1.1 'No Future' – Past Narratives

Before it is possible to describe what 'future narratives' are, we have to ask ourselves what is actually meant by the term 'narrative' itself. Although we immediately understand what a 'narrative' is, since "it could be argued that we are story machines: processing, telling and re-telling them as part of the daily routine" (McEntaggart 3), the definitions of the term vary and this subchapter will establish what is meant by 'narrative' for NAFU.¹⁷

One way of approaching the concept is by looking at the significance and ubiquity of narratives in our lives.¹⁸ Horace Abbott points out the universality of narrative and its connection to life itself. On the first page of *The Cambridge Introduction to Narrative* he states that "[w]e make narratives many times a day, every day of our lives. And we start doing so almost from the moment we begin putting words together" (1).

Ansgar Nünning and Birgit Neumann follow Abbott by acknowledging the importance of narratives for our everyday life, but with a special focus on how these help us in terms of 'world-making' and identity formation. They have rightfully described the human as "the story-telling animal"¹⁹ in their *Introduction to Narrative Theory* (8). Nünning and Neumann elaborate their argument by listing the various narrative practices. "One might as well begin with the observation that narratives are omnipresent in literature and culture. Narratives are at work in ordering experiences, negotiating collective values, constructing versions of the past, generating knowledge and stabilising identities" (8) In contrast to the confinements of textual analysis with regard to the subject of study for most narratologists, narrative is described by Nünning and Neumann as a mainly functional

¹⁷ The terms 'narrative', 'story' and 'storytelling' are often used synonymously. For this study, only 'narrative' will be used to prevent possible misunderstandings since there is a difference in meaning between the technical narratological terms 'narrative' and 'story' (for further reference cf. Bode, *Der Roman* 81–96).

¹⁸ Narratives are essential for us. Patrick McEntaggart even reads the paintings on the cave walls at Lascaux, France from the Palaeolithic period as an example for "a basic narrative" (cf. 3). He also suggests that we spend "a huge amount of time engaged with stories", which is "part of our common humanity" (cf. 3–4).

¹⁹ Referring to Swift's novel *Waterland* as Tom Crick, the narrator characterizes man as a 'story-telling animal' (cf. Neumann and Nünning 8).

device of the human mind. With reference to Bruner and his work in the field of cognitive psychology, especially his exemplifications of the different subclasses of our memory,²⁰ Neumann and Nünning continue that “narratives are not only a literary art form but a fundamental way of organizing human experience and knowledge.” (8)

Narrating appears to be an anthropologically universal device²¹ used by humans in all cultures within a broad spectrum of pragmatic and artistic contexts for making sense of the world. Narrative is a tool for imposing means on reality and a basic strategy of coming to terms with experience and change. Our experience and knowledge are not simply given or naturally meaningful. Rather they must be ordered, articulated and interpreted – i.e. narrated – to become meaningful. It is the process of narrating experiences that gives order and direction to events that otherwise might be perceived as random, chaotic or isolated. [...] narratives can therefore be regarded as a fundamental way of worldmaking: Narratives are of paramount importance for the ways in which we make sense of our experiences and of the world at large. (8)

In other words, narratives are omnipresent since they are the only cognitive tools we have to make sense of the world around us, to organize time and to narrate our own ‘story’.²²

In this subchapter, however, I do not want to focus on the importance and ubiquity of narratives, but on the reason why narratives are commonly used to

20 For further information on ‘complex learning’ and Jerome Bruner’s “spiral” approach cf. Rost 272. Neumann and Nünning are stating but not elaborating on Bruner’s idea of ‘life as narrative’. “We organize our experience and our memory of human happenings mainly in the form of narrative – stories, excuses, myths, reasons for doing and not doing and so on” (cf. “The Narrative Construction of Reality” 1–21).

21 The nature and importance of the “universals of narrative” are discussed in Meir Sternberg (cf. “The Universals of Narrative and Their Cognitivist Fortunes”, 297–395).

22 In psychological terms this would be our autobiographical memory (cf. Mietzel 232).

describe 'past events'. Narratives, with special regard to their *story side*,^{23,24} are *retrospective, subjective reconstructions* and interpretations of a somewhat chaotic reality (cf. Neumann and Nünning 8; cf. Ryan, *Avatars of Story* 92).²⁵ This observation is crucial for NAFU, since it helps to distinguish between future and past narratives (shorthand: PN). Bode elaborates further on PNs in the first volume of this narratological series (cf. *Future Narratives. Theory, Poetics, and Media-Historical Moment* Part 1): "Most, though not all, narratives we know are concerned with past events, with something that has already happened – whether in reality or

23 Just to avoid any kind of terminological confusion I will briefly mention what is to be understood as 'story' for this study. Story is often discussed in alternative terms such as 'fabula' (Mieke Bal), 'narrated' (Gerald Prince) or 'histoire' (Gérard Genette). Bode gives a great overview over the different concepts with reference to terminology and levels of meaning (cf. Bode, *Der Roman* 81–96). Story is most often used to describe the content side of narrative ('what') as opposed to the discourse side of it ('how') (cf. *ibid.* 86). In the case of screen media the distinction between story and discourse is important in so far as the story is always mediated. Kafalenos points this out although she is preferring the term *fabula* instead of story:

"A fabula, as I use the term, is a chronologically ordered sequence of events that a perceiver constructs in response to a representation (a story, film, painting, or ballet) or to events perceived in the world; a fabula is made by perceivers. Even when events are told in chronological sequence, during the process of reading or listening the perceiver pays attention to indications of sequence and assembles for herself a chronologically ordered fabula. This same process of constructing a fabula is one of the ways we interpret a visually represented scene: a scene that like a snapshot depicts an isolated moment. Constructing a fabula is a hermeneutic procedure that enables viewers to explore temporal and causal relations among events, and between an isolated moment and prior and subsequent events and states" (138)

Emma Kafalenos points out the retrospective ordering of events into a meaningful fabula or story. Story is the preferred term for this volume. Story is always connected to the cognitive performance of the recipient as opposed to plot (in film studies) as Bordwell points out: "In a narrative film, all the events that are directly presented to us, including their causal relations, chronological order, duration, frequency, and spatial locations. Opposed to story, which is the viewer's imaginary construction of all the events in a narrative" (*Poetics of Cinema* 480).

24 Furthermore, it shall be remarked that the entire discussion of the 'story' being the 'deep structure' of a text which is extremely popular in transmedia studies (cf. Ryan, *Avatars of Story*) shall be disregarded here. To reword the position of Bode (cf. *Der Roman* 81–96) the story is not like a cloud from which all the possible "discourse strips are raining" but there is nothing outside the discourse. A story does not exist before you 'read' it. Especially with regard to NAFU, the architecture of a narrative is interesting but not in terms of its 'deep structure' as story but in terms of its structure for possible paths through the narrative.

25 The meaningful sequencing of events and their abstraction as story can therefore be, of course, presented as a timeline. Since a timeline is always representing the past and the selected events on the timeline are retrospectively selected and evaluated as meaningful.

purportedly, i.e. in fiction. Such PNs endow events with meaning by discursively aligning them with other events, thereby suggesting a meaningful story.”

That means, at least two events that are *causally* linked are the core of any PN. To retrospectively interpret events to be interlinked in such a way helps us to understand a story. This directly relates to a more general idea of ‘narrative’, since it is the only cognitive tool we have to generate meaning:

[...] for *meaning* is exactly the stuff that is *produced* when two events are linked to each other. Two isolated, unconnected events do not have any meaning whatsoever. Two linked events have meaning. The meaning resides *in the connection*, and rightly so: because it is there that narrative energy was invested – in the bridge, in the binding power that connects those two points, like the cohesive power that binds atoms to form a molecule. (Bode, *Future Narratives. Theory, Poetics, and Media-Historical Moment Part 1*)

The retrospective, cognitive construction of those past events into a uni-linear progression, into a storyline, has hence to do with our cognitive ability to create meaning and identity from a complex and chaotic ‘reality’: “[M]emory itself is dependent on the capacity for narrative. In other words, we do not have any mental record of who we are until narrative is present as kind of armature, giving shape to that record” (Abbott, *The Cambridge Introduction to Narrative* 3) It is humankind’s only armature, or tool, for making sense of our lives by shaping our own biography into a narrative. This relates to Paul Ricœur’s concept of ‘human time’: “The world unfolded by every narrative work is always a temporal world. Or, as will be often repeated in the course of this study: time becomes human time to the extent that it is organized after the manner of a narrative; narrative, in turn, is meaningful to the extent that it portrays the features of temporal existence” (Ricœur 3; qtd. in Abbott, *The Cambridge Introduction to Narrative* 4) And vice versa, narratives are shaped, whether fictional or factual, in the same way as we perceive of time, reality and our own history – mostly as uni-linear, causally linked and meaningful.^{26,27} At least this is suggested by PNs. However, it would

26 Of course, contemporary fiction as realized in postmodernist narratives goes very much against the notion of a meaningful and structured reality. In textual fiction, but also in cinema, as the likes of Peter Greenaway have shown time and again, the causally linked sequencing of events is exchanged for, for example, Greenaway’s ‘lists’ as shown in *The Pillowbook* or other strategies that want to do away with the narrative cinema of Hollywood. These strategies can be mainly observed in art cinema.

27 “But in case this sounds a bit too complacent: if indeed narrative can be regarded as the transformation of actual or imminent contingency into the semblance of (narrational) necessity, then this production and establishment of meaning always, and inevitably so, takes place against the backdrop of the possibility of sheer meaninglessness, over an abyss of futility and of the absurd – most prominently so if the possibility of failure or breakdown in the produc-

be too inconsiderate to assume that “narrative is the principal way in which our species organizes its understanding of time” (Abbott, *The Cambridge Introduction to Narrative* 3), if time is only to be understood as ‘past’.

As a matter of fact, any commentary of a football match is happening in the present²⁸ and therefore it is possible to narrate what Bode has called ‘present narratives’.

But to shift from the existential level to the more mundane and quotidian, and from past to present narratives: Imagine a football reporter on the radio. It is a live reportage. He reports what he sees. The slight delay of a couple of seconds should not hinder us from saying: he tries to narrate events while they’re happening. Anything else would be splitting hairs. Not only as our reporter pauses and summarizes does he give shape to his story – already as he describes the moves of one team against the other, the passes, shots and counter-attacks, he fabricates a story. The crazy thing is that he himself does not know how it will end. That’s part of the excitement – of his and of ours. And what form or meaning his narrative will take or attain, respectively, will depend not only on his skills as a live reporter, but also on his partisanship: one reporter’s tragedy is another’s triumph (even if, and that is the point, the facts of the match should be non-controversial – which they rarely are). (*Future Narratives. Theory, Poetics, and Media-Historical Moment* Part 1)

This discovery opens the gates to the subdivision of the broad term narrative into subclasses depending on the presentation and relation of ‘temporal existence’, how temporality is staged and structured in the narrative discourse and what the consequences are for the fundamental principles of narrative: events and sequence; and its attributive functions: meaning and causality.

Nevertheless, this subdivision can only take place without any confusion, if it is clear what is to be understood as narrative. Abbott defines narrative as follows:

Narrative:

The representation of a story (an event or series of events). Some scholars have argued that there cannot be a narrative without someone to tell it (a narrator), but this view would exclude most drama and film, which, though they present stories, usually do so without a

tion of meaning becomes thematic and is thereby being foregrounded” (Bode, *Future Narratives. Theory, Poetics, and Media-Historical Moment* Part 1)

28 Marie-Laure Ryan makes a similar observation by referring to it as “narrative in real time” (*Avatars of Story* 78). She analyzes the commentary of a baseball game and distinguishes “real time” telling from “retrospective telling”, in what she calls “a game-story” which is retrospectively constructed in the memory of the listener or “by the broadcasters in the postgame show” (ibid. 91–92). Ryan, however, focuses on the ‘story’ side while Bode insists on the prevalence of the discourse for establishing ‘present narratives’. Therefore, I will follow Bode in my argumentation since I am interested in FNs with narrative architectures that do not elude from some kind of ‘deep structure’ that seems to be rooted in Ryan’s understanding of the term ‘story’ (cf. *Avatars of Story* 93).

narrator. Narratives consist of two main components: the story and the narrative discourse. (*The Cambridge Introduction to Narrative* 237)

Thereby it becomes clear that we need a broader concept of the term narrative to cover its subclasses. Therefore Bode suggest an even wider definition:

Up until now, it has been comparatively safe to say, we speak of narration when at least two events are linked together in a language (note that this definition is wide enough to include, for example, the visual language of movies; basically, any sign sequence that be read as conforming to a message-code dialectics can be addressed as happening ‘in a language’) – ‘at least two’ because the mere statement of an isolated fact is not yet a narrative; and ‘linked together’ because the mere statement of two unconnected facts doesn’t constitute a narrative either. *Narrative is the linguistic and mental linking of events* [emphasis added]. (*Future Narratives. Theory, Poetics, and Media-Historical Moment* Part 1)

In contrast to Abbott, Bode refers to narrative without restricting himself to the terms ‘presentation’ or ‘representation’ but by shifting the focus on the *linkage* of at least two *events*. This also means that we can talk about “event as the elementary or smallest unit of narratives” (Neumann and Nünning 1).²⁹ This definition is also medium-independent (although it must be clear that medium sensitivity does always come into play when analyzing a particular narrative). This linkage has a certain temporal flexibility, since it is possible to create past and present narratives. Consequently it comes as no surprise that we as humans have the cognitive ability to construct special kinds of narratives that are neither situated in the past (the events have already happened) nor in the present (the events are

²⁹ Neumann and Nünning give a short overview of the major definitions of narrative in connection with the term ‘event’.

“In recent endeavours to delineate narrative, the concept of event as the elementary or smallest unit of narratives has become prominent. Accordingly, narrative has been defined [...] as the recounting of at least two real or fictive events, neither of which logically presupposes or entails the other (Prince, Rimmon-Kenan), as a series of statements that deal with a causally related sequence of events that concern human, or human-like beings (Cohn), and as a representation of a series of causal events or situations not limited to human agents or anthropomorphic entities (Richardson). In all of these cases, events are understood as a ‘significant incident’ and involve a change of state (cf. Prince 2003 [1987] 28). Hence, to be characterised as a narrative, an event-sequence must entail some kind of notable – i.e. ‘tellable’ – ‘disruption of an initial state of equilibrium by an unanticipated and often untoward event or chain of events (Herman 2007b:10). In typical narratives the action contains a conflict which forces agents to overcome obstacles and to take conscious decisions about how to achieve their aims. Typical narratives focus on the unexpected, the unfamiliar, the dangerous, the secret or the prohibited. A frequent effect of narrative is therefore the creation of suspense” (Neumann and Nünning 11)

happening at the very moment). Cognitive psychology refers to this as a special case of causal thinking, i.e. *counterfactual thinking* or the ability to create scenarios with alternate events or outcomes. This ability enables humans to infer attributions to a chain of events, mainly to be able to change future related cognitions (cf. Rost 351).

Other interdisciplinary approaches which focus on the human ability to project events into the future come from economics and philosophy. The connection of these is exemplified by Annie McClanahan in *Salto mortale*.³⁰ She tries to shed light on the connection between narrative, the future and speculation by arguing that 'speculative' finance has transformed how we relate to the past, and ultimately, how we imagine the future since speculation as a cognitive as well as a financial act creates a future both uncertain and imminent (cf. 1). In her study on the importance of narrative for financial speculation she outlines how our concept of 'chance' is born from the insurance industry.³¹ McClanahan stresses the possibility of translating the future, especially by stressing its speculative nature, into narrative: "As a mode of linking the present with the to-come, the real with the unreal, speculation is also an imaginative and narrative act" (1).

However, since the future is by definition uncertain and multitudinous, the narrative itself cannot be constructed as a uni-linear chain of cause and effect. This is only retrospectively possible. Therefore we need a new model to narrate the future or, in other words, to trace the many different, not yet actualized paths on the time map.

1.1.2 Mapping the Future

The human mind is capable of constructing mental simulations to 'tell' the future,³² mainly by 'cognitively staging' different outcomes or alternate events. Therefore it can rightfully be asked if narratives exist, which are able to do the

³⁰ Karl Marx describes financial speculation as a *salto mortale*, or fatal leap, into the unknown (cf. McClanahan 16).

³¹ The historical perspective of the term will be discussed in broad detail by Bode in volume 1 of this series (cf. *Future Narratives. Theory, Poetics, and Media-Historical Moment*. Part 1).

³² It should be clear that I am not referring in any way to predictions or prophecies. 'Telling' the future simply means that the human mind is able to construct scenarios cognitively. Those scenarios are able to simulate a certain degree of 'openness'. "What happens – and we are slowly approaching the future now – when somebody tries to tell neither what has already happened nor what is happening right now, but the future? Not like a fortune-teller who reveals events that are (purportedly) pre-destined and pre-determined, not like some latter-day Nostradamus, but like somebody who imagines a future and tries to tell us a story about what is not (yet), about

same. Such narratives would have an architecture which makes it possible to narratively stage or simulate ‘openness’, for example by enabling different outcomes.

Just as we view the past as a narrative, that is, as a series of events which can (and must) be connected through narration in order to make ‘sense’, it can be suggested that we think about the future in narrative terms as well (in fact, can only think about it in these terms).

The future or any idea about it is constructed in our minds from what we know of the past and the present. It could thus be regarded as a ‘narrative projection’. We use our knowledge about the past to imagine future occurrences, which are, in turn, structured narratively.

Terms like ‘scenario’, ‘prediction’, ‘counterfactual thinking’ etc. all imply the presence of a narrative, since they are, in some sense, “stories” about the future.

Resulting from this, future and narrative, when regarded in the context of cognitive processes and reception, may not be as contradictory as they first appear to be (NAFU Wiki).³³

In other words, some narratives are created by using the human cognitive ability to think something that is not (or not yet). Bode identified this potential subclass of narratives as ‘Future Narratives’ (short: FN):

‘Narrating Futures’ is about a new, hitherto unidentified kind of narrative. [...] the key feature this new kind of narrative [...] is: it does not only *thematize* openness, indeterminacy, virtuality, and the idea that every ‘now’ contains a multitude of possible continuations. No, it goes beyond this by actually *staging* the fact that the future is a space of yet unrealized potentiality – and by allowing the reader/player to enter situations that fork into different branches and to actually *experience* that ‘what happens next’ may well depend upon us, upon our decisions, our actions, our values and motivations. (*Future Narratives. Theory, Poetics, and Media-Historical Moment* Part1)

It is the task of this project to identify narratives that are able to stage the future and to preserve its characteristic as future by conveying its openness in the narrative structure. “It might therefore be said that these narratives *preserve and contain* what can be regarded as defining features of future time, namely that it is yet undecided, open, and multiple, and that it has not yet crystallized into actuality. It is by virtue of their capability to do exactly this – to preserve the future as *future* – that these narratives are here called ‘Future Narratives’” (ibid.)

things as they could be, about events as they might possibly occur” (Bode, *Narrating Futures Vol 1*. Part 1).

³³ The NAUFU Wiki is a consecutively developed database created by members of the NAUFU research team. As of now, there is only restricted access.

Before this subclass can be defined in opposition to PNs, I would like to give a well-known example of a literary text which does famously thematize (future) time as multiple and therefore as undecided and open, although this openness is not conveyed in the structure of the text itself.³⁴ Hopefully, this will clarify what is to be understood by “the future is a space of yet unrealized potentiality”. This famous short-story is, of course, “The Garden of Forking Paths” by Jorge Luis Borges (29–34).³⁵ Borges constantly tried to reshape our understanding of time and causality in his many writings, f.e. *Ficciones* (1944), “The Library of Babel”, “The Book of Sand” and *The Aleph* (1949). Especially in the “The Garden of Forking Paths”, time is portrayed as multiple, multi-linear, playful and infinite.

Borges' short-story takes the form of a signed statement by a Chinese professor of English named Dr. Yu Tsun, a spy for the German Empire, who lives in the United Kingdom during World War I. He knows his arrest is near. Nevertheless he has to convey a piece of information to Germany about the location of a British artillery park. Narrowly escaping his pursuer Captain Richard Madden, Tsun reaches the home of Dr. Stephen Albert, who is an esteemed Sinologist. Tsun and Dr. Albert talk about Tsun's famous ancestor Ts'ui Pên, who gave himself to accomplish two tasks: to write an intricate novel, and to construct an infinite labyrinth. However, Ts'ui Pên was murdered before completing his novel, leaving behind only inscrutable drafts. The labyrinth was never found. Yet Albert explains to the author's descendant Tsun that he has solved both mysteries – the enigmatic nature of Ts'ui Pên's unfinished book and the mystery of his lost labyrinth. He claims that both are one and the same – the book is the labyrinth:

Albert continued: ‘Before unearthing this letter, I had questioned myself about the ways in which a book can be infinite. [...] In the midst of this perplexity, I received from Oxford the manuscript you have examined. I lingered, naturally, on the sentence: I leave to the various futures (not to all) my garden of forking paths. Almost instantly, I understood: ‘the garden of forking paths’ was the chaotic novel; the phrase ‘the various futures (not to all)’

34 Therefore this short-story does not qualify as a FN itself.

35 The ubiquity of this short story is due to its relevance for interactive media such as hypertexts. Chris Monfort called “The Garden of Forking Paths” “a novel that can be read in multiple ways, a hypertext novel”. Borges described this in 1941, prior to the invention (or at least the public disclosure) of the electromechanical digital computer. Not only did he invent the hypertext novel – Borges went on to describe a theory of the universe based upon the structure of such a novel. Then he sketched out, in the actions of the protagonist, one particular existential philosophy which motivates action within this universe, a universe in which “everything that is possible does indeed occur in some branch of reality” (Montfort 29) Although “The Garden” is hardly a novel but a short-story, its relevance for interactive fiction cannot be denied. Nevertheless, the discussion of medium sensitivity with reference to FNs will be discussed at a later stage in this book.

suggested to me the forking in time, not in space. A broad rereading of the work confirmed the theory. In all fictional works, each time a man is confronted with several alternatives, he chooses one and eliminates the others; in the fiction of Ts'ui Pên, he chooses – simultaneously – all of them. He creates, in this way, diverse futures, diverse times which themselves also proliferate and fork. Here, then is the explanation of the novel's contradictions. Fang, let us say, has a secret; a stranger calls at his door; Fang resolves to kill him. Naturally, there are several possible outcomes: Fang can kill the intruder, the intruder can kill Fang, they both can escape, they both can die, and so forth. In the work of Ts'ui Pên, all possible outcomes occur; each one is the point of departure for other forkings. Sometimes, the paths of this labyrinth converge: for example, you arrive at this house, but in one of the possible pasts you are my enemy, in another, my friend.' (33)

Although the frame narrative of this short story is interesting, I want to shed the light on Borges' idea of Ts'ui Pên's novel. In opposition to most fictions in which a character chooses one alternative at each decision point and thereby eliminates all the others, "The Garden of Forking Paths" attempts to describe a world in which all possible outcomes of an event occur simultaneously, each one itself leading to further proliferations of possibilities. Additionally, these constantly diverging paths do sometimes converge again. As Montfort pointed out, Borges combined with the description of a "chaotic novel" the concepts of "book and maze" and therefore a text "that can be read in multiple ways" by allowing a branching in time thus creating "diverse futures, diverse times which themselves also proliferate and fork" (29). Hence, the distinguishing feature of FNs, which separates them from past and present narratives, is given in the title of Borges' short-story "The Garden of *Forking Paths*" – *narratives that allow for more than one continuation*. In contrast to PNs these narratives are *undecided, open and multiple*. This, of course, has vast consequences for the concepts of linearity and causality, which serve as the main building blocks for PNs. If these are shaken, we have to adjust our acuties by focusing again on "the elementary or smallest unit of narratives" (cf. Neumann and Nünning 1) namely the 'event'.

By way of contrast, Future Narratives do not operate with 'events' as their minimal units. Rather, their minimal unit is at least one situation that allows for more than one continuation. We call this a 'nodal situation', or a 'node', for short. Between these nodes (if a Future Narrative has more than one node – before and after the node, if it has only one) we still find events, linked with each other in normal narrative procedure (whatever may be called 'normal'), but they are not what defines a Future Narrative as Future Narrative. That is the node. The node is what Future Narratives have – and other kinds of narrative have not. If they can produce a node, they're welcome to the club. But only if. A node is the *differentia specifica* of a Future Narrative. (Bode, *Future Narratives. Theory, Poetics, and Media-Historical Moment* Part 1)

It has to be said once more that FNs do not challenge the concept of narrative in general – after all, they are called future *narratives*. The aim of the NAFU project is to identify and analyze a certain subclass that works with nodes as elementary units instead of events. A text can only qualify as a FN if it displays at least one *nodal situation*. This also means that it is now possible to define the term 'future narrative': "We defined Future Narratives (FNs) as narratives that have at least one nodal situation or node. A node – just to remind you – is a situation that allows for more than one continuation" (ibid.)

The core feature of FNs is their nodal structure. This idea can also be applied to our concept of future(s) in general, since every moment in time offers the possibility of more than one continuation or, in other words, each moment is a nodal situation. This assumption can only be made if concepts like pre-determination and providence are excluded. Otherwise, the future would not be undecided and open, it would be a not yet actualized chain of events which are arranged in uni-linear sequentiality.

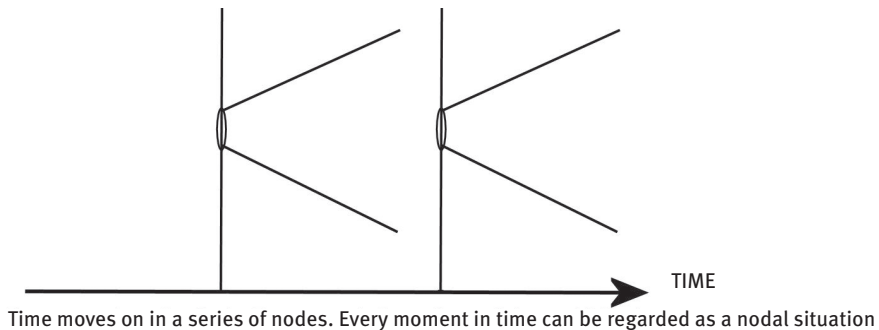


Fig.1: Time as a Series of Nodes

Figure 1 shows time's arrow as a horizontal line and any present moment in time as a vertical line intersecting with time's arrow. The oval placed on the vertical line is representing a nodal situation. Instead of one event linked with another, each nodal situation (or in this case, each present moment) opens a *horizon of options* for future consequences (the German 'Konsequenzenraum' embraces this notion fittingly). In other words, every present moment opens a yet unspecified field of 'potentiality'.³⁶ Just as indicated in the title of Borges' short-story, the nar-

³⁶ At this present moment, for example, the reader will find herself in a nodal situation where she can decide whether she wants to continue reading, stop reading, skip a few pages, etc. All these possibilities are the potentiality that this node is charged with.

rative architecture of FNs is multi-linear. Of course, this has direct consequences for the concept of causality that is required in most stories to link one event to another. It exposes the fragility of the concept itself and of the sheer illusion of its necessity.

We are agreed that the effect of past narratives is to enforce the idea of causality. By presenting a linear series of events *after they have happened*, past narratives imply *structurally* (though they might argue differently on a semantic level) that they could *only* have happened this way, that is, events happened by necessity. Now, future narratives structurally break the necessary connection between two events by allowing for more than one continuation during a nodal situation, weakening or even destroying the emphasis on causality. The question is, with what do future narratives substitute this grounding in causality? The opposite of causality would be randomness, the absence of any causal relation. (Bode, *Future Narratives. Theory, Poetics, and Media-Historical Moment Part 1*)

FNs cannot abandon the idea of causality completely. But the causality is transferred to a different level. Whereas the *causal linking* of events is the only way to achieve narrative coherence in PNs,³⁷ FNs challenge this convention by introducing a nodal situation. A node always bears the potentiality for more than one continuation. It thereby unhinges the concept of causality. A chain of cause effect means that there can be only one possible continuation, the actualized one. This is why PNs are absolute. The character might imagine a different outcome, but there is always only one path actualized in the narrative. All the effects lead to one outcome only which leaves the reader with the feeling that ‘it just had to be that way’.³⁸ FNs challenge this absoluteness of PNs by unveiling the work mechanics of the causality principle:

The prime reason why they [narratives] work so amazingly well is that it is ridiculously simple to link two events and give them a semblance of coherence, a semblance of cause-and-effect nexus. Often, the mere indication of a temporal sequence – first this, then that – is enough to trigger the idea that maybe this sequence is not only a coincidence, but that the two events are causally related. In fact, as David Hume argued, that is how the (illusionary) idea of causality is formed in the first place: we observe an event following upon another

37 Exceptions to this are postmodern narratives. These types of narratives, however, challenge causality by challenging what is commonly understood as narrative in general. FNs, on the other hand, are not trying to abandon what is to be understood as narrative. This subclass is just *structurally* different from past narratives. This is the reason why I do not consider postmodern films by directors like David Lynch and Peter Greenaway.

38 Of course, as soon as a node is actualized it implodes into an event. Those events do not differ from events in past narratives. Consequently, the retrospective principle of causality is working again. But as long as the potentiality of a nodal situation is not actualized there is always more than one possibility.

with sufficient frequency, and then conclude – without any logical legitimacy – the two are connected by necessity, as cause and effect: an unwarranted assumption, which, however, seems to have had some survival value for our species. (ibid.)

This illusion of causality is one of the main principles of visual storytelling in film and other spatio-temporal media.³⁹ Since a story cannot be mediated through a narrator, the mere temporal sequentiality of presented events triggers our innate tendency to directly link the observed images to another; even if there is no other reason to do so apart from their successive presentation.⁴⁰ “So, in narrative the causal connections between the events need not be explicitly stated at all: it’s enough for them to be implicit, to be possible, to be plausible.” (ibid.)

FNs, however, challenge the concept of causality by substituting a uni-linear chain of cause and effect for a multi-linear array of possibilities. FNs challenge the traditional understanding of what makes a narrative in such a profound way that it may well be asked whether these multi-linear architectures can still be called narratives. Of course, they are narratives since they are called ‘Future Narratives’. But more importantly, narratives are experienced as temporal phenomena. And since the mere temporal ordering is enough to associate two events in screen media as causally linked, the time-space continuum is *only* unhinged in

39 Graphic novels are related to films due to their spatio-temporal nature. Thierry Groensteen calls the iconographic iteration the coherent thread that binds the panels in comics narratively together: “Die partielle ikonische Iteration gehört zu den Zwängen, deren Identifizierung gelegentlich Schwierigkeiten macht. [...] Ist denn das, was in einer gezeichneten Sequenz Erzählen überhaupt begründet, nicht gerade die Tatsache, dass jedes Bild etwas vom vorausgegangenen bewahrt (somit die Kohärenz des Geschilderten, den roten Faden gewährleistet) und zugleich einem Metamorphoseprozess eingegliedert ist” (Groensteen 189; qtd. in Mahne 67). As long as we talk about stories in comics that coherence is, of course, nothing other than visually implied causality.

40 Apparently, this is precisely why the complex cinema of, for example, Lynch and Greenaway, who are both also painters and work therefore with the simultaneous presentation of visual elements instead of their succession, questions the concept of chronology, causality and, hence, the nature of *narrative* cinema itself. “I don’t think that cinema is a very good narrative medium. I think if you want to tell a story you should be a writer – it’s far more powerful [...]. Now is the time I think we should dump narration, we should no longer simply slay the whole vocabulary of cinema for the whole purpose of telling stories. I’m not against narrative, I enjoy storytelling. I do think that cinema has so much to offer outside the slavery of narrative.” (Greenaway quoted in Hawthorne) Greenaway introduced for example the concept of “lists” to his “A” film *The Pillowbook* (1997). Like the ancient Pillow Book of Sei Shonagon, which consisted mainly of lists, the film used its visual power to juxtapose (moving) pictures in a list like manner to create a new kind of cinema. Causality, again, is a mere illusion for Greenaway, which can be retrospectively inferred from the continuity of the film, but this is not objective of art cinema. Nevertheless, the reduction of causality challenges the concept of narrative in total.

the nodal situation. There is no temporality inscribed into the nodal situation itself, only in its continuations. And that is why any FN is, of course, a narrative. A nodal situation may lie outside the cause-and-effect chain of events, but a node is not a narrative. It is just an element. It is only the continuation of a node that changes its state of matter from virtual potentiality (node) into actuality (run).

However, so far we have only *stated* that FNs exist. To verify this hypothesis it is crucial to transfer this idea to concrete examples. I would like to start with a negative comparison: the future is not a science fiction novel. It has to be pointed out again that the NAFU understanding of ‘future’ is mainly a structural and not a utopian or dystopian one. Stories that take place in the future do not necessarily offer a nodal situation, nor do FNs have to be set in the future. For example, H.G. Wells’ novel *The Time Machine* (1895) takes place in the past, present and future with reference to the diegetic framework of the storyworld, nevertheless it does not qualify as a FN. Here is the beginning of chapter seven:

Now, indeed, I seemed in a worse case than before. Hitherto, except during my night’s anguish at the loss of the Time Machine, I had felt a sustaining hope of ultimate escape, but that hope was staggered by these new discoveries. Hitherto I had merely thought myself impeded by the childish simplicity of the little people, and by some unknown forces which I had only to understand to overcome; but there was an altogether new element in the sickening quality of the Morlocks – something inhuman and malign. Instinctively I loathed them. Before, I had felt as a man might feel who had fallen into a pit: my concern was with the pit and how to get out of it. Now I felt like a beast in a trap, whose enemy would come upon him soon. (35)

A utopia or dystopia may be set in the future, but it does not make a FN since the narrative architecture is a uni-linear sequence and there is no nodal situation. In other words, if the narrative structure can be simply visualized by a uni-linear graph, it cannot be a FN. Whether a novel is set in the future or written in future tense or future subjunctive, that is of no relevance – if there are no nodes then openness cannot be inscribed into the structure and therefore such a narrative does not qualify as a FN.

FNs, on the other hand, stage situations which preserve and contain the main features of the future: its openness, undecidedness and multi-variance. The future is *in* the structure. And so far, these kinds of narratives have not yet been acknowledged as a narrative subclass in its own right. These new narratives do not necessarily reflect the concept of ‘future’ in the *content* of the story world, as in for example H.G. Well’s novel, but they preserve the openness and structure of future time.

Strange as it may seem, FNs are no exotic specimens, which can hardly be found in our everyday life. They can be found everywhere. Probably the best

known example of a multi-linear story comes in the form of a children's book, or for this study in the form of a DVD, the famous Choose-Your-Own-Adventure-Stories (short: CYOA): "*The Abominable Snowman* is a 2006 animated interactive DVD movie, based on the Choose-Your-Own-Adventure gamebook of the same name by R. A. Montgomery. Viewers make choices every 3–6 minutes using their DVD player remote control to determine what happens" (Doucette) The producer Jeff Norton aspired to create alternate story paths and declares on the cover of the DVD that there are "over eleven possible endings" (cf. *ibid.*). There is no need to go deeper into the content of the story, in which the North siblings Benjamin, Crista and Marco must rescue their missing Uncle Rudy. Although there is a difference in character and story developments, "the alternate paths still obey the rules of the fictional world" (cf. *ibid.*). Although there are alternate paths and endings, one could argue that the individual reception of the story is still uni-linear. The actual 'playing' of the CYOA always results in only one actualized possibility. However, this is no contradiction to the FN concept itself. A nodal situation must have *the potential* to lead to more than one continuation. Once the node is *performed* by choosing (in this case either the right or left arrow key on your remote control), the story continues just like any PN. But when the same nodal situation is revisited (by playing again), it is possible to choose differently. Then this path is again actualized in a uni-linear way till the next decision point. In other words, these points or nodal situations produce the *precondition* for experiencing a FN as narrative by *transforming* the potentiality that is inscribed into the architecture into actuality. The viewer can only perceive such a FN as narrative once that transformation has taken place.

However, mapping out the narrative structure of such a DVD clearly shows a spatial spreading out of narrative time. Another CYOA by the name *The Scourge of Worlds*, which essentially works along the same lines as *The Abominable Snowman*, emerged from the vast *Dungeons and Dragons* franchise in 2004. This CYOA shows a wide range of continuations from ten major and more than thirty minor nodal situations. The hierarchically organized structure and its nodal architecture have been traced out by Alan DeSmet "on a map of all the choices you can make" (cf. DeSmet). One look at his map makes the spatiality of the narrative structure instantly understandable. FNs always display an architecture that can be visualized as a map. In this case, and in most FNs, the architecture resembles a hierarchically organized decision tree.

Often the simplest examples shed light on the most complicated phenomena. Clearly, FNs like *The Abominable Snowman* and *The Scourge of Worlds* convey certain aspects of 'future' in their structure, which is multiple, undecided and open. Of course, the individual reception of a CYOA is always uni-linear. The interactive decision points only stage their potentiality as long as there is no deci-

sion made. Otherwise the potential of two different alternative paths turns into the actuality of one chosen path, which is presented on the screen. However, *The Abominable Snowman* is a FN none the less since the architecture of the narrative displays various nodal situations (you can either choose one path or the other) and offers eleven possible endings. Once again, the future is in the nodal architecture. Additionally, the very fact that FNs can even be contained in a children's book and/or a DVD exemplifies two characteristics of a hitherto unidentified subgroup of narratives: their ubiquity and their occurrence in different media.

You can find such narratives in print, you can find them in movies, you can find them in computer and online games, you find them in sophisticated simulations of complex real-life processes, in scenarios used by insurance companies and world climate change experts, by peak oil aficionados, politicians, and communicators. They are everywhere. They cut across all media and genre boundaries, they cut across the dividing line between fact and fiction, between the actual and the virtual. As I said: they are everywhere. (Bode, *Future Narratives. Theory, Poetics, and Media-Historical Moment* Part 1)

Of course, a CYOA has a far simpler structure than a climate change scenario. Nevertheless, the basic FN components, the building blocks so to say, are essentially the same. When we want to talk about something that is yet uncertain and we want to stress the possibility that it can go either way, we need a different kind of narrative to stage that potentiality.

Accordingly, we need new means to describe those structures that make FNs. The elementary units of FNs are *nodes* (or nodal situations) and *edges* (what happens between the nodes, i.e. the possible paths), which are different from the minimal requirements of PNs. PNs, just to refresh our memory, are made of at least two *events* that are linked together. And this is exactly the distinguishing feature between future and past narratives. Their *elementary building blocks* differ in their specifics and therefore the basic structures of the narrative subgroups differ, too. Accordingly, the consequences for causality and other concepts that mark the coherence and contingency of a story are affected profoundly.

The architecture of a PN can always be realized as a uni-linear timeline. Even if we take into account all the events that had to happen to lead to one crucial event in the story world, it is still a chain of events. And this only reinforces the illusion of determinacy – all those different things *had to* happen to lead to *this* moment in the story. It is not the exploding of the narrative structure from a node into an array of possibilities, but conversely the imploding into one singular event in a PN. Classic narrative cinema such as the romantic comedy *Sleepless in Seattle* stresses the back-story of the character Sam Baldwin (played by Tom Hanks). Retrospectively the loss of his wife, Maggie, is the cause for the development of the love plot. Additionally, the role of chance and destiny is stressed by the acci-

dental meeting of Sam and Annie (played by Meg Ryan) at the airport, without them consciously recognizing each other, and their futile attempts to officially get together in the further course of the story. They seem to be destined for each other although they have never seen the other person in real life before. Annie only knows Sam's voice from the radio. However, all their plans to meet each other are futile until (and what are the odds?!) they meet each other on the observation deck of the Empire State Building in the last scene of the movie.

The film stresses the role of chance, as it could have been very likely that due to bad timing they would never have met, but also the role of destiny: all this had to happen so they meet on the platform of the Empire State Building just to exit in the enclosed space of an elevator together.⁴¹ This is a classical Hollywood happy ending if there ever was one.

Bode has already exemplified the tendency of narrative to transform chance and coincidence into an illusion of necessity in *Der Roman* with special focus on autobiographical and other 'realistic' fiction. These kinds of narratives focus on all the imponderabilities that had to happen to come to a certain moment in the story. Although this selection gives the appearance of 'fate', 'fate' is just a narratively constructed illusion:

Für die Sinn-Erzeugung und Bedeutungs-Stiftung ist es wesentlich, dass es eigentlich keine Zufälle geben darf, vom Ende des Tages her betrachtet. D.h. natürlich wird generell anerkannt, dass es Zufälle gibt, aber die werden rückblickend erzählerisch in eine Kette von Ursachen und Folgen transformiert, wodurch dann eine Illusion von Schicksalhaftigkeit erzeugt wird. [...] Basis solcher Erzählungen, die rückwärtsschreitend Kausalfäden verfolgen, um das Jetzt als logisch-zwingende Folge alles Vorhergegangenen ausheben zu können, ist selbstverständlich das Kausalitätsprinzip (keine Wirkung ohne Ursache, keine Ursache ohne Wirkung), in der Überspitzung: der Determinismus. Der Determinismus hat aber die Eigenart, dass sein Wirken immer nur retrospektiv, erst nachdem etwas eingetreten ist, nie jedoch vorausschauend festgestellt werden kann – sonst könnte ja jeder die Zukunft vorhersagen. [...] Diese retrospektive Auswahl wird in realistischen Erzählungen gern verdeckt durch die Nennung einer Fülle von Details und Umständen, deren Relevanz für die Erzählung nicht immer gleich einsehbar ist, die aber, gerade in ihrer Häufung, Wirklichkeitsnähe vortäuschen können. Mit anderen Worten: Über Selektion wird Folgerichtigkeit suggeriert, über einen 'Überschuss' an Umständen der Anschein von Realität. Das Verhältnis beider Größen zueinander variiert. (19–20)

⁴¹ This, of course, is the visual translation of the above described tendency of PNs to collapse into a singular event. Although this movie plays with the viewer's expectations in the main part of the film by suggesting that the story might develop one way or the other, the ending is set in an elevator. The characters cannot escape from this space, once the doors are closed and it is set into motion. This matter of transport also knows only one direction, once the button is pushed. This is also why *Sleepless in Seattle* is a filmic metaphor for the work mechanics of PNs par excellence.

However, it is not just Hollywood cinema and ‘realistic’ fiction that is prone to make use of this narrative illusion, examples can also be found in the independent cinema sector as, for instance, in the multi-perspectival episodes in Quentin Tarantino’s *Pulp Fiction*, Akira Kurosawa’s *Rashomon* or Greg Marck’s *11:14*. Also omnibus films like *Paris, Je t’aime* show a culminating tendency. *Paris* is an anthology film starring an ensemble cast of actors. The two-hour film consists of eighteen short films set in the different arrondissements of Paris. To emphasize its fragmented nature the movie is also directed by twenty-two filmmakers. The film shows successively in episodic intervals the simultaneous developments of different characters in the same space and time frame.

The events in those films can only be actualized in the viewing process one after the other, but they can occur simultaneously in the diegetic timeframe of the story world. Instead of an ever-branching arborescent structure, or a tree diagram, we have the opposite here, a converging cluster of events which have to lead to the exact same point in the story world. In other words, all these events had to happen to come to a certain moment in the story. Causality and necessity are implied here. Those *events had to happen*. Other paths might be imagined or actualized through (filmic) conditional but essentially “your path ends here”,⁴² in a point of convergence, for example, at *11:14* or on the observation deck of the Empire State Building.⁴³

The architecture of FNs, on the other hand, is the *reversible figure* of those PN structures. Instead of an inevitable point of convergence, or a converging situation, various continuations can be realized. From a nodal situation the diversification of several parallel developments becomes possible. This is a less deterministic constellation. Causality and necessity are called into question as the guiding principles of the story development but the openness and alternate

⁴² This quote is taken directly from *The Scourge of Worlds* when the viewer has chosen a continuation from a nodal situation that ends badly. This ‘game over’ situation is marked by the words “your path ends here”. However, the viewer can always return to the formerly visited nodal situation again to change her decision.

⁴³ The objection has to be accepted that there is only one (unedited) ‘time’ in movies, which is the present. “[... F]ilm time is always present time; in watching a film one seems to see things happening *now*, as though one were present not at the film but at the filmed event” (Sparshott 86) Since there is no narrator the film can only show what is happening in the present tense. Even flashbacks or flashforwards cannot ‘narrate’ what is seen in a different tense, which is the crux of the camera eye and spatio-temporal storytelling. However, the arrangement of the narrative threads and the overall architecture of a film can be discussed. “[O]f course, whatever one sees is always here and now, because the terms ‘here’ and ‘now’ are defined by one’s presence. But in any other sense it is false [...]. Rather, it is as though we were spectators of the temporality of the films we see” (*ibid.*86)

possible paths are foregrounded. A node⁴⁴ conveys the potential of a diversification of alternate story paths.

Although this study is firmly rooted in the field of narratology and film studies, I would like to mention as a side note that a node bears certain qualities that are also found in quantum physics. When Werner Heisenberg tried to observe atoms and their 'paths' he found that it is impossible to actually 'look at' atoms, since the observer can never know certain pairs of physical properties, like position and momentum, to arbitrary precision.⁴⁵ In other words, since it is not possible to know both, the precise position and momentum of a particle at a given moment; it is also not possible to determine its future state. This is what Heisenberg has famously termed the 'uncertainty principle'. More generally speaking, the uncertainty principle points towards the fundamental unpredictability of the future. Since we can never know the present exactly, it is impossible to apply the law of causality to precisely predict a future state. Therefore, the impossibility of causal prediction makes way for the possibility of multiple future outcomes (cf. Fischer 39–53). FNs are in this respect closer to quantum physics than to PNs that are guided by the law of causality (which is a just an illusion). And further, the node itself resembles the atom in such a way that both possess a certain 'potentiality'. As long as no one observes an atom, it also holds a horizon of options as to what it could become when it ceases its uncertainty:

Solange ein Atom in Ruhe gelassen wird und es ganz für sich ist solange hält es all seine Optionen offen. Es kann jederzeit jede Eigenschaft annehmen, die die Natur ihm zugesteht. Es ist die Summe seiner Möglichkeiten. Wenn es gefragt wird – in einem Experiment, was es denn nun wirklich ist, muss es sich für eine Möglichkeit entscheiden. Sie wird dann seine Wirklichkeit. (Fischer 49)

The actual realization of an outcome can only be observed, not foreseen and the experiment itself is already shaping the reality of the atoms. In equal measures, the node itself always holds a maximum of potentiality of all the possible continuations that could stem from it (including all their possible consequences for narrative parameters such as time, space and character), but as soon as we observe a certain path taken (for example as a 'walk through' of a video game) the node collapses into an event and gives up its potentiality. In other words, we can only describe the degree of openness of a nodal situation in the architecture

⁴⁴ We have to remind ourselves here that the reversible figure is a result of the exchange of events as minimal units of past narratives to nodes in FNs.

⁴⁵ Either an atom is not where the observer assumes it to be or it is too fast to be observed. And the more precisely one physical property, for example position, is known the less precisely the other property can be predicted, for example momentum (cf. Fischer 39–53).

of a FN but not in an individual ‘run’ or ‘path’ through the story. This is why NAFU is not interested in empirical work but merely in the structure of such narratives. This relation to quantum physics and the premise of more than one continuation seems to settle FNs in the field of electronic media since Janet Murray has already described the advantages of electronic media in her groundbreaking work *Hamlet on the Holodeck*:

To be alive in the twentieth century is to be aware of the alternative possible selves, of alternative possible worlds, and of the limitless intersecting stories of the actual world. To capture such a constantly bifurcating plotline, however, one would need more than a thick labyrinthine novel or a sequence of films. To truly capture such cascading permutations, one would need a computer. (38)

Murray states that Borges’ *Garden* can only be described, but never realized, in the rigid structure of analogue media such as film. And indeed, FNs are more likely to be found in digital than in ‘old’ media, which will be shown in the course of this study.⁴⁶ However, the advantage of digital media is often immediately associated with its ‘interactive’ nature. The CYOAs mentioned earlier also make use of decision points that can be visualized as nodal situations in the overall narrative architecture. Intuitively, it could be assumed that a node has to be realized or performed actively by the recipient. It shall be stressed though that the definition of nodal situation does *not* mention the element of choice in the definition. This is purposely done to imply that agency as meaningful action does not have to be on the side of the recipient. Choice may pretty well be passive but it is not constitutive of a node. Also a fictional character can be placed into a nodal situation and the decision of the character will influence the further course of action. Of course, agency as the capacity of human beings to make choices especially with regard to the degree of consequence for the further development of an (then actualized) path is ultimately achieved by the switch from ‘old media’ such as film to ‘new media’⁴⁷ that allow for agency by the user. The ‘interactivity’ of these media enables the concept of the nodal situation to develop its entire potential. However, our idea of ‘interactivity’ must be honed before it is possible to discuss its relevance with regard to FNs. For this study interactivity is used as defined by Bode.⁴⁸ “The relationship between

46 Since films are no longer exclusively watched by playing a film reel in a movie theatre, the inclusion of other ‘filmic’ media, such as for example TV movies, DVDs or ‘movie games’, is a necessary measure.

47 “What is new media? [...] The translation of all existing media into numerical data accessible through computers” (Manovich 19–20).

48 Ryan defines interactivity and its subtypes as two sided: It is the semblance a user surface or interface of a medium gives that responds to a user’s action. Thereby it allows for new actions on the users part based on the initial response (cf. *Narrative as Virtual Reality* 205–224). Bode does

a user and a medium can be called *interactive*, if *the interface of communication allows series of mutually dependent action-response exchanges*. [...] Evidently, the degree of interactivity significantly relies on the nature of the medium. It is non-existent in a book, but patently obvious in a touch screen"⁴⁹ (*Future Narratives. Theory, Poetics, and Media-Historical Moment* Part 1).

A medium is interactive when its interface gives the semblance of a response. (*ibid.*) Interactivity as a medial attribution makes it possible to show the full potential of FNs but, as it will be shown in the main part of this study, nodal situations also exists in non-interactive media such as film. Tom Tykwer's *Lola Rennt* is the prime example here. *Lola* was like a breath of fresh air for the often unimaginative German cinema of the 1990s. Apart from its pop aesthetics and playful use of different media, *Lola* was mainly a big success due to its narrative structure. Instead of the typical, uni-linear development of the story, *Lola* (played by Franka Potente) experiences the same twenty minutes of her life three times over, but she 'chooses' three alternate paths. She and the other characters in the film are unaware of the fact that there are three different developments of the story.⁵⁰ Each episode is an actualized continuation from the initial nodal situation. Although there is no choice here for the viewer *Lola* is still a FN, since the branching of more than one continuation is given from the nodal situation of the film, the same situation from which each run takes an alternate route. Therefore

not agree with Ryan's definition especially concerning her division of interactivity into "internal/external" and "exploratory/ontological" categories. Especially the term "ontological" seems to be unfortunate and thereby the distinction into subcategories becomes a bit confused (cf. *Future Narratives. Theory, Poetics, and Media-Historical Moment* Part 1). Therefore, only Bode's definition of interactivity will be used for this study.

49 It has to be mentioned that a touch screen can hardly be described as interactive if the only interactivity it allows for is the navigation from one 'page' to another as for example used for online magazines (created 'flip book' software and usually comes as *Flash* animation) since you also flip the pages of a regular book, which would also make this interactive. The main difference is that the electronic medium itself responds in a way that is to a certain degree independent from your input: mainly by (since we are talking here mainly about digital media) calculating in exponential functions and algorithms based on a binary code leads us into the field of the production of meaning as created by the field of A.I. (artificial intelligence). The electronic medium 'interprets' the input and acts accordingly. This cannot be delved into here since it would lead into a completely different discussion away from narratology. It shall be spelled out once again that for Bode a medium is interactive if it gives "the semblance of a response" (cf. *ibid.*). Subsequently this means that interactivity and narrative are two completely different things. Whereas narrative is mainly a cognitive construct, interactivity is a quality of the medium itself. Thus it is impossible to inquire about the interactivity of a narrative.

50 The ambiguity of concepts like 'choice', the role of the recipient and the possible as Bordwell would call it "contamination" of the mutually exclusive runs will be discussed in chapters 2.2., 2.3. and 2.3.1.

choice on the part of the viewer is a possible but not an inevitable part of a nodal situation. The protagonist of a movie can also be in a nodal situation that results in more than one continuation. The crux is in the map and it is not so important who is running through the story world. Additionally, it has to be stressed that the logical requirement of *Lola Rennt*'s three different 'runs' or continuations have to be understood as mutually exclusive by the viewer, which is already implied in the word 'different'. They must not be mere repetitions; they must cancel each other out in the story-world.

That is an interesting teaser – but it does, of course, only work on the viewer's assumption that basically and as a rule the two continuations of this character's life are different, and different in the strong sense of 'mutually exclusive'. In other words: if we had the impression that all we see could be accommodated in one and the same story, then we'd never even think of the possibility that we're dealing with different continuations. It's as easy as that and almost tautological: it is the internal incompatibility of different strands that directs our attention to the fact that this must be a multi-linear FN. (Bode, *Future Narratives. Theory, Poetics, and Media-Historical Moment* Part 1)

How those nodes work visually will be exemplified in greater detail in the case study on *Lola Rennt* in chapter 2.3.1.; for the present moment it is enough to know that FNs also exist in non-interactive media such as film.

If we were to describe the narrative architecture of *Lola Rennt* with its three alternate continuations, we would have to call it 'multi-linear'.⁵¹ The bi-furcation or the 'spread of continuations' is not yet realized in the node itself. However, the nodal situation contains a certain potential for such *multi-linearity*.⁵² The nodal situation offers *potentiality*.⁵³ In PNs events hold a potential due to their inter-

⁵¹ FNs will always be described as 'multi-linear' and not as 'non-linear' since this mathematical term is reserved for the description of truly chaotic systems.

⁵² Of course, a novel with more than one plot line can also be addressed as being multi-linear. The concept of multi-linearity for FNs though emphasizes that the narrative itself offers varying continuations. For FNs multi-linearity is both a result and a 'potential' of a nodal situation.

⁵³ In narrative theory a similar concept was introduced by Claude Bremond when he stated that every point in a narrative possesses the potentiality for two possibilities. The protagonist can choose or not, win or lose (cf. Krützen 86). This enables Bremond to distinguish between three phases of a narrative sequence:

- 1) The source (an initial situation that enables possible developments)
- 2) The development (the actualizing or not actualizing of a potentiality)
- 3) The end (the reaching or not-reaching of the goal)

Bremond notices that there is always the potentiality of more than one continuation in a narrative situation. Any story can therefore be transferred to a multi-linear map, for example, *the Silence of the Lambs* is arranged by Michaela Krützen in that way (cf. 86). However, the multi-linearity of FNs is of a different kind. Whereas Bremond refers to the idea that any event holds

pretative ambiguity (the reader or viewer does not know what will happen), in FNs nodes hold a potential that is independent of the interpretative effort of the recipient. They simply feature more than one continuation in the structure. The result of the different 'runs' in FNs can still be interpreted (just like any PN), but FNs offer a plus: the possibilities of different runs.

'At least one node' and 'more than one continuation' are obviously minimal requirements or conditions. In actual fact, most FNs will have a plenitude of nodes and many nodes will not just display a bi-furcation, but allow a spread of continuations. But if not even these minimal conditions are met, we evidently don't have a FN or a node, respectively. And once they are met, we have a proper FN at hand – and immediately one of the major differences between a Past Narrative and a Future Narrative catches the eye: non-FNs are mostly uni-linear. They tell you how one thing led to another. FNs never are. They always and inevitably – because by definition – show that one thing or another may follow from this particular situation here, from the node we're looking at. Invariably, FNs are multi-linear. (ibid.)

Multi-linearity is not just a branching of paths, which can only go one way either in the same game, or later. It indicates also a possible revisiting of a nodal situation.⁵⁴ Otherwise it would be impossible to actualize more than one continuation in *Lola Rennt* and *Blind Chance*. Lola runs three times, starting from the same nodal situation and so does Witek.

What makes us think, when we watch a movie of the Lola runs type, that we're looking at different continuations anyway? The simple answer to this seemingly foolish question is that we just know whether something is the same – is identical, a simple repeat – or different. A more sophisticated answer to the same question would be that we need, first, a point in time, a situation, that we've recognizably been at (been in, respectively) before and then at least two continuations from there that are mutually exclusive. Like in *Blind Chance*: the protagonist either misses his train or he catches it. (ibid.)

The three story strands are mutually exclusive from the point of view of the character in these films, for example Witek in *Blind Chance* or Lola in *Lola Rennt*, as Bode remarks.

the potential that could have also been different, FNs stage that potential by incorporating it into the structure. That a character in a film is contemplating this or that does not make this a node of the narrative. Therefore, Bremond's concept is very different to that of NAFU.

54 This, of course, depends on the complexity of the FN structure. Some structures make it possible to revisit an earlier point in the narrative (for example in 'axial structures'), others do not (for example hierarchically organized 'tree structures'). 'Axial structures' are explained in chapters 3.4.3. and 3.5.

But, wait a minute, ‘mutually exclusive’ from which point of view? ‘Mutually exclusive’ with regard to which frame of reference? Obviously, not on the level of you and the movie, because you are offered various continuations. So, ‘mutually exclusive’ from the logic of the story world? It would seem so. You either catch your train or you miss it – you cannot have it both ways. Only that some FN movies play with the idea that you could, possibly, have it both ways. (ibid.)

The alternate continuations are not identical although they take place at the same time and in the same diegetic space.⁵⁵ However, logically they are separate continuations.⁵⁶

In these cases, and in most FNs in films, the FN comes in the shape of a forking-path plot. The fork in the path(s) occurs on the level of the narrative structure, this is what set FNs apart from multi-plot⁵⁷ PNs.⁵⁸ In forking-path films, such as *Blind Chance*, the alternate continuations are completely autonomous as separated entities. The viewer realizes that Witek is revisiting the same situation three times, but it is also clear that all three continuations are logically exclusive. Witek 1 cannot ‘learn’ from the paths taken by Witek 2 and 3. It is merely up to the viewer to layer all three paths upon each other and to weigh the differences and similarities between them. In that way the actualization of all three possible ‘lives’ is what is appealing to the viewer. Because although *each* moment in life in its present form is a nodal situation, once realized, no revisiting of a former nodal

55 It is also possible to explain this phenomenon by declaring that the *nodal power of this situation is the same, which makes it the same situation*. Since the term ‘nodal power’ has not been introduced yet, this cannot be discussed in further detail at his stage but it will be taken up again in the course of this chapter.

56 Some recent films play with the idea of this kind of exclusiveness. Nacho Vigalondo’s *Timecrimes* (org. *Los Cronocrímenes*) or Anno Saul’s *Die Tür* play with exactly the overlapping of these logical impossibilities by staging the collision of the various personifications (from different continuations) in the film while keeping the narrative in a constant time loop as in Harold Ramis’ *Groundhog Day*.

57 The forking-path plot has to be set apart from other unconventional forms such as the “Multi-Plot Narrative: A narrative that follows the parallel destinies of a large cast of characters, cutting a slice in the history of the storyworld in breadth as well as in length. New plot lines are initiated when intersecting destinies create new personal relationships, new goals, and new plans of action, which interact in various ways with the previously establish (Sic!) plot lines. The interaction makes it very difficult to isolate discrete strands of plot in the entangled network of relations represented by the narrative as a whole. [...] Today the most visible manifestation of the form is the television soap opera” (Aarseth 324) The forking-path plot sets off from a distinguished nodal situation and then establishes various mutually exclusive story strands. In the logic of the film world, these story strands cannot intersect and the characters of each path are unaware of the existence of the other paths.

58 A borderline case is the genre of alternate histories, which will be discussed in broad detail by Kathleen Singles in *Narrating Futures* Vol. 5.

situation (then actualized into an event) is possible. Time's arrow is not reversible. Films like Gaspar Noé's *Irréversible* show exactly that. The real horror of the film is neither the explicit rape nor the ultra-brutal fire-extinguisher scene, but the realization of the viewer that the life of three people, who are portrayed as very likeable, will inevitably end in a catastrophe. There is no return to a node, the story is irreversible. Life is irreversible.

So far, our idea of a typical FN basically resembles the structure of a film like *Lola Rennt*: one nodal situation with three different continuations. However, multi-linearity is not always that simple. FNs do not limit themselves to old media such as film, but they appear also in new media such as hypertexts,⁵⁹ where complex branching is possible due to the underlying link structure of this kind of electronic 'text'. But our concept of multi-linearity, or potentiality with regard to the nodal situation, is applicable to all FN structures in any medium.

Furthermore, the nodes themselves, though constitutive, are not the only features of FNs. If we want to be able to describe the architecture of a FN, we also have to mark what happens between the nodes. What happens is on the *edges*, which lead away from a nodal situation.⁶⁰ An edge links a node to another node, unless a FN features only one nodal situation. Nodes and edges are the basic buildings blocks of FNs. By acknowledging those minimal requirements we are able to formally describe a nodal structure as a graph, "a graph being a collection of *nodes* (or vertices) and *edges* (or links), the later connecting *pairs* of nodes. So, edges lead from one node to another or to an end stop" (Bode, *Future Narratives. Theory, Poetics, and Media-Historical Moment Part 1*)

A prototypical example is the structure of a CYOA. These kinds of books and DVDs offer various nodal situations (cf. DeSmet). In *The Scourge of Worlds* a node offers two or three optional continuations and each path will probably lead to another nodal situation (in *the Abominable Snowman* these nodes are called 'decision points', since the viewer has to decide by using the remote control which continuation will be shown on the screen). *The Abominable Snowman* is also organized in such a way. This movie makes it impossible to revisit a previously seen nodal situation. It is merely possible to restart the entire DVD again and to choose differently this time. Therefore, this FN features a hierarchically

⁵⁹ One famous example is the hypertext by Michael Joyce, *Afternoon, a Story*, which is discussed by Aarseth in *Cybertext* (cf.77–95).

⁶⁰ What happens between the nodes is usually a series of 'events' just like in PNs. Once performed (either by the protagonist in a film or by the player of a game), we refer to these as individual *runs*. The runs are only in so far interesting as they are able to show the consequences of an actualized nodal situation. The potential, however, for all possible runs is entailed in the nodal situation. The architecture of a FN only encompasses nodes and edges.

organized tree structure with nodal situations, which are displayed as bifurcations. The plot forks at each decision point. It is also evident that this CYOA deals with explicit or *overt* nodal situations (as opposed to *covert* nodes that are not flagged out as nodes). Various ‘hypertexts’, for example, leave it unclear to the user whether a word is a link to another part of the narrative, a node, or if it does not respond to the user’s actions. Most internet sites, for example,⁶¹ use a certain color to indicate a link, which is essentially working like a node. Obviously, not every website is part of a FN, but the coding language of hypertext fiction is often the same as that of regular websites. And, of course, any surfing of the internet can be read as a FN. Also note that a node does not necessarily have to have continuations that lead to other nodes. It suffices if there is only one node that has more than one continuation. Those can be without any nodes at all. And each path “may just go on and on, from event to event until it eventually reaches the end of its uni-linear road” (Bode, *Future Narratives. Theory, Poetics, and Media-Historical Moment Part 1*)

However, it is not enough to identify the nodal situations in a FN and to analyze their potentiality. The edges themselves have to be analyzed structurally. We have to ask ourselves if it is possible to go back to a former point in the narrative or not. In NAFU terms, the question is what kind of the directionality edges in a FN possess. To come back to our film example, *Lola* might end in three alternate story paths, but what about Phil (played by Bill Murray) in Harold Ramis’ *Groundhog Day*? *Groundhog Day* has become part of our cultural memory. The film title itself has entered common use as a reference to an unpleasant situation that continually repeats itself, or seems to do so. The appeal of the film is clearly its iterative structure. Phil relives the same day over and over again. He is stuck in a time-loop. What does this say about the directionality of Phil’s alternate story paths:

Are all edges uni-directional? Of course not. Some nodals may send you back to a previously visited situation. They may do so directly, then I would call the interconnecting edge ‘bi-directional’ (but never forget that many, many things can happen on such an edge – it is by no means necessarily empty of events – quite the contrary! –, so this is not a matter of merely sending you round in circles!). Or they do that through a series of uni-directional edges that form a loop and that constitute, in that particular section of the overall structure, a circular sub-structure. (No single edge can be circular, it can only be bi-directional.) (Bode, *Future Narratives. Theory, Poetics, and Media-Historical Moment Part 1*)

61 HTTP (which is the ‘start’ of any web address in the URL bar) is the abbreviation of ‘hypertext transfer protocol’. Most websites function essentially like a hypertext. One of the most popular sites on the web that works in such a rhizomatic way is *Wikipedia.org*. *Wiki* indicates its links by using the colour blue.

The crucial point in Ramis' film is, quite contrary to Tykwer's, that the protagonist is aware of his existence in a time-loop. "In *Groundhog Day*, for example, we are given ample evidence that the people in Punxsutawney, Pennsylvania, are reliving the same day and that only Phil Connors remembers what occurs from one 'same' day to the next. But aside from this big exception to the laws of spatio-temporal directionality, everything else in the world of this movie fiction resembles the real world" (Kupfer 337) Phil's behavior illustrates the potential of bi-directional edges. He learns from his experience. He realizes what is actually important for him in his life. Thematically, *Groundhog Day* is a story about self-improvement. Here, it is possible for Phil to learn from being in the same situation again and again, which is not possible in real life.⁶²

Edges – whether *uni-* or *bidirectional* – are the continuations of a *node*. These narrative elements are exclusively found in FNs and they make it possible to stage openness and potentiality in almost unlimited ways. As a last remark on bi- and unidirectionality, it has to be mentioned that the directionality of edges determines the inbuilt temporality or 'sequentiality' of certain FNs. For example, a CYOA may offer more than one nodal situation; however, the reader starts with the first page, or in the case of a DVD with the first longer introductory sequence, before she will encounter a nodal situation. From that initial node, N1, she can continue to the next nodal situation, N2. The next part of the story will lead to another nodal situation, N3. It is impossible though to get to N3 without previously visiting N1 and N2. There is an inbuilt *sequentiality*.

And still, as I had occasion to remark à propos the arborescent structure, if a structure has directionality, it also has an in-built, if you will: objectified temporality (you cannot visit B and C before you've seen A – there is an unalterable, non-negotiable consecutiveness). And if some edges are bi-directional – like: you can go down this corridor to B and C and then back again to A –, then this is part of the objective structure of the artefact. It is an objective possibility that has nothing to do with the question of whether any user has realized it or not. To map this possibility is not to map a run. It is to map an objective feature of the structure that allows different runs (in which we are indeed not interested). Strictly unidirectionally interconnected nodals are like series of en-suite rooms that curiously enough have only valve-like or sluice-like one-way doors. It is a feature of their architecture. It would

⁶² Video games make use of exactly that. A player can return to a former point in a game and then use his acquired skills or knowledge he or she has gained from previous game session. This is usually the case in classic platform games such as Nintendo's *Super Mario* series. Video and other games are the subject of *Volume 4* of this series. Films like Edgar Wright's *Scott Pilgrim* use this convention to narrate their story along with a video game aesthetic of the film itself. The main character, Scott, also has the possibility to revisit a point in the narrative at the end of the movie. This scene would be referred to as the 'boss fight' in video game terms. Films and video games are increasingly mutually related, which will be discussed in the final part of this study.

be a serious omission not to take note of the fact that not all nodal structures are like that. Because they aren't. In mapping the structural possibility of 're-visiting' we are decidedly not mapping re-visits themselves (just like we're never mapping visits either – both are phenomena that are strictly run-related) – we're only doing what we're doing: surveying and mapping an objective feature of that situation, viz. that it can be re-visited (if it can ...). Except for situations with which we'll deal later on, the nodal situation remains unaffected by any visitor or visits and revisits, because by definition all changes occur outside a nodal situation. *The nodal situation is never an edge – where events happen –, and it is always before something potential is realized, in the sense of actualized. And then it is no longer a node* [emphasis added]. (Bode, *Future Narratives. Theory, Poetics, and Media-Historical Moment Part 1*)

Therefore it becomes clear that certain subtypes of FNs can be identified through their building blocks and the directionality of their edges. Different structures⁶³ of FNs can be visualized and aptly described by our apparatus.

Nevertheless, not just the overall architecture of a FN is of interest here, but also each single nodal situation. The question is how much 'future' is in a node?

Define 'nodal power'.

The degree to which a situation is open. (Bode, *Future Narratives. Theory, Poetics, and Media-Historical Moment Part 1*)

You could also say that the *nodal power* is the sum total of a nodal situation's quantitative and qualitative properties with regard to their potentiality. Those concepts were already implicitly introduced in the preceding chapter, but not in relation to the term nodal power. The question is not just any more, how much future is in a node but also, what kind of future it is.

Clearly, a node in a CYOA, when the hero has to decide whether to leave his family behind and to be safe or to go after his family into an unknown and possibly risky new adventure (which is the ultimate nodal situation in one of the eleven possible endings in *the Abominable Snowman*), is a different kind of nodal situation than the real-life dilemma of 'do you want to take the stairs or do you want to take the elevator'. There is a clear qualitative difference. In the case of the CYOA, this ultimate decision point offers two options that lead to two completely different endings. We could say, that this node offers a bifurcation with a high degree of nodal power, due to the consequences that are already foreshadowed in the nodal situation itself. However, it is not possible to say that *The Abominable*

⁶³ FNs such as the CYOA game, the most simple and typical FNs, display an arborescent structure. However, a branching tree is not the only possible structure as in, for example, transmedia storytelling, where different points of entry offer a more rhizomatic structure (although we will see that they actually display an 'axial' structure).

Snowman possesses a high degree of nodal power in total. The nodal power is to be measured for *each* nodal situation individually.

Note that by definition you can only speak of the *nodal power* of a *situation*, not of the nodal power of a whole FN. Nodal power accrues only to one particular node, and it is *measured in the differences in the space of possibilities demarcated by the edges of its various continuations, until they reach their respective next nodes or end stops*. This rule is necessary to avoid the paradoxical claim that the nodal power of the first node of a FN is exactly the same as, or identical with, that of the entire FN, since it contained all the potentiality of everything that followed from it. While such an idea may be appealing to a philosophical determinist, it is totally at odds with an approach which holds that causality is only the effect of a retrospective narrative ordering of events, which concept, therefore, cannot be applied projectively to situations whose continuation is still undecided. (Bode, *Future Narratives. Theory, Poetics, and Media-Historical Moment* Part 1)

To come back to our initial question, how much future and what kind of future is staged in a node, Bode stresses that the first part is the crucial one: “The nodal power of a situation is only the measure of its openness. That quantity remains constant no matter how much of it a user is able to realize. S/he may realize it to a higher or lower degree, depending on her/his skills, experience, etc. But the ceiling of what can be maximally realized in a given situation (because the situation is set up in such a way) remains unaffected by that” (ibid.)

In other words, because the nodal power of a specific node is always the same, it is possible (for the protagonist of a film or the player of a game) to be in the same situation again. This is the reason, for example, why there are three mutually exclusive continuations in *Lola Rennt*. It is because the nodal situation at the beginning of each path is the same. And it is the same because it has the same nodal power. Lola can die (path 1), Manni can die (path 2) or both live (path 3). This space of possibilities makes the nodal power of the nodal situation of this movie. And the only reason why the nodal power of the nodal situation is the same as the nodal power of the entire FN architecture is because there is only one node. The concept of nodal power and its interdependence with the elementary units of a FN enables us finally to describe and analyze narratives with regard to their openness. Therefore we are now able not just to raise the question of how much future can be conveyed in a narrative, but also what kind of future(s) that is.

However, the future is what it has always been, something that has not yet happened. Any FN carries our definition of future only in an abstract way, in its structure. Just like any text is only realized by actually reading it, or any game by actually playing it, FNs are made to be *performed*. Unlike other narratives, the individual discourse has fundamental consequences for a node and its poten-

tiality. Once a nodal situation is actualized, it implodes: “All that can happen in a nodal is that transformation from potentiality to actuality – and once that happens, the node is gone. It has dissolved into a particular event, a new situation (which doesn’t have to be another nodal situation at all). The disappearance of a node is not a sad fact. That is what nodes are for. To allow the future to happen” (Bode, *Future Narratives. Theory, Poetics, and Media-Historical Moment* Part 1)

Therefore, nodes are mere spaces of possibility for the future to be staged. A CYOA may offer the possibility of various paths through the narrative but the actual performance, the actual run or the path taken, of each story line is always realized in the here and now. There is nothing outside the present and the alluring promise of a nodal situation to go one way or the other is always broken down to only one specific option in an individual run. The option itself remains twofold but only one can be realized. The hero cannot be in the jungle and the desert at the same time; hence the alternate paths are mutually exclusive due to the logic of the story world. It is also possible to say that the narrative script, the rules of a CYOA, do not allow for that to happen. And to perform a CYOA is to play that narrative game correctly. This is the actual point of such a text. The future is merely in the structure and not in its actualization.

To give an example, *The Abominable Snowman* offers the possibility to create an individual adventure by choosing from two possible continuations at each nodal situation. The CYOA may offer eleven possible endings, however, the individual performance of the text can only be actualized as one path at a time. Of course, it is possible to restart the game and to choose differently at the nodal situations this time. Nevertheless, the actualization of a choice in a present moment eliminates the other alternate paths by transforming the potentiality of a situation (‘You can choose path A (the hero will go to the jungle to save his friends) or B (the hero will abandon his friends and flee into the desert’) into the actuality of an event (‘You have chosen B and the hero fled into the desert’). The present of the recipient works like a burning lens. The choice crystallizes the multi-linearity of a situation into one actualized event. However, the present moment in FNs works conversely to the performance of PNs. Whereas in PNs one can retrospectively assume how the story could have gone otherwise, the nodal situation in a FN foreshadows diversification. A glimpse into the future is possible by being able to choose from more than one continuation. In some cases it is even possible to return to a situation and to choose differently. The view widens before it narrows. The future is now. And what is even more important, in PNs the event has always already occurred, in FNs it has never occurred until you arrive there. In that respect ‘time is on my side’ when I am performing the future. Instead of the retrospective feel of deter-

minacy, FNs enable the recipient to *experience* a narrative as open, the future as not yet realized, as potential. Additionally it should be mentioned again that FNs do not directly narrate the future; they simply preserve certain aspects of it such as openness. They offer those qualities so openness can be made accessible for the recipient.

To sum it up, what happens when a FN is performed? Obviously, the individual reception of a FN, just like the reception of any narrative, takes place in the here and now. Yet, unlike in PNs, the present moment becomes a transformer for the most fundamental element of FNs, the node. The transformational line of the present sounds the bell for the actualization of the FN, the processing of the nodal situation, so that the potentiality of a situation becomes the actuality of an individual experience.

Every change is the dissolution of a node into an event. We said: nothing happens inside a node, nothing but the transformation that is identical with the disappearance of the node. That is what nodes do: they disappear, leaving a trail of actuality. Once possibility has solidified into fact, we are able to retrospectively identify cause-and-effect chains that seem to explain why 'this had to be'. In identifying what had to come together to create the present situation, we imagine certain temporal lines (which we have marked out as relevant) converge. The result is that by connecting different events in a specific way, we have not only invested them with meaning, we have also given the whole process an air of inevitability. In other words: our narrative processing of the past (selection of 'relevant' events and their relating) has created not only meaning (which cannot be had without a suggestion of causality, because the wholly contingent is not experienced as meaningful), but also the semblance of necessity – narrative necessity, because it is exclusively produced by narrative, and therefore by virtue of narrative. (Bode, *Future Narratives. Theory, Poetics, and Media-Historical Moment* Part 1)

And further:

In claiming that there is a corpus of narratives called FNs, we never claimed they are able to *directly narrate multiple futures* – in fact, we don't see how that could be done. Rather we claimed that, by virtue of operating with nodals, they are able to preserve essential features of future time, viz. openness, indeterminacy, potentiality, the possibility of multiple continuations, and so on and so forth. They are able to do this because they not merely represent or thematize, but actually stage these qualities of the future and thereby render them to experience. Narration kicks in at the line of conversion, and instantly so. Whatever is happening at that line of NOW can only be communicated through narrative (again: that is no denial of experience, quite the contrary: it is its preservation and mediation). (ibid.)

Hence, it is important to distinguish between the structure and performance of a FN. For disambiguation the term *architecture*^{64,65} is used to refer to the overall structure of a FN (containing its rules, nodal structure, possible entry and exit points etc.) whereas *run* is used to refer to an individual performance of a FN. Only the performance makes it possible in some cases to actually trace all the nodal situations of a FN.⁶⁶ However, the nodal power (or the degree of openness) is independent from its realization. It is something that belongs to the architecture, not to the individual runs. Once again, NAFU is not trying to do empirical research, but the aim is to identify the structural components of FNs because the future is in the structure. The individual runs are only in so far interesting since FNs are not able to directly narrate multiple futures but to preserve some of their qualities in the architecture. Therefore an individual run can make openness accessible but the staging of the virtual (as the direct opposite of actual) is of interest here. This staging is done by using a medium to convey the narrative structure, “as the encounter of a space of possibilities”. FNs have an inherent tendency to project their structure in a spatial way (as tree or network structures). Mapping the future is not just a catchy phrase, but it describes the process of the construction of the architecture of a FN. The temporal concept ‘future’ is inseparably linked to its spatial nodal structure. Therefore, FNs are staging the spatial dimension of narrative in a prominent way and the question might well be asked whether spatio-temporal media are the preferred medial class for FNs since these media always use both dimensions by enabling a reception that is both simultaneous (image) and successive (motion), i.e. the *motion-picture* (or *film*). Since

64 Aarseth also uses a system to describe the structural and performable elements of a text. He makes a tripartite distinction between scriptons, textons and the transversal function (cf. *Cybertext* 62). Since Aarseth works mainly with electronic texts his distinction works on different levels than the NAFU distinction between *run* and *architecture*. To avoid any confusion this study will stick to the NAFU terms to distinguish between structure and performance.

65 It is also possible to think of it by using terminology from linguistics. The individual performance is linked to the relation of signs in a specific temporal sequence. It compares to the syntagma, whereas the nodal situations are possible options and have consequences for each syntagma. They are the paradigmatic class, a set of options, but only one option can be realized at one time in a specific syntagma. Virtually though, a paradigmatic class offers a degree of variance.

66 In some texts, it is not even possible to actualize all performances within the life span of a human being. One example is Raymond Queneau’s sonnet machine *Cent mille milliards de poèmes* (cf. Queneau) which enables the reader to produce 100,000,000,000,000 sonnets by differently combining the 140 lines of the book (cf. Aarseth, *Cybertext* 62).

the subject of this volume is the identification and analysis of FNs in film,⁶⁷ it is necessary to have a look at the peculiarities of that medium.

Nicole Mahne explains the difference between temporal and spatial media in reference to Seymour Chatman's *Story and Discourse* as follows:

Im Unterschied zu *spatial media*, wie Bilder oder Skulpturen, kontrollieren *temporal media* die Präsentationszeit. Zweifelsohne erstreckt sich die Kontemplation eines Bildes in der Zeit, sie ist allerdings kein 'temporal program inscribed in the work'. Ein zeitgebundenes Medium 'requires us to begin at a beginning it chooses (the first page, the opening shots of a film, the overture, the rising curtain) and to follow its temporal unfolding to the end it prescribes.'⁽¹³⁾

Spatial-temporal or *spatio-temporal*⁶⁸ media are therefore obliged to narrate their stories in space and time, through image and motion. Spatial media present their content visually – they offer a simultaneous reception of the content to the viewer. Thereby the spectator has a certain degree of freedom of view. Pictures do tend to draw a viewer's attraction to certain elements (mainly by the use of perspective), but nevertheless the viewer has the chance to look at the picture without time limit. The perception of the picture takes place by allowing the viewer to interpret what she sees in her own way and speed.

Emma Kafalenos points out the tension between the conflicting poles spatial and temporal mediation with regard to story [here *fabula*] as follows:

The visual representation is available to the viewer in its entirety all at once, and it does not physically change during the process of perception. Narratives told in words, in contrast, specify the events to include in the *fabulas* we construct, and for this reason are generally assumed to be the less open of the two modes of communication. This view, however, fails to take into account how much or how little information is available to the perceiver during the process of interpretation. When we read a novel or a story or an historical account, we cannot establish a complete *fabula* until we reach the concluding words. Because narratives

⁶⁷ *Animated pictures* would also have been an option for all the screen media in this book since *animare* could be translated as "to bring to life": "The term 'animation' comes from the Latin word *animare* which means 'to bring to life'. With this technique, the viewer gets the impression of watching an animated picture by being shown single frames in a very fast succession. These frames can either be drawn by hand or generated on the computer. If you play such a sequence with about twenty-five frames per second, the viewer gets the impression of nearly fluid movement. A ninety minute film consists of about 100,000 frames. Imagine the effort! Looking at early computer animations, the source material consisted of many separate graphics, where every image was slightly different from the others. They were captured on film" (Lieser 12) However, the term animated pictures is mainly connotated with their method of production. And therefore the term animation (production) is not suitable for its use in this book.

⁶⁸ "[...] spatio-temporal, adj. [...] Etymology: *spatio-*, used as comb. form of Latin *spatium* space n. + temporal adj. Belonging to both space and time" (*Oxford English Dictionary, Spatio-temporal*).

provide information sequentially, during the process of reading we know only segments of the fabula.

As we begin to read or listen to a narrative, there is always a first event that we learn about without yet knowing anything other than the one event. Even when a second event is revealed we know only two events, and our freedom to speculate is generally not greatly diminished. We often respond to the first scenes in a narrative in the way we respond to the isolated moment that a photograph or painting depicts; we pause in our reading and think about a fabula or fabulas in which the event could occur. In fact, narratives often guide us to respond to an opening scene the way we respond to a visually represented scene: to establish the represented moment as the foundation – the temporal cornerstone – in relation to which to position subsequent events and prior events. (138)

However, Chatman refers to spatial media as *static* media which are unable to convey a sequence of events and thereby denies them the ability to express their content narratively (cf. 34).^{69,70} Temporal media on the other hand dominate the reception by sequencing their content; they have a “temporal program inscribed in the work”. This associatively links temporal media to concepts like uni-linearity.

To shed the light on screen media such as film and how they are connected to narrative, it is helpful to look at Edward Branigan and his cognitive approach to film analysis and his followers such as Nitzan Ben-Shaul. “Film narrative is a way

69 Chatman has a notoriously narrow idea of ‘picture’ (medieval pictures give you whole stories, to be read from left to right) and an equally narrow idea of the term ‘narrative’. For NAFU, everything can be a narrative as long as it can be read as a linking of two events (cf. Bode, *Future Narratives. Theory, Poetics, and Media-Historical Moment* Part 1) (‘not even both of them have to be represented’ cf. Lessing).

70 As Peter Lehmann and William Luhr have rightly pointed out, cinema or conventional motion pictures are first and foremost narrative media and it is nonsense to deny them their function as storytelling vehicles. Filmic narration presents its scenes in temporal succession. The story is distilled by the viewer as part of causally linking the presented scenes into a coherent plot line. Since there is no ‘narrator’ (according to Chatman), although devices like the camera eye etc. do very much mediate the content in a specific way, the causal linking of the depicted scenes is merely through visual association. The question therefore has to be in which way scenes are structured and organized to enable the perception of the content as narrative:

“This leads us to the issue of narrative, which is a term for the way in which the story events of a movie are organized; in exploring narrative we explore the structure of those events or the way the story is told. Feature films are generally perceived first in narrative terms; everything else is secondary” (Lehmann and Luhr 27) Conventional motion pictures therefore display what Lehmann terms ‘narrative primacy’: “films are as much about their style of storytelling as about the stories they tell; the two may not even be separable [...] Storytelling involves decisions about what gets told and what does not as well as how the events that are told should be arranged” (28)

of organizing spatial and temporal data into a cause-effect chain of events with a beginning, middle and end. [...] narrative is one of the fundamental ways used by human beings to think about the world” (15–16)

Acknowledging the narrative potential of motion pictures we have to recall our initial definition of 'narrative' itself. Bode defines narrative as “the linguistic and mental linking of events” (*Future Narratives. Theory, Poetics, and Media-Historical Moment* Part 1) The linking itself implicates temporality (it can be thought of as a sequence). Nonetheless, the nodal structure of FNs implies a certain notion of spatiality since FNs often display aborescent or network structures⁷¹. Additionally, the 'node' bears a generic semblance to the use of a link in digital contexts. A link has to be 'performed' to be activated. In digital narratives it links two separate parts of a story and the user can actualize their connection, thereby creating her own story path.

Since FNs appear in all kinds of visual media, whether new or old, analogue or digital, the term film⁷² serves as an umbrella term for all NAFU related artifacts that produce a spatial-temporal mediated narrative, such as movies, animations and so on. However, the term film can hardly be used to draw the line between movies and video games. The hybridity of the media in form and content will be discussed especially with its consequences for FNs in terms of media sensitivity in the second half of this volume.

1.2 From 'Running' to 'Clicking'

...it is only too typical that the 'content' of any medium blinds us to the character of the medium. (McLuhan 24)

This book is part of the *Narrating Futures Series*, whose ambitious aim has been to do genuine frontier research by opening up and identifying “a totally new, hitherto uncharted and unexplored field within Narratology: Future Narratives” (Bode, *Future Narratives. Theory, Poetics, and Media-Historical Moment* Part1) In the preceding chapters the ubiquity of FNs in our everyday lives has already been

⁷¹ Bode explains and illustrates these structures in great detail in *Future Narratives. Theory, Poetics, and Media-Historical Moment* Part 1.

⁷² Noël Carroll and Jinhee Choi prefer the term *moving image* over cinema. “So far then, we have not only recommended a change in the domain of investigation for film theory – from cinema to moving images – but we have also identified two necessary conditions for what is to count as a moving image” (126) However, the term moving image suggests a singular image to display movement. In conventional filmmaking twenty-four images are used to create one second per film. Therefore, I still argue for the term film as the better equivalent.

emphasized. Accordingly the narratives in question are “by no means restricted to any one medium, such as language, or print. On the contrary, movies, or computer games, or other electronic media that allow for multiple continuations are equally in the focus of our research” (ibid.) These explorations, or adventures, in a new narratological field call not only for interdisciplinary research but also for unprecedented ways of doing so. Therefore a research team was founded to enable this project to uncover FNs on a bigger scale. “The project is a two-sided one: on the one hand, it will analyze a corpus of future-related ‘texts’ in the widest sense of the word (see below); on the other, it will conceptualize a grammar, a logic, and a poetics for said future(s) narratives, so that the mediation of multiple futures’ scenarios becomes feasible. In other words: it is both analytical and projective, both theoretical and with far-reaching practical consequences” (ibid.)

Technically speaking, each part of the team was concerned with identifying FNs for a different medium, from texts to films to video games. However, the increasing hybridity of media with its current epitome in the form of smart phones and tablet computers makes a clear cut between those volumes impossible. Furthermore, FNs stage openness and undecidedness and their structural component, the node, is a generic relative to the link in electronic media, which makes the analyses of FNs in digital contexts a natural choice. Nevertheless, the focus of this specific volume is the identification and analysis of FNs in *films*, which are conventionally linked to photography and not to digital art (cf. Monaco 24). It should be noted though that recent movies are in such a way digitally enhanced, for example James Cameron’s *Avatar*, that the mere distinguishing feature ‘film’ (referring to its materiality as in ‘film reel’) has to be abandoned for a wider definition of the term ‘film’ that also includes digital screen media. The digital age of cinema, however, brings new challenges to film scholars with respect to analyzing time and space and their filmic representation as Marian Hurley points out:

As film scholars, we must constantly return to the cinematic production and manipulation of space and time to reassess how it is affected by our changing perception of the ontologies of space and time and, conversely, how our understanding of these physical concepts in cinema alters our spatio-temporal awareness in the real world. The advent of digital technology, with its formal atemporality and virtual space, presents a further radical challenge to our understanding of these categories, adding another layer of complexity to an already complex topic.

And further:

From the original moving images of Breton’s time to digital video and virtual realities, conventional notions of identity and subjectivity have consistently been questioned. (ibid.)

However, the switch from analogue to digital images is tearing down the borders between film and other electronic media with regard to their materiality. Noël Carroll and Jinhee Choi offer the following definition for the term 'moving image':

So far we have identified four necessary conditions for the moving image. Summarizing our findings, we can say that x is a moving image (1) only if x is a detached display, (2) only if x belongs to the class of things from which the impression of movement is technically possible, (3) only if performance tokens of x are generated by a template that is a token, and (4) only if performance tokens of x are not artworks in their own right. (130)

Their definition embraces all kinds of images, whether digital or analogue, as long as "x is a detached display". Furthermore, they see the need to distinguish moving images from theatre performances, but not from video games. Let us take a look at a hybrid medium that allows for interaction with the material (to a very limited degree) but is still mainly used for storing filmic content: the DVD. Terence Rafferty (cf.44–49) declares his uneasiness with the DVD format by criticizing the *interactive* possibilities the viewer gets through this carrier medium. A viewer gets a chance to interact with the story, for example by choosing alternate endings,⁷³ and he becomes a "de facto editor" of the film. He *performs* in a way; his activity influences the form of the filmic narrative.

He [Rafferty] feels that the DVD gives too much discretion to the viewer, thereby undermining the authorial control of the filmmaker to such a degree that the result is no longer worthy of the title art. The DVD provides opportunities for interactivity that Rafferty thinks were scarcely feasible under previous regimes of film viewing, such as watching movies

⁷³ Various DVD editions come with alternate endings such as Danny Boyle's *Sunshine* and Frank Miller's *The Spirit*. However, the main film does always have one preferred 'regular' ending. The alternate ending can be viewed by accessing the 'special features' section of the DVD. Therefore the authorial control of the filmmaker is in no way undermined since the main film itself is a complete entity in terms of coherence, plot and ending. However, the DVD options which Rafferty points out do not make a film an interactive narrative. The alternate ending(s) is just an option to provide 'extended' viewing. There are DVDs such as Ridley Scott's *Blade Runner Final Cut* or James Cameron's *Avatar Director's Cut* which show the original film interwoven with additional scenes, which were not shown in the cinema screenings. This does set those editions apart from the main feature film. However, the original version is still identifiable as such and the director's cut is just a special edition and clearly marked as that. The viewer does only have a choice before the actual film, as to which version she wants to watch. The various editions challenge in no way the authorial control of the filmmaker. If anything, they enhance it, since filmmakers like Peter Jackson, the director of *The Lord of the Rings Special Edition*, are now able to exceed the standardized two to three hours viewing time. The home screening on DVD opens up the possibility for the filmmaker to elaborate his idea even further beyond the 130min threshold. The idea of 'extended viewing' in relation to FNs is discussed in further detail in chapter 3.1.1.

at the local theater or on broadcast TV. The interactivity, first and foremost, involves the ability of the viewer to skip over parts of the film and thus to view scenes in a different order than the author mandated in the original cut of the film. This, Rafferty fears, will make the viewer the de facto editor of the film – the person who determines the cadence, the emphasis, and thereby, many of the most significant aesthetic properties of the film. For Rafferty, this is tantamount to the utter capitulation of artistic authority on the part of the filmmaker. (Choi 15–17)

Apparently, Rafferty's uneasiness stems from his idea of film as being a one-way medium in terms of communication. Films used to be mainly watched in a cinema simultaneously by an audience. Therefore, the director of a movie was in absolute control of the narrative and its perception.

In recent times narrative cinema is making extensive use of the DVD format. Some films do not even make it to the big screen but are directly distributed via DVD, a development that was started by the invention of the video cassette and the increase of VHS rentals in the 1970s and 80s. The individual viewing process, nowadays also a feature of television commonly referred to as *Video on Demand* (short: IPTV), is the rule and the collective experience in the cinema is the exception. The DVD⁷⁴ (being the most common carrier medium for feature films), however, comes usually with special features such as alternate endings.⁷⁵ Therefore the question for this study is how to differentiate between, for example, a DVD *movie* and a *movie game*, such as David Cage's highly acclaimed *Heavy Rain* (cf. chapter 4.1.1). The materiality of the carrier medium cannot be the distinguishing feature, since DVD means nothing else than *digital versatile disc*, versatile implies the use for all kinds of content and does not limit the use of DVDs to feature films.

Rafferty rightfully identified the source of his uneasiness and called it 'interactivity', which seems to go against the grain of conventional film making (cf. 44–49). However, there are so called 'interactive movies', such as David Wheeler's *Tender Loving Care*, which is available on standard DVD format. In *Tender Loving Care* the viewer is invited to unravel the mystery of a family with the help of psychiatrist Dr. Turner (played by John Hurt). The interactivity of the film comes through answering a questionnaire by Dr. Turner. The viewer is further-

⁷⁴ The current technical development in communication media leads to the assumption that even the DVD format is dying. It would be very surprising if the technically advanced BluRay took its position. It is more likely that online providers such as *Netflix* will occupy that position by streaming material directly onto the viewer's computer. There will be no specific carrier medium anymore since all data will be stored in online clouds and will therefore be accessibly anywhere, anytime.

⁷⁵ There are, of course, exceptions such as film director David Lynch. He does not enable the viewer to edit the content of his movies on DVD in any way.

more invited to explore the family's house by using the DVD controller. Bernard Perron addresses the problem of 'interactivity' and movies in "From Gamers to Players and Gameplayers" in *the Video Game Theory Reader*. He also analyses *Tender Loving Care* among other films and video games (especially the genre of *full motion video* such as *Phantasmagoria*). Instead of ascribing 'interactivity' to one specific medium, he thinks of it as a scalar aspect, which makes it possible to no longer think of the commonly used terms 'movies' and 'games' as mutually exclusive. Instead Perron introduces the classic taxonomy of games by Johan Huizinga and Roger Caillois to distinguish between interactive *movies* and movie *games* as two opposite poles on a scale of interactivity⁷⁶ (cf.237–239). If watching is privileged over activity, the medium's content is identified as an interactive movie; if it is the other way round, the game aspect is foregrounded. Consequently the term 'film' is a hybrid⁷⁷ for this study that embraces all kinds of screen media – whether analogue or digital, broadcast or screened, interactive or non-interactive – as long as these have one common denominator: *they allow moving or motion pictures*. Therefore, the corpus of FNs in film is a variety from conventional movies to digital screen narratives.

It is possible to say that in the same way as the introduction of the node explodes the concept of uni-linear narrative itself (from a conventional uni-linear series of events to arborescent and network structures), the introduction of *FNs explodes the traditional concept of film*. By staging openness in a medium which is conventionally defined by the strict dominance of the temporal succession of the narrative, the established concept of film has to be called into question. This volume is looking at the different possible narrative structures or FN architectures and their ultimate consequences for the medium and the viewer itself. The point to prove is that the FN concept can highlight features that have hitherto been neglected or put in a different context. A brief overview shall be given in the following pages with regard to the special foci of the individual chapters. To begin with, in the second part of this book prototypical examples of films are analyzed.

Therefore a short review will be given of recent studies on the topic of complex cinema or complex narrative structures such as David Bordwell's "Film

⁷⁶ Of course, neither Huizinga (1872–1945) nor Caillois (1913–1978) had been able to take video games into consideration due to their living period. Nevertheless, especially Caillois' categorization of games is helpful to distinguish between certain aspects of 'movie games', which will be shown in the specific case studies in the course of this volume.

⁷⁷ Films (in a wider sense) resemble video games due their optional use of interactivity, they share certain characteristics with photography and comics due to their optional illusion of movement (for example, Chris Marker's *La Jetée*) and they border on television due to the possible broadcasting of films and streaming possibilities on the computer, so a film can be made for mass or for individual reception.

Futures” with the introduction of his concept of *multi-draft narratives* and the so-called ‘contamination’ of mutually exclusive story strands. Furthermore Thomas Elsaesser’s notion of the *Mind Game Film*, Warren Buckland’s *Puzzle Film*, David Bordwell’s *network* and Lev Manovich’s *database* narratives will be looked at. It has to be analyzed whether these concepts contribute to the concept of FNs in films. This will especially concern ‘non-linearity’,⁷⁸ the filmic conditional and the question of identity. The chosen examples will show the different FN structures and how openness can be staged in a non-interactive medium, an ‘old medium’ in Manovich’s sense (cf. 19–20).

The first case study is Tykwer’s *Lola Rennt* in which the heroine, Lola, exercises three different ‘runs’ to save her love interest Manni. *Lola* will be analyzed as a filmic metaphor of cinema as game. *Lola* will serve as a guideline for the identification of visual nodes in motion pictures. Furthermore, Tykwer’s movie is a prime example for a FN architecture in terms of multi-linearity and it will have to be discussed how this structure is playing on the established narrative ‘rule’ of causality. It is no coincidence (or is it?) that *Lola* hit the screen when the internet and its relatives in new media were about to become the new paradigm for our society.

The second case study will transport us back to another period in the history of humankind, when a once strictly ordered society felt the impact of an uncertain future and the dissolution of its rules and regularities. Krzysztof Kieślowski’s *Blind Chance* and the three variations of the life of the protagonist Witek will serve as another example for a multi-linear FN. This kind of narrative architecture that makes it possible for the protagonist to be in the same situation three times in a row has consequences for concepts such as chance and determinism, causality and necessity in the filmic reality. In contrast to what Žižek says in his analyses of both films, *Blind Chance* offers a far more radical concept of future than *Lola Rennt*. Especially the role of causality is called into question in *Blind Chance*. Life is not a game, take it easy, *Lola*.

In a next step Alain Resnais’ experimental cinema will provide us with the up-to-date most extreme example of arborescent structures in filmic narratives, his double film feature *Smoking/No Smoking*. Since *Smoking/No Smoking* is essentially not one movie but two (or more?), it is taking the arborescent structure of FNs to an extreme, it is not a tree it is a forest. Resnais’ cinematic experiment sheds a new light on the peculiarities of FNs in film, since a high degree of complexity in the FN architecture is reflected in the reduction of ensemble, character

⁷⁸ NAFU refers to this as multi-linearity but most studies do not distinguish between the terms and use them synonymously. The difference between both concepts has already been discussed in chapter 1.1.1.

constellations and the foregrounded artificiality of the story world. It is very much a counter narrative against conventional film making. *Lola* and *Blind Chance* have already challenged the established rules of conventional film making but *Smoking/No Smoking* is taking it to an extreme.

Peter Howitt's *Sliding Doors* is probably the closest to conventional Hollywood filmmaking, although it can be interpreted as an ironic take on the conventional romantic comedy plot, especially with regard to the two endings of the film. Structurally, *Sliding Doors* features a bifurcation at the beginning of the film, but instead of a succession of the plot strands in total Howitt introduces the bifurcation in the form of *parallel streaming*, both story strands are shown intermittently during the progression of the film. Two continuations instead of three or more offer more possibilities in terms of coherence, continuity, character conceptualization and emotional involvement of the viewer. *Sliding Doors* may be offering only one nodal situation with two continuations but with maximum impact on the outcome of both story strands. The movie should not be underestimated as it is a clever take on Hollywood cinema by counter-narrating against the popular romantic comedy plot through multi-linear narration.

So far the architectures of these films can all be represented as tree structures. However, there are various films which feature multi-linearity in non-arborescent ways. Jaco van Dormael's *Mr. Nobody* combines the technique of parallel streaming with a multi-linear plot that results out of two nodal situations to present a universe of its own by the name of *Mr. Nobody*. The film concerns itself thematically with concepts such as weather forecasts, quantum physics, entropy and the big crunch. Time is not just the focal point of this film, but is also introduced as a new kind of dimension as explained in string theory. This has dramatic consequences for the main character Mr. Nobody. The protagonist employs quantum physics to experience three alternate lives at the same time. The result is a parallel viewing experience that does not put the question of actuality to the viewer (as in: it is up to the viewer to decide which plot is the 'true' plot), but the viewer has to accept that all three plots are equally true since the end of the film features Mr. Nobody at the age of 118 and X experiencing the Big Crunch of the universe and time itself. By the reversal of time's arrow everything starts again and all the possibilities are open again. Therefore, the question of a 'real' plot strand becomes superfluous. On top of that, the film plays with the filmic conditional by interweaving dream sequences and the blurring of reality, fantasy and the three different lives. *Mr. Nobody* is the most radical FN in prototypical motion pictures with regard to its architecture (the combination of parallel streaming, tree structures and time-loops). It is also a prime example for the operating principles of FNs in film since the visual structuring devices have to be sustainable enough to carry the viewer through the complex cinematic experience.

Mr. Nobody has already played with the mind as a universe of its own and its potential for simulation processes, Duncan Jones' *Source Code* dives even further into this idea by employing the mind of the main character, Colter Stevens, as a world simulator of a past event. The structure of the film is that of a time-loop, not unlike Harold Ramis' *Groundhog Day*, on a hypodiegetic level but with a second nodal situation at the end of the film on the diegetic level of filmic reality. The film plays on the first half of the story with Ruth Perlmutter's concept of the *Owl Creek Syndrome*, which is mainly used in what Perlmutter calls *Trance Films* to reflect the traumatic consequences of a dying mind (cf. 125–34). One of the most famous examples in that context is Adrian Lyne's *Jacob's Ladder*. However, unlike most trance films, *Source Code* offers a utopian ending by staging two happy endings as effects of the simulative powers of the mind. *Source Code* can be seen as the final result of all the work mechanics of FNs in film since the highlighted artificiality of the film's aesthetics and the hero, a US army pilot, aesthetically relate *Source Code* to recent video games such as *Modern Warfare 2*. Furthermore, the question of identity and the uniqueness of the human are called into question by the transferring of Colter Steven's mind into a computer, his brain being the source code for the reality, a concept already exploited by Andy and Larry Wachowski's *The Matrix*. But the consequences of such transhumanity in terms of the abolishment of ultimate death and the possibilities for multiple happy endings through simulation make *Source Code* a good example for the similarities between films and the world of new media. *Source Code* and *Mr. Nobody* show how FNs strive against the confinements of conventional film making.

On the level of medial communication these films were designed for the screening in cinemas. What happens when the recipient is not just a passive viewer will be explored in chapter 3. *Crossing the Medial Threshold*. This chapter will shed a light on the possibilities of FNs in television and beyond (as in 'trans-media'). To begin with, the most common distribution format of feature films, the DVD, will be focused on and its ability to turn the viewer of a film into what Kristen Daly has coined *the viewer* (cf. 81–98). The concept of choice and agency with regard to interactivity and how this is reflected in FN architecture will have to be discussed here.

Feature films are very often produced for broadcasting on television only. The most common television-dependent narrative genre is serial narration, as series are the most popular shows on regular television. An outlook will therefore be given on what Mittell has termed *complex television*⁷⁹ (cf. "Narrative Complexity

⁷⁹ "Both home video recording and packaging have altered the viewer's temporal relationship to television narratives, giving more control to audiences in ways that resist the restrictions of the regimented television schedule. These shifts in temporal technologies have impacted the narra-

in Contemporary American Television” 29–40) and transmedia storytelling. To illustrate these concepts, recent TV series such as *Being Erica* and *Misfits* will be analyzed.

To expand more on the notion of interactivity, the direct influence of the viewer on the narrative will be examined with regard to ‘reality television’. It will be asked whether formats such as *The X Factor* or *Big Brother* do actually provide nodal situations and therefore really stage the future as multiple and open or are mere pseudo FNs with regard to their structure.

Reality TV has sprung into the public’s eye around the same time as *Lola Rennt*, a time of a paradigm shift from analogue days to digital worlds. *Big Brother*, for example, has made the internet its main ally for the supervision of the contestants. The next step is therefore an outlook on recent examples in televised storytelling in the form of the narrative game, or the transmedia experience. Examples are the TV serial *LOST* and the transmedia project *Dina Foxx*. The real potential of Daly’s viewer concept will be discussed here. The viewer becomes the ally of the protagonist and experiences adventures in running and clicking. The FN’s concept makes it possible to describe the underlying narrative architecture of such examples and why ‘openness’ can be more radically achieved in ‘new media’.

Herry Jenkins and other media theorists such as Jason Mittell who work in the field of transmedia storytelling and convergence culture have emerged not from the field of game studies but from the academic field of television studies. In its early days video games were introduced as ‘intelligent TV’ and its generic connection to television through, for example, continuity and seriality are evident. Also, consoles are connected via cable to a regular television. Therefore part four of this volume explores to the outskirts of FNs in film by focusing on FNs in *digital worlds*. Part four of this study will show how the shift from analogue to digital narratives allows for more complex narrative architectures.

At first we will come back to Manovich’s idea of database narratives and the oxymoron of the ‘interactive movie’. With the help of Perron it will be made clear what is to be understood as ‘interactive movie’ and why these narratives fall into the wider concept of films. The switch of carrier media, from television and cinema to universal devices like the computer, open up for database narratives

tive strategies of television, as creators now tell stories that can be experienced in a range of more flexible and collectable formats, encouraging a more invested and engaged form of spectatorship than typically assumed for earlier television. New media forms like videogames and websites also allow viewers to enter into the narrative world of television programs, encouraging a degree of fan engagement and transmedia immersion greater than with any other pre-digital medium. These technological developments have all encouraged narrative complexity as a highly pleasurable and marketable technique in contemporary media” (*ibid.*).

such as Ben-Shaul's *hypernarrative interactive cinema* and *Korsakow* movies, which both operate with an internal linking system. The FN concept makes it possible to describe how openness is staged in these narratives and why the same basic building blocks suffice to describe the architecture in 'old' and 'new' media. The elementary units are the same but the radicality of openness differs in analogue and digital media. One reason lies in the performance of these narratives through real agency which transforms the recipient into a user. This kind of interactivity helps to illustrate the potential of the FN approach.

Finally, a few words shall be given on the materiality and the format of this thesis itself and the impossibility to convey a FN structure into this volume itself. To make the notion of openness tangible for the reader of this volume, the digitalization of this book by employing a hypertext structure with internal and external links and multimedia content would have been ideal but practically impossible. Ideally this volume should provide entry and exit points in a rhizomatic way, whichever chapter is read in whichever order and with interlinks to the other volumes. Additionally the direct response of the readers of this volume should have been made possible but again, the conventionality of academic writing opposes to such ideas. Therefore this book is focusing on open and bifurcating structures but suggests a linear reading experience. However, FNs are a new field in narratology and this book is to be seen as a mere introduction to this topic. And as it is in the nature of introductions, they provide a basis, an overview and should be seen as a starting platform for further explorations into the wide open field of future narratives – in the future, necessarily.

2 'Running' – FNs on Film

2.1 "Cinema is memory, it's always part" – or is it?

Jacques Lacan's concept of the imaginary has been frequently applied to film studies, for example by Slavoj Žižek. It is the pre-linguistic realm of sense perception and fantasy. "In short, the imaginary is a realm of identification and mirror-reflection; a realm of distortion and illusion" (Homer 31) The (psychosemantic) imaginary, in Lacanian terms, and the filmic are related. This can be partly explained through the imaginary's and the film's disposition to be able to show what cannot be translated into the symbolic and to make it therefore describable (cf. Jahraus, *Der erotische Film: Zur medialen Codierung von Ästhetik, Sexualität und Gewalt* 186).

It is the field of images, imagination and therefore illusions which makes the imaginary an important concept for film studies. Any medium that is trying to create a world of illusions and that manifests its world in the viewer's fantasy is dealt with here. The main part of this study will concern itself with these kinds of narratives. Therefore it is necessary to take a closer look at conventional filmic storytelling itself. Audio-visual media share certain characteristics with other temporal media as Jens Eder points out:

Audiovisuelles Erzählen hat mit anderen Erzählformen vieles gemeinsam. Wie jegliche Narration dient es der Vermittlung von Erlebnissen, Gedanken und Gefühlen durch die Darstellung einer Geschichte. Wie Romane können Filme dabei frei zwischen verschiedenen Schauplätzen, Zeiten und Perspektiven wechseln. *Wie Theateraufführungen sprechen sie die Sinne der Zuschauer unmittelbar und im zeitlich festgelegten Ablauf an.* [emphasis added] Es ist daher kaum überraschend, dass sich viele Unterscheidungen der literaturwissenschaftlichen Narratologie mit einigen Modifikationen auch auf Filme [...] anwenden lassen. Dazu gehören etwa Kategorien zur Analyse der Geschichte (Thematik, Welt, Handlung, Figuren, usw.), der Erzählinstanzen (diegetisch vs. nicht-diegetisch, usw.) und des narrativen Diskurses (z.B. Zeitrelationen der Ordnung, Dauer, Frequenz usw.) Doch zugleich zeichnet sich das audiovisuelle Erzählen durch medienspezifische Besonderheiten aus. Es verbindet auf charakteristische Weise narrativen Sinn mit sinnlichem Erleben. (7)

In his introduction to audio-visual storytelling Eder mentions two decisive components of narrative cinema: the images have an immediate effect on the recipient and the medium's autonomy in terms of storytelling is manifested through the fixed temporal succession of the narrative presentation. It is a non-interactive medium – an old medium (cf. Manovich 19–20). Sternberg cuts right to the chase of the matter stating that:

On the one hand, telling in time is telling in a temporal medium, where all items and structures and effects must unfold in an ordered sequence. Whether viewed from the transmitting or the receiving end, communication there proceeds along a continuum. This is evidently a *sine qua non* for verbal storytelling, as for all literature and discourse in language, but not for them alone. It applies no less necessarily to a variety of syncretic, multimedia forms of discourse – dance, theatre, opera, cinema – whose extension in space yet combines with an irreversible progression in time. Whatever the grouping of their signs at any given moment, it cannot so much as freeze, let alone develop or regroup, except from moment to moment along the communicative process. [...] Temporality in the sense of discourse sequentiality (linearity, directionality) thus controls an assortment of media, art forms, representations. And the straining against the ‘tyranny of time’ throughout the ages, in modernism, for example, only reaffirms and redefines the tyrant’s power with each abortive rebellion. (*Telling in Time* 901)

When we look at its communicative devices it is clear that the world is pre-made by the sender and the recipient can at the utmost choose between parameters that the sender has already integrated in the text but the recipient cannot introduce her own concepts into the pre-manufactured world. The question for this volume is therefore, whether or not conventional motion pictures can convey FNs and to what extent is the staging of openness possible? FNs in movies deny Perlmutter’s statement that “[c]inema is memory – it’s always past” (125)⁸⁰ One could also argue that, like drama, cinema is always *now* – it is recorded but when you watch it, it is not past. Nevertheless, cinema is the most dominant way of storytelling as it restricts the recipient to her role as a (passive) viewer. Of course, the viewer is not restricted from active story processing in her mind, i.e. the actual story will only emerge if the viewer is trying to make sense of what she can see on the screen. She will try to predict what will happen next and integrate the events into the story by modifying what she has already witnessed and by modifying her predictions. The aim for the viewer is to create closure and coherence. This might be by a subconscious process but it is the basis of understanding film.⁸¹ “I take narration to be the process by which the film prompts the viewer to construct the ongoing fabula on the basis of syuzhet organization and stylistic patterning. This is, we might say, the experiential logic of understanding a film’s narrative, the equivalent of the tourist’s guided path through a building” (Bordwell, *Poetics of Cinema* 98)

80 “Like memory then, cinema is fraught with the presence of the past. Even in flashback, the unrelenting linear narrative structure is in the present tense, a paradox that becomes most salient in a different kind of flashback – when watching old movies” (Perlmutter 125).

81 Of course, postmodern directors such as Greenaway and Lynch are consequently subverting this strive for coherence. Nevertheless, the recipient has no actual influence on what is happening on screen.

Therefore nodes can be integrated into the narrative structure, but the performance of the nodal situation is merely up to the protagonist that is, it is *text-internal*. The alternative story strands diverging from the nodal situation are all functions of the text itself. There can be no radical form of narrative ‘openness’ in movies since the mode of reception is limited. The presentation of the narrative is dominated by the medium itself in such a way, that there is always the same uni-linear presentation of the narrative content at each individual ‘run’ by the viewer. This is also the reason why Chatman subsumes films under temporal media (cf. Chatman 34).

Nevertheless, the uni-linearity of the medium is not to be confused with the staging of openness on the structural level of the narrative as in, for example, forking-path narratives. This multi-linear narrative is defined by Abbott as follows: “Forking-path narrative in which two or more incompatible worlds cohabit in the same diegetic level” (*The Cambridge Introduction to Narrative*, 233) The *incompatible* worlds or *mutually exclusive* story strands offer a notion of openness, even though this openness is within the plot structure and therefore on a different structural level than in an interactive medium. Although the two or more alternative versions are presented without any diegetic linking of the different paths, the medium of presentation, in this case conventional motion pictures, allows for only a linear perception by the viewer. A radical staging of openness can therefore never be realized in narrative cinema where the entire narrative is already given in its sequentiality and materiality as for example the reel of the film. Now, this simple observation is enough to exclude cinema from radical FNs since outcome and plot development are always predetermined by the movie itself. However, FNs in films are possible. Conventional films can still provide us with basic structures that can be realised in a more drastic form in what could be termed radical FNs such as video games. In other words, cinema can do what it does best. It can provide us with the illusion of openness and manifest in our mind the fantasy of it. The actual performance of the nodal situation does not lie in the hand (‘clicking’) of the viewer. It is merely text-internal and the alternative versions can only be performed by the protagonist (‘running’). Nevertheless, the one-way communication of cinema and its dominance over the narrative as presented on screen also comes with a positive flip-side:

In filmischen Texten identifiziert sich der Zuschauer mit der Kamera und den filmischen Figuren, wodurch der Zuschauer sich als Subjekt des Films fühlen kann und eine Illusion der Selbstsicherheit, der Handlungsmöglichkeit und der Macht über das Geschehene erlebt. (Hank 2)

Cinema opens up a field for an immersive experience in a space free from direct consequence for the viewer. Only the protagonist has to face the consequences of her behavior. This enables the viewer to experience the aesthetic pleasure of often extreme or in real life impossible situations through identification and immersion.⁸² Of course, any (good) fiction is able to do so, but audio-visual media have an *immediate* effect on the viewer.

Somit kann der Zuschauer durch den Film von der Möglichkeit des gefahrlosen Durchspiels durch Identifikation Gebrauch machen, um zu sehen, wie sich welche Handlungen im realen Leben auswirken können. (Hank 2)

That “Durchspielen”, literally “through-play”, corresponds with the phenomenon of the ‘run-through’ in video games. In a ‘run-through’ or ‘story run-video’, gameplay-sequences are edited out and only the narrative part of the game remains, which is basically turning the game into a movie. The path taken by a protagonist in conventional cinema can therefore correspond to the actual performance of an interactive medium, which is filmed and turned into a movie. Like a video game, where all gameplay elements are edited out and only the narrative remains, films can offer the experience of non-interactive run-throughs for the viewer (which corresponds to the first part of this book ‘running’).

Although conventional films cannot offer an interactive experience in which the viewer has direct influence on the development of the story, cinema is not limited to uni-linearity on the structural narrative level. In recent years, film scholars such as Bordwell (cf. “Film Futures”) and Elsaesser have executed fabulous film analyses to show the complexity of modern motion pictures with special regard to forking path narratives. Film scholars are continually debating the categorization of narrative complexity (cf. Buckland) coining new terms to refer to the narrative maze of such complex films, i.e. “puzzle film” (cf. Buckland), “mind-game film” (cf. Elsaesser), “multiple-draft narrative” (cf. Bordwell, “Film Futures”), “modular narrative” (cf. Cameron) or “database narrative” (cf. Kinder). The following chapter will give an overview of the current debate on complex storytelling in film with regard to FNs.

⁸² “Immersion: A strong fantasy identification or emotional connection with a fictional environment, often described in terms of ‘escapism’ or a sense of ‘being there’” (Jenkins, *Convergence Culture* 327).

2.2 'Film Futures' and Mind-Games in Movies

At first we need to remind ourselves of the fact that the basic definition of a FN is that it has to display at least one nodal situation with more than one continuation. This basic definition of this extraordinary narrative subclass does not exclude narratives which stage openness without offering a means of interacting with the narrative itself. The main feature of the nodal situation lies in its potentiality or in the possibility of multiple continuations. Bordwell has rightfully identified in his 2002 article "Film Futures" a subclass of conventional films with regard to their materiality, although surely not classical Hollywood cinema, that feature what Bordwell calls *multiple-draft narratives*. Those filmic narratives feature a forking path plot in which "one moment of choice or chance determines all the rest" (92).

As for film, recent years have brought us several intriguing efforts at forking-path plots. Like 'Roads of Destiny', they proceed from a fixed point – the fork – and purportedly present mutually exclusive lines of action, leading to different futures. Consider Krzysztof Kieślowski's *Blind Chance* [...], *Too Many Ways to Be No. 1* (*Yat goh chi tan dik daang sang*, 1997) and Tom Tykwer's *Run Lola Run* (*Lola Rennt*, 1998). None of these films hints at the radical possibilities opened up by Borges or the physicists. *Blind Chance* and *Run Lola Run* present only three alternative worlds, while *Sliding Doors* and *Too Many Ways to Be No. 1* offer the minimum of two. [...] My main purpose in what follows is to chart some key conventions on which four recent forking-path films rely. [...] I'll be tracing out seven conventions.

1. Forking paths are linear [...]
2. The fork is signposted [...]
3. Forking paths intersect sooner or later [...]
4. Forking-path tales are unified by traditional cohesion devices [...]
5. Forking paths will often run parallel [...]
6. All paths are not equal; the last one taken presupposes the others [...]
7. All paths are not equal; the last one taken, or completed, is the least hypothetical one.

[...] Instead of calling these 'forking path' plots, we might better describe them as *multiple draft* narratives, with the last version presenting itself as the fullest, most satisfying revision. [...] Whatever films or novels or plays we choose, though, I suggest that we will find that the concept or alternative futures will be adapted to the demands of particular narrative traditions – pruning the number of options to those few that can be held in mind, finding new uses for cohesion devices and repetition, relying on schemas for causality and time and space. In fact, we might even postulate that the more radically the film evokes multiple times, the more constrained it must be on other fronts. [...] Narratives are designed by humans for human minds. [...]. (88–104)

This rather lengthy quote should demonstrate the amount of research that has already been done on forking path films. Bordwell analysed in *Poetics of Cinema* (cf. 177–87) an even bigger corpus. He extended his analysis to works that are

not necessarily limited to the forking path structure but play with the possible futures scenario by presenting the viewer with e.g. temporal loops or many more switchpoints in the plot. “By the turn of the millennium, the conventions of such films [forking path films] seem so well known that new movies can play off them” (Bordwell 185).⁸³ Bordwell argues that instead of the infinitive, radically diverse set of alternatives described in Borges’ “The Garden of Forking Paths”, film *futures* work within a set narrow both in number and in core conditions. Bordwell argues that this is can be explained by folk psychology (the ordinary processes we use to make sense of the world) (cf. “Film Futures” 90). Bordwell states that forking path films can only narrate successfully if the presented alternatives do not exceed the capacity of the human mind since “[n]arratives are designed by humans for human minds” (“Film Futures” 104).⁸⁴ The recipient is invited to match the presented alternatives against each other and to evaluate the differences and similarities between them. As a result the narrative closure is not given by one individual path but by the mosaic that is extracted retrospectively from the reverberation of the alternate futures in the human mind. By referring to (folk) psychology, it is already clear how Bordwell’s approach differs from the NAFU concept. Whereas NAFU is focusing on the narrative *architecture* (the structural elements of these films), Bordwell emphasizes the role of the recipient. Nevertheless, his seven ‘core principles of forking path films’ are helpful to describe the structure of those films, as long as we focus on his theoretical findings and neglect the reader oriented part.

Let us take a closer look at Bordwell’s first convention “forking paths are linear” (*ibid.* 88) for a start. He states that forking paths follow a strict line of cause and effect where one moment of choice determines the rest of the plot. However, as Sara Hank points out, causality seems to be a paradox in these films:

83 Bordwell recently took another take on this concept by connecting it to what he calls “net films”. Christopher Nolan’s *Inception* is one of his examples. More information can be found on Bordwell’s extensive homepage.

84 As a side note, I would like to mention Alan Baddeley and his work in the field of cognitive psychology (cf. Baddeley). He described the ‘working memory’ as part of the human mind. It enables us to store a certain amount of information, to evaluate it and to act accordingly within the span of our short-term memory (being one particular part of our memory as described by Richard Atkinson and Richard Shiffrin). This part of the human mind has a very limited capacity, often referred to “the magical number seven” (cf. Miller 81–97). Adults can only remember seven (plus/minus two) elements or ‘chunks’, for example digits or words (when they are presented without any context). This correlates to Bordwell’s ‘folk psychology’ to some extent. The human mind can only store a limited amount of chunks or in this case alternate “futures”. Since this is not a study in psychology but narratology, this was just mentioned en passant.

Unter Kausalität wird allgemein der Zusammenhang von Ursache und Wirkung verstanden. Sie ist das Vorliegen eines (gesetzmäßigen) Wirkungszusammenhangs zwischen Ereignissen oder Entscheidungen in der Weise, dass ein Ereignis A unter bestimmten Bedingungen ein Ereignis B mit Notwendigkeit hervorbringt, bzw. verursacht, wobei die Ursache A der Wirkung B zeitlich vorausgeht und B niemals eintritt, ohne dass vorher A eingetreten ist. Rational ist die Kausalität logischer als das Schicksal, oder eine höhere Macht, den (sic!) diese müssten ja zunächst bewiesen werden. Mit dem Kausalitätsprinzip betrachtet, sind Zeitschleifen-Filme zunächst unrealistisch, schließlich gibt es keine logische Ursache von einer Wiederholung der Zeit. Somit gibt es keine begründete Ursache für die Wirkung. (10)

Bordwell and Hank both assume that causality is a guiding principle for narrative coherence. Yet the reverse is actually the case; the *impression* of causality can only be retrospectively achieved *by* narration. However, this first Bordwellian convention points out one decisive feature of forking-path films – little differences in timing can have a huge effect on the outcome of the story.⁸⁵ For example in *Lola Rennt* and *Blind Chance*, the protagonist is in the same situation three times over, but there is a minimal deviation in timing in the nodal situation, which determines the differing developments of the three alternate story paths.⁸⁶ This is a ‘mock’ take on the infamous ‘butterfly effect’⁸⁷ since the complexity of the parameters that lead to a truly non-linear development cannot be grasped by the means of cinema. The metaphor of the butterfly was chosen by Edward Lorenz a long time after the actual discovery was made. It symbolizes that the minutest change of circumstances can cause major differences in the alternate outcomes (cf. Lorenz). “Sometimes the proverbial minor detail is taken to be the difference between a world with some butterfly and an alternative universe that is exactly like the first, except that the butterfly is absent; as a result of this small difference,

85 Hank mentions the same phenomenon for *Lola Rennt*: “Durch diese Verhaltensänderung findet allerdings eine minimale Verschiebung der Zeit statt (Ceteris paribus). Diese hat zu Folge, dass jede Variante ein bisschen anders verläuft und somit in ein anderes Ende mündet” (6).

86 Although this is questionable for *Blind Chance*, which will be discussed in chapter 2.3.2.

87 Eric Bress and J. Mackye Gruber’s *The Butterfly Effect* makes this the principle of the entire plot development. Although the consciousness of the protagonist Evan Treborn (played by Ashton Kutcher) perceives his own time as uni-linear following time’s arrow; his ability to reverse time and to give the future a different shape is the guiding principle of the film. However, he realizes at the end of the film that it would have been better had he never been born and therefore reverses time before his own birth and commits suicide while still being a in his mother’s womb. The branching of the paths is not on a higher structural level and explained in the narrative as some sort of superpower by Evan. The same idea is taken up again in the British TV series *Misfits* since one of the main characters, Curtis, has the ability to turn back time after experiencing an immense sense of regret.

the world soon come to differ dramatically from one another” (Smith 1)⁸⁸ Chaos theory and the butterfly effect also explain why complex, dynamic systems like the weather make any forecast impossible since too many factors have to be taken into account to make a reliable prediction. The weather forecast is in itself an oxymoron and therefore also a common reoccurring motif in forking-path films. For example, the main character in *Groundhog Day*, Phil, is a TV meteorologist who is supposed to go to Punxsutawney to report on the annual festivities in which a groundhog, also by the name of Phil, is serving as some sort of an ‘mammal meteorologist’. Another film which employs the metaphor of weather (and the butterfly itself) is *Mr Nobody* in which the father of the protagonist is a rather unfortunate meteorologist and the first meeting of the main character’s parents is portrayed as a result of the butterfly effect.

A metaphor common to almost all forking path films, which clearly symbolizes how small differences in timing can have huge effects on the outcome of the story is the trial and/or fail of the protagonist to make it to a certain appointment or meet a certain deadline. Bordwell marks this as his fourth core principle: “Forking-path tales are unified by traditional cohesion devices” (“Film Futures” 95). Those orientating devices help the viewer to structure the narrative in terms of space, time and causality. In, for example *Lola Rennt*, Lola needs to meet Manni by twelve o’clock at the supermarket; otherwise he will try to rob a bank. The physical attempt of Lola to determine her own future and that of Manni, too, is displayed by her constant running. However, as stated before, the slightest differences in timing have drastic consequences for the outcome of each path; in the first version Lola dies, in the second Manni dies, and the third attempt results in a happy end.

Especially the physical attempt of running is often displayed in those narratives along with the deadline and is usually connected to some form of transport such as trains (*Blind Chance*, *Source Code*, *Mr Nobody*, *Sliding Doors*) or other traffic (*Lola Rennt*). The possibility of the human to determine his or her own fate through physical effort results often in the ‘running’ of the protagonist. The viewer stays passive, whereas the protagonist exercises a physical struggle. Consequently, FNs in conventional motion pictures are referred to as the ‘running’ part of this volume. Whether the protagonist is able to make an appointment or not has drastic

88 Also compare Hank’s take on the butterfly effect: “In einer Erweiterung der Kausalität wurde die Idee des Schmetterlingseffekts entwickelt, wonach kleine Änderungen unvorhersehbare große Wirkungen hervorrufen können. Bei nichtlinearen Systemen können winzige Differenzen in den Anfangsbedingungen gravierend verstärkt werden, sodass das System schließlich chaotisch reagiert und dazu führt, dass kausale Vorgänge über längere Zeiträume hinweg prinzipiell nicht vorhersehbar sind” (11).

consequences for the main character in Howitt's *Sliding Doors*. Whether or not Helen catches her train will result in her ultimate death or an indicated happy end. Unlike most forking-path films *Sliding Doors* indicates the proximity of the two alternate story strands by interweaving the mutually exclusive variations through presenting the alternative plotlines in alternation, "continually intercutting one future with the other" (Bordwell, "Film Futures" 89). This is suggested by Bordwell's fifth principle, "[f]orking paths will often run parallel". He states that the alternate paths are variants of another, because of the recurrence of the same places, cast of characters and situations. This makes it easy for the viewer to spot even little differences and similarities of the alternate versions (cf. 96).

The more complex the branching, the more reduced the narrative content. The most extreme example of forking-path narrative in film is Resnais' double feature *Smoking/No Smoking*, which always starts the same way: Celia Teasdale takes a break from her summer cleaning and goes into the garden of the Teasdale mansion. She spots a pack of cigarettes (the brand is the aptonym "Players"). In *Smoking* she decides to take a cigarette break in and in *No Smoking* she unsurprisingly chooses not to. The garden of the Teasdale mansion becomes therefore a literal "Garden of Forking Paths" from which a further branching develops:

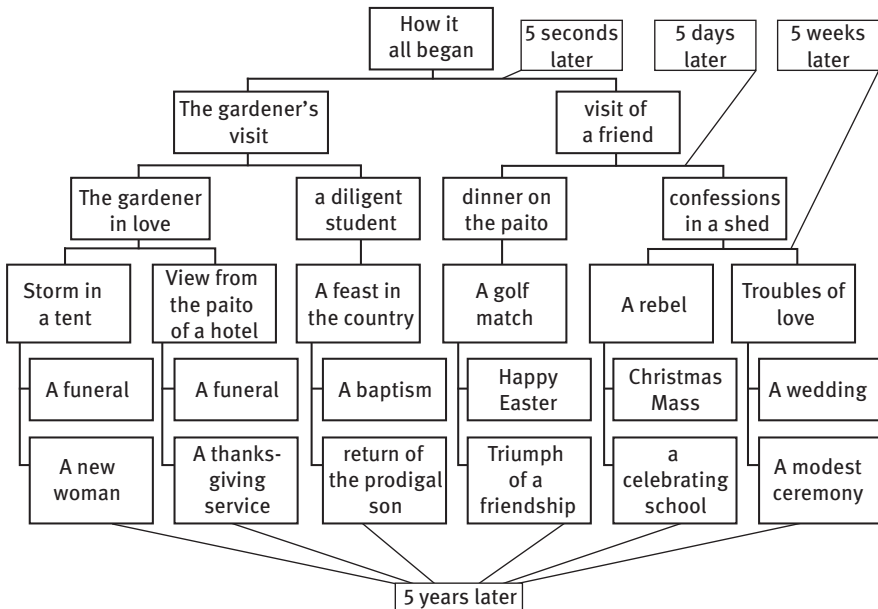


Fig. 2: Overview of the forking paths in *Smoking/No Smoking* as translated into English from the French booklet of the DVD.

Although the branching structure is extremely complex, the viewer never loses her orientation because of the reduction of characters (all five female and four male characters are played by the same two actors, Sabine Azéma and Pierre Arditi) and the simplified settings (always outdoors and demarcated by a cartoonish illustration of the upcoming setting). The recurrence of the same places, characters and situations, however, also implies that the butterfly effect is never carried out to the full effect.

So instead of the infinite, radically diverse set of alternatives evoked by the parallel-universes conception, we have a set narrow both in number and in core conditions. None of these plots confronts the ultimate Borgesian demands: Lola is not shown as Manni’s sister in a rival world, [...]. Helen does not turn into her rival Lydia, and in no version does the protagonist fail to exist at all. We have something far simpler, corresponding to a more cognitively manageable conception of what forking paths would be like in our own lives. (Bordwell, “Film Futures” 90)

The cognitively manageable amount of forking paths (conventionally two or three alternate paths⁸⁹) accounts for Bordwell’s thesis about the folk psychology of our understanding of forking path plots. The proximity of the plot lines also refers to Bordwell’s third principle, “[f]orking paths intersect sooner or later”. This convention seems a bit problematic. First of all, Bordwell’s main argument for his third principle is that “[r]ecurring characters and background conditions render widely divergent futures more cognitively coherent” (*Poetics of Cinema* 177–78). In other words, this means that the tendency not to use too many varied characters results in most of the characters appearing in all the paths. Certain settings also serve as ‘points’ of convergence in which most of the characters of all the separate paths appear together, although only the viewer is aware of this, for example the last airport scene in *Blind Chance*.

However, it is questionable whether the reoccurrence of the same core characters and the same locations in the alternate story strands is already enough to call this phenomenon an “intersection” of parallel paths. These are mere *preconditions* to enable such an intersecting, which is nothing more than an observation, but that can hardly be enough to count for a core principle of forking path

⁸⁹ Bordwell also states that there are exceptions to the rule, such as the many futures in *Groundhog Day*. However, since Phil serves as a unifying consciousness through his linear reception of his own many futures, the film viewer can follow his walk through the alternate paths easily. In true forking path films with many branchings such as *Smoking/No Smoking* the different outcomes add up to 12 endings. However, since the double feature was conceptualized as two separate films, each movie displays 6 alternate endings, which refers back to Baddeley’s magic number of 7 ± 2 with reference to the capability of the human working memory.

films. Bordwell does not explain this any further in *Poetics of Cinema*⁹⁰ but he states in "Film Futures" that:

Makers of forking-path plots seem unable to resist contaminating one by another. At one moment in *Sliding Doors*, the heroine has an inkling of what is happening in the parallel story. Walking along the river with her friend Anna, Helen seems to anticipate what's happening at the same moment in the other story, wherein her counterpart cheers on a crew team: 'Fairly weird. I knew there'd be a boat race going on in purple and white shirts.' ... [I call this] crosstalk between futures. (98–99)

But even if there is a 'true' intersection of mutually exclusive paths this can lead to the illogical confusion of alternate realities. And the contamination of alternate versions is problematic since it would indicate the fragility of the story strands as being *mutually exclusive* and therefore endanger those case studies for qualifying as FNs. This will be exemplified in the following chapter in *Lola Rennt*. Bordwell's third principle is only valid for FNs if the story strands remain mutually exclusive. Nevertheless, the observation that the same characters and settings are used in the alternate paths is unproblematic and the case in most FNs. Examples for the reoccurrence of the exact same settings are the illustrations of specific locations in *Smoking/No Smoking*, such as the final illustration before each alternate ending displaying a comic picture of a church and a graveyard.

The still image, which is always exactly the same, indicates a *local* point of convergence of the alternate futures, but it also serves as what Bordwell calls a "signpost" in his second principle: "The fork is signposted" There has to be a highlighting at the beginning of the forking path to indicate for the viewer the upcoming branching. This is the nodal situation in a FN. *Smoking/ No Smoking* signposts its nodal situations in an extreme way due to the many branchings. But also in more conventional forking-path narratives the nodal situation is signposted, as for example in *Lola Rennt* by Lola's red telephone receiver.

However, the nodal situation always leads to different paths but "all paths are not equal" as Bordwell states in his sixth and seventh principle. "All paths are not equal; the last one taken presupposes the others" ("Film Futures" 99) Bordwell argues that in forking-path plots retrospection is as important as prospectation. The first path sets out a basic layer of the story against which the other story paths are matched.⁹¹ It sets a benchmark and is usually the longest path in terms of screen

⁹⁰ Bordwell republished "Film Futures" in *Poetics of Cinema* (cf. 171–87) but the third convention is not explained any further there.

⁹¹ Hank refers to a similar characteristic of what she calls 'time-loop films' (dt. *Zeitschleifenfilme*): "Der besondere ästhetische Reiz besteht daraus, die neue Variante vor der Kontrastfolie der vorherigen Variante zu sehen" (5).

duration (narrative time). This is what Bordwell calls the “primacy effect”. (*ibid.*) The viewer will compare all alternate paths with the first one displayed.

The counterpart is described in Bordwell’s seventh principle. “All paths are not equal; the last one taken, or completed, is the least hypothetical one” The “recency effect” (*ibid.*) privileges the final future we see. Bordwell concludes that the last ending is seen as the final solution by the viewer. In terms of story logic all the other alternate paths had to happen to come to the last path taken. The paths were preconditions and make the last path the most prominent and truest path compared to the others. In *Blind Chance*, *Lola Rennt* and *Sliding Doors*, “the last future we encounter is privileged by its absorption of the lessons learned in an earlier one” Bordwell argues. “Instead of calling these forking-path plots, we might better describe them as multiple-draft narratives, with the last version presenting itself as the fullest, most satisfying revision. Once more, this conforms to our propensity to weight the last ending, to treat it as the culmination of what went before it [...] even if what went before couldn’t really have come before” (*Poetics of Cinema* 184)

This may be true for *Lola Rennt*, *Blind Chance* or *Sliding Doors* since the alternate paths are displayed one after the other. But it is a fragile concept for *Mr Nobody*, since the claim of the film is that all three alternatives are equally true, or *Smoking/ No Smoking* since the split into two films questions the possibility of a ‘recency effect’ (since there are at least two most recent endings depending on the choice of sequence of the viewer). Therefore either Bordwell’s sixth and seventh convention can only be observed in a few specific cases (and are therefore not conventions but assumptions) or his concept of forking-path or multiple-draft narrative is very fragile.

Furthermore, Bordwell’s argument is based on the psychology of reception. It is not a description of the *logic of the architecture*, which is exactly what NAFU is interested in. His sixth and seventh principles are only in so far interesting since they point out that the sequence of what is shown on the screen, with regard to directionality and temporality, is important for a medium like cinema that presents its content in succession. Therefore, some of Bordwell’s conventions and terminology, such as ‘the signpost’ and ‘contamination’, will be used when I will discuss specific case studies, other core principles will be neglected or discussed with restrictions.

However, Bordwell’s “Film Futures” is important when talking about forking-path films since it has sparked off many attempts to describe complex structures in narrative films. One of the most famous successors of Bordwell is Buckland’s concept of the puzzle film. Buckland (in cooperation with Elsaesser) argues that Bordwell bases his entire concept on his *Poetics of Cinema*, in which he explains films by the means of Aristotle’s conception of plot. Buckland states that the

complexity of contemporary films exceeds Aristotle's concept by far. Therefore he coins a new term, *puzzle film*, to refer to those cinematic artefacts that go beyond Bordwell's idea as proposed in "Film Futures".

In regard to puzzle films, Bordwell follows Aristotle in interweaving the complex, multiple plotlines back into a single, unified classical plot. He only considers one additional quality of the puzzle film – forking path plots – which he finds can easily subsume under Aristotle's classicism: [...] Thomas Elsaesser (in this volume) notes that the result of Bordwell's argument 'is that the para-normal features are given normal explanations, and the narratives are restored to their 'proper' functioning.' (3)

Puzzle films break with the classical framework of stability and coherence. They do not conform to classical norms (such as redundancy). One of Buckland's examples here is Nolan's *Memento*, which may consist of a classical four-part pattern (Bordwell interprets the film that way), but the complexity of the narration, by interweaving two story strands like a Moebius strip, cannot be adequately represented by Bordwell's downplaying of the film's narration in favor the classical structure of the film.

The premise of this volume is that the majority of the forking-path/ multiple draft/ puzzle films [sic!] are distinct in that they break the boundaries of the classical, unified mimetic plot. The puzzle film is made up of non-classical characters who perform non-classical actions and events. Puzzle film constitutes a post-classical mode of filmic representation and experience not delimited by mimesis. (5)

And further:

Puzzle films embrace non-linearity, time loops, and fragmented spatio-temporal reality. These films blur the boundaries between different levels of reality, are riddled with gaps, deception, labyrinthine structures, ambiguity, and overt coincidences. They are populated with characters who are schizophrenic, lose their memory, are unreliable narrators, or are dead (but without us – or them – realizing). In the end, the complexity of puzzle films operates on two levels: narrative and narration. It emphasizes the complex *telling* (plot, narration) of a simple or complex *story* (narrative). (6)

Buckland's idea of creating an umbrella term, puzzle film, to subsume all kinds of different complex cinema types may sound appealing, but does present us with some problems. Whereas Bordwell restricted his concept to structural features, namely the *forking* paths of the narratives, Buckland tries to incorporate all kinds of films into his concept from *Blind Chance* to *Fight Club* to *Pulp Fiction* (cf. 11). What these films have in common is an unusual way of storytelling by deploying unconventional devices like forking-paths (*Blind Chance*), unreliable narration (*Fight Club*) or episodic, non-chronological storytelling (*Pulp Fiction*). What

all these films have in common is that the first viewing experience of them puts the viewer in a position of disorientation, which is only resolved at the end of the movie when she can put all the pieces of the puzzle together to form retrospectively a full cognitive picture. Therefore what Buckland suggests is far better described by Elsaesser’s term the mind-game film, a “mind-game, played with movies” (13). The viewer has to piece the narrative together with non-trivial cognitive effort (for a full list of motifs cf. 17–18).

Buckland’s and Elsaesser’s concepts have been recently employed by many scholars in the field of film studies such as Gabriele Weyand, Miklós Kiss and Maria Poulaki. Whether the “complexity of a globalized world” is focused on with regard to complex cinema (cf. Weyand), or the necessary “cognitive dispositions” to understand complex narratives (cf. Kiss), or the transfer from “complex narratives to narrative complexity” (cf. Poulaki) the focus of all these research projects is determined by *the effect* those complex structures have on the *viewer* who is watching the film. However, most *Future Narratives* in films are probably also *puzzle films*, but there is a big difference between those two terms. A film is a FN when it displays a nodal situation which leads to more than one continuation. This is a clear *structural* feature. This is a very different approach to films from Buckland’s or Elsaesser’s. Bordwell’s idea of forking paths is much closer to the concept of FNs in films. Bordwell’s concept and some of his seven core principles are helpful to structure the corpus of conventional motion pictures, but this study goes beyond traditional cinema and crosses the threshold in terms of interactivity. This will exceed the notion of ‘multiple-draft narratives’ by far.

The gap between conventional motion pictures and those which embrace notions of interactivity can be overcome with the help of one of the pioneers in new media studies, Manovich, and his idea of the ‘database narrative’:

As a cultural form, the database represents the world as a list of items, and it refuses to order this list. In contrast, narrative creates a cause-and-effect trajectory of seemingly unordered items (events). Therefore, database and narrative are natural enemies. Competing for the same territory of human culture, each claims an exclusive right to make meaning out of the world. (225)

The creation of database narratives follows therefore a different logic than traditional cinema. Instead of the linear construction of cause-and-effect chains, database narratives offer a multitude of some sort of ‘pick-and-mix’ lists through which the viewer has to extract the algorithm of the text (to use Manovich’s terminology here).

This [...] places the opposition between database and narrative in a new light, thus redefining our concept of narrative. The ‘user’ of narrative is traversing a database, following links

between its records as established by the database's creator. An interactive narrative (which can also be called a *hypernarrative* in an analogy with hypertext) can then be understood as the sum of multiple trajectories through a database. A traditional linear narrative is one among many other possible trajectories, that is, a particular choice made within a hypernarrative. Just as a traditional cultural object can now be seen as a particular case of a new media object (i.e., a new media object that has only one interface), traditional linear narrative can be seen as a particular case of hypernarrative. (227)

Although Manovich describes narrative and the database as two “natural enemies” this is not logically correct. The human mind can only *retrospectively* make sense of a somewhat chaotic reality by shaping it into a narrative. The illusion of cause and effect is also applied retrospectively. The uni-linear presentation of events as in a PN and the possibility to organize items in a database are just different forms of the *arrangement* of narrative elements. The database itself does not create meaning. Meaning can only be generated by the user who will retrospectively shape the presented events into a meaningful sequence – a narrative. Therefore the concept of database cinema only challenges what is to be understood as film with regard to the production side:

For cinema already exists right at the intersection between database and narrative. We can think of all the material accumulated during shooting as forming a database, especially since the shooting schedule usually does not follow the narrative of the film but is determined by production logistics. During editing, the editor constructs a film narrative out of this database, creating a unique trajectory through the conceptual space of all possible films that could have been constructed. From this perspective, every film engages with the database-narrative problem in every film, although only a few have done so self-consciously. (237)

Manovich's examples for database cinema are Greenaway's *The Draughtsman's Contract* and Vertov's *Man with a Movie Camera*. Although Manovich's idea of a database cinema is intriguing, it is just shedding a light on possible different presentations of narrative elements. A database is a static entity (units may be deleted or added but the entity itself has no inherent temporality; it is in that sense a relative of spatial media, which also explains why Greenaway is a prime example here since he always tries to incorporate 'still life' in some form or other into his films) whereas the motion picture is by nature a *spatio-temporal* medium with an inherent dynamic with regard to story development.

Manovich's idea of database cinema challenges any notion of narrative cinema (Greenaway has frequently mentioned that cinema's main concern should not be narrative). Since FNs are concerned with *narratives* and narrative architectures, Manovich's database approach is intriguing but of no relevance to FNs in *conventional* films. His idea can be applied when narrative chunks are pre-

sented in 'new media' but for the first part of this study, his concept is negligible. Yet, Manovich's concept had to be explained here to shed a look on two further concepts, which have recently gained attention with regard to complex narratives in motion pictures: Kinder's 'database narrative', which is clearly inspired by Manovich, and Allan Cameron's 'modular narrative films'.

A number of contemporary 'modular narrative' films display, as a central stylistic and thematic concern, a fraught relationship between contingency and narrative order. [...] 'Modular narrative' and 'database narrative' are terms applicable to narratives that foreground the relationship between the temporality of the story and the order of its telling. For Marsha Kinder, 'database narrative refers to narratives whose structure exposes or thematizes the dual processes of selection and combination that are at the heart of all stories' [cf. Kinder]. In its cinematic form, database or modular narrative goes beyond the classical deployment of flashback, offering a series of disarticulated narrative pieces, often arranged in radically achronological ways via flashforwards, overt repetition, or a destabilization of the relationship between present and past. [...]

Although the pleasure of navigating the narrative structures of these films is undoubtedly central to their appeal, modular narratives also evoke a mood of temporal crisis by formally enacting a breakdown in narrative order. This mood of crisis is not simply a response to the mediating role of digital technology in contemporary society or the rise of the database as a cultural model. It draws upon these elements but also serves as one of the most recent extensions of a modern and postmodern discourse that continues to rethink the human experience of time in relation to science, technology, and social and industrial organization. Accordingly, the relationships among past, present, and future form a central concern of cinematic modular narratives. (Cameron 65–66)

Modular narratives focus on *how* a story is told in films. Cameron also emphasizes the role of the recipient and the disorienting effect such narratives have on her. Again, just like in the examples by Buckland and Elsaesser, the cognitive ability of the viewer is in focus and not the *architecture* of the narrative. Although the idea of technology (Cameron essentially means databases by this) reforming our society which is mirrored in the eruption of database narratives and the actual ability of viewers to make sense of them is an interesting idea, neither modular nor database narratives encompass what is to be in focus here: FNs. What is in focus is a certain narrative architecture that enables openness *within the structure*. Only those narratives are qualified to be FNs which allow for a node to be realized in this way – or that. Therefore neither database, modular, puzzle nor mind-game films qualify as concepts to describe FNs. A new poetics has to be established to describe those phenomena adequately which will make use of Bordwell's multiple-draft narratives concept, but ultimately go beyond it. What sets the FN approach apart from these recent studies is the focus on the architecture instead of the viewer. In other words, how a narrative must be organized to enable

the staging of openness. The next chapters will exemplify this on particular case studies.

Let the games begin!

2.3 ‘Running’

The aim of this chapter will be to examine case studies of FNs in films. Therefore, it has to be clear, and should be clear from the preceding chapters, what kind of ‘future’ is in focus here. I would like to come back to the initial example given in the introduction of this study, Borges’ “Garden of Forking Paths”. His idea of an artefact that encompasses a multitude of possible futures has not just inspired Bordwell to think about “Film Futures”, but also David Diffrient and his approach to forking-path films and ‘cubist narratives’:⁹²

As early as 1941, Argentinean writer Jorge Luís Borges anticipated the advent of hypertext fiction and subjunctive cinema when he published “The garden of forking paths” (“El jardín de senderos que se bifurcan”). [...] As suggested above, the forking-path paradigm articulated by Borges in his parable about parallel and possible futures has since been assimilated in the lexicons of hypertext fiction, Web design, and computer gaming – arenas in which non-linearity, infinite branching and complex combinatory patterns have perhaps been most fully realized and consistently utilized. More central to the present discussion, however, are cinematic works that feature forked-path narratives. This type of episode film poses hypothetical conclusions to a single, germinal story-event that is presented early in the frame narrative. Together these different outcomes, rendered as serial episodes, express what could be, would be, or might have been. Similar to Italo Calvino’s 1979 novel *If on a Winter’s Night a Traveler* (which is composed of a series of abortive narrative beginnings leading not to a climax but rather to another beginning), ‘repeat action’ films such as *Blind Chance*, *Sliding Doors* (1998), and *Run Lola Run* fit into this sub-category. (Diffrient)

Diffrient creates the connection between Borges’ ‘garden’ and cinema by concluding that forked-path narratives provide more than one continuation to a single story-event that is “presented early on in the frame narrative”. A nodal situation

⁹² He is referring to episodic, multi-perspectival storytelling. Those narratives disperse “point-of-view across either a wide spectrum or a select group of individuals whose contrasting memories portend their ultimate non-compatibility on an emotional or physical level” (Diffrient). Cubist narratives and forking-path plots both “ask the spectator to accept a potentially false proposition: ‘as if’ it were true (and vice-versa) [...]”. This calls into question not only the plausibility of an objectively rendered ‘primal scene’, but also more traditional or transparent narratives’ claim to truth” (ibid.).

is described as a situation that allows for more than one continuation, which is exactly what Diffrient has described here in his 'forked-path narratives'. Therefore, although conventional motion pictures are ruled by the uni-linearity of the screen duration (narrative time) there is a possibility to stage a branching, a certain degree of openness or potentiality through the introduction of the forking-path plot.⁹³ FNs can and do exist in films and the next chapter will look at some of them in more detail. The main focus will be here on the structure of these narratives from sequential forking-paths to parallel streaming technique to time-loops and complex combinatory forms.

2.3.1 Chance and Contingency in Tykwer's *Lola Rennt*

Lola Rennt (English title *Run Lola Run*) is probably the best known and also most thoroughly analyzed forking-path film of all. This is partly due to the enormous financial and critical success Tykwer's masterpiece has achieved. During its first week of being shown in German cinemas *Lola Rennt* reached an audience of 360.000 viewers and within three weeks time *Lola* had attracted about 1.000.000 German viewers. Even in the U.S. *Lola* made a box-office gross of 7.000.000 US\$, which is an enormous success for a German film. This has so far only been surpassed by Wolfgang Petersen's *Das Boot* (cf. Töteberg). Tykwer's film has also reached vast academic attention. Introductory volumes on film analysis mention *Lola* from James Monaco to David Bordwell and Kristin Thompson to Jill Neldes;

⁹³ Cubist narratives or multi-perspectival texts formally and semantically emphasize the dependency of any visual or cognitive processes on the concept of the perspective. However, cubist narratives focus on two aspects especially: the mental constitution of the displayed characters (which relates them to concepts like Perlmutter's *trance film*, Elsaesser's *mind-game film* and, more generally, the concept of unreliable narration) and the disorienting function for the viewer who has to piece a narrative puzzle together, which questions notions of truth and authenticity in filmic narratives.

FNs on the other hand focus first and foremost on the structure of the text. Usually, quite contrary to cubist narratives, the structure is extremely well organized and the nodal situation is clearly demarcated as such. For our purposes, multi-perspectivity can add a more complex layer to FNs, but the core condition is found in the structure, the nodal situation, which always results in a forking-path plot. A cubist narrative centres on a situation, which has already happened, for example the non-chronological flashback narrative in Pete Travis' *Vantage Point*, in which the assassination attempt on the president of the United States of America is shown from the point of view of eight different characters. A future narrative establishes a situation and then branches away from it, for example *Smoking/No Smoking*. The question that a cubist narrative asks of the viewer is: What has really happened? What is the truth? In a FN the viewer is asked: What can happen? What is possible?

and works on complex narrative cinema from David Bordwell to Warren Buckland and from Thomas Elsaesser to David Diffrient and from Florian Mundhenke to Michael Wedel use *Lola* as a prime example; Slavoj Žižek and his Lacanian inspired take on popular films is devoted to Tykwer's movie (cf. *The Fright of Real Tears: Krzysztof Kieślowski between Theory and Post-Theory*); so are academic texts which try to mend the gap between old and new media from Garrett Stewart to Paul Coates, from Marsha Kinder to Allan Cameron and from Nitzan Ben-Shaul to Dan Harries; the interplay of destiny and chance has also sparked off an interest in the film in theological studies (cf. Roser).

To a certain degree this can be explained through the massive popularity of the film when it was released in 1998.⁹⁴ It hit the nerve of a generation mixing the structure of Resnais' *Smoking/No Smoking*,⁹⁵ a highly artificial movie(s) which never denies its theatrical roots, with the fast-paced, music video aesthetics⁹⁶ of Danny Boyle's *Trainspotting*.⁹⁷ Just like David Fincher's *Fight Club* seemed to eerily predict some future events, for example the collapse of the World Trade Center, so did *Lola Rennt* but on a different level. The movie seemed to sense the sea change that was to come with the ubiquity of the (mobile) internet, a medium which allows for interactivity and agency. It allows the user to manoeuvre herself through the database (in Manovich's sense). As Manovich had shown, database works contrarily to the uni-linear organization of conventional narratives (cf.

94 This popularity has not ceased yet. Just like *Goundhog Day*, *Lola Rennt* became part of the cultural memory in terms of filmmaking. Ironic takes on the movie can be found from *The Simpsons* "Trilogy of Error" to *Early Edition* "Run, Gary, Run" to *Johnny Bravo* "Run, Johnny, Run".

95 This is especially prominent when "we consider some of the film's rapid-fire flash forwards. "und dann" ("and then") these sequences begin and what follows is a series of still frames accompanied by the shutter click and whir of a still camera that reveals a minor character's future" (Whalen 33–40) Those "und dann" frames directly quote *Smoking/No Smoking*'s "ou bien" still frames, which indicate the beginning of a cut scene, which will teleport us to a forking-path situation.

96 "*Run Lola Run*, with its frenetic plot, dizzying camera mobility, split-second montages, split-screen framings and pounding soundtrack, also draws on the style of the music video, a post-modern pastiche which functions simultaneously as a Modernist critique of the benevolent, transparent codes of classical cinema. [...] The film incorporates popular culture into a European tradition of innovation and ambiguity" (Nelmes 87–88).

97 Of course, the similarities to Kieślowski's *Blind Chance* are striking, too. Tykwer was directly influenced by Kieślowski's film (cf. Žižek, *The Fright of Real Tears: Krzysztof Kieślowski between Theory and Post-Theory* 78–92; cf. Coates 113–26). Furthermore Tykwer worked on *Heaven*, "a film based on the scenario co-written by Kieślowski and Piesiewicz, the first part of the planned trilogy *Heaven, Hell, Purgatory* – so there is some affinity between the two directors" (Žižek 192) Whalen also mentions Wender's antecedent *Same Player Shoots Again* in which basically a single two-minute shot is repeated five times (cf. 34). For our purposes the structural similarities between *Blind Chance* and *Smoking/No Smoking* will especially be pointed out.

225), which *seems* to be reflected in the structure of *Lola* (cf. Kinder; Cameron; Grieb).⁹⁸

Also new distribution formats like the DVD were to a certain degree interactive and one of the most popular reality television shows of all time was just about to be broadcast, *Big Brother*, which aired for the first time on Dutch television just one year after the release of *Lola*, i.e. 1999. This was a competitive television show in which the audience could influence the outcome of the show by choosing a ‘winner’ through mass voting. Furthermore, cinema seemed to be outstripped as the most commercially successful entertainment medium by video games with *Lara Croft* leaping onto the scene as the first ‘female’ star in 1994 (Grieb sees a direct connection between the heroines *Lola* and *Lara* cf. “Run Lara Run”). The future was wide open and it seemed to call for a new kind of cinema to be established, a cinema which abandoned the uni-linearity of conventional narrative movies for a database approach that mirrored the complexity of a globalized world; a new kind of filmic narrative which enables the viewer to make “order from chaos” (cf. Weyand).

However, it has to be acknowledged that *Lola Rennt* may be the first commercial success but surely not the first FN film with regard to its arborescent structure. Kieślowski’s *Blind Chance* and Resnais’ *Smoking/No Smoking* have both already worked with forking-path plots. At least with regard to conventional motion pictures, FNs do not display a new kind of cinema, but a cinema which opens a space for potentiality on the level of the *plot* structure. Nevertheless, just like Borges “The Garden of Forking Paths” being the most frequently quoted narrative when it comes to complex, branching structures, *Lola Rennt* is the flagship of FNs in conventional films. Therefore it will be analysed as the first case study. It will be shown how the nodal situation plays out in *Lola* and what kind of FN architecture is exemplified here. For this I will use Bordwell’s conceptualization of multiple-draft plots.

Lola may be the first example, but it surely is an ambiguous one with regard to its qualification as a FN. The characteristics, parametres, narrative structure(s)

⁹⁸ I have to disagree with the database approach. Although *Lola* clearly breaks with the conventions of traditional Hollywood cinema, the movie’s carrier medium is still the film reel. A database narrative needs a switch from the realm of the imaginary into the symbolic by translating the scenes into a ‘source code’ which translates back into the binary digit language of the computer. No ‘old medium’ in Manovich’s sense can really provide a database. A database also opens for different kinds of narrative architectures such as networks and rhizomes. Both cannot be realized in a uni-linear medium such as film. Film can only open up to a certain degree of complexity in terms of the plot. The plot can be organized in terms of forking-paths or time-loops, but the internal structure of the carrier medium cannot be manipulated by the user. This is why any association with a database is misleading.

and their problematization will be exemplified here with *Lola* being the master copy against which all other FNs in conventional films will be matched. *Lola* works by establishing Bordwell’s ‘primacy effect’, as it were. It is the referential prototype which all other FNs in films will be compared to.

Tykwer explains on the special features of the DVD in an interview that the idea for the film came from one single image, which had been stuck in his mind for a long time: a woman who is running for her life and for her love. That image encompassed for Tykwer the nature of cinema: motion and emotion. Motion, dynamics, the motion picture itself and the strongest emotion a human is capable of, love, combined for Tykwer into the idea of a running woman, *Lola*, which was then turned into the idea of a film script. Since this volume also states that the illusion of movement is at the heart of any definition of film, *Lola* serves well as a prime example for FNs in movies. Unlike the playful and unconventional aesthetics of the film with regard to music score, multimediality or cutting rate, the narrative itself is rigorously organised and centers around a drastic, clear cut problem as Tykwer points out (cf. “Special Features: Die Macher”). That clear cut problem is also the establishing moment for the ‘rules of the game’ or, in other words, the establishing problem stated in the exposition⁹⁹ of the movie, which sets of the action.

According to Sid Field, in classical narrative cinema the narrative is ordered following a three-act structure (cf. Bordwell on Field; Bordwell, *Poetics of Cinema* 105–06). Field claims that the 1:2:1 structure consists of an *exposition* in which a *conflict or problem* is established, it is then followed by a *development of intensity*, which takes up the biggest part of the narrative, and finishes in a *climax* with a *resolution/denouement*. Thompson introduces a four partite structure with the first part being the *setup*, followed by a *complicating action*, then “*development*” and finally a *climax* “in which the protagonist definitely achieves or doesn’t achieve the goals” Whether it is therefore a three or four part structure is a negligible observation. More importantly, as Thompson points out, the first part of the narrative sets out a *set of goals*, which have to be achieved by the protagonist in

⁹⁹ Exposition has to be seen with regard to the plot structure of the film: “The term plot structure can mean many things. I’m using it to refer to the way in which the syuzhet is patterned in itself without a regard to the strategies by which the narration presents the fabula information. A prototypical example of plot structure thinking would be Jane Smiley’s claim that a novel falls naturally into four parts: exposition, rising action, climax and denouement. These divisions bear wholly on the syuzhet. [...] If the narration is like our trip through a building, the plot structure is like the building as we might reconstruct it in a blueprint – an abstract, quasi-geometrical layout of parts according to principles of size, proportion, and contingency” (Bordwell, *Poetics of Cinema* 102)

the following film.¹⁰⁰ *Lola* starts with a prologue in which the filmic ‘goals’ for the protagonist are symbolically set out, which is encapsulated in a statement by the security guard Schuster:

Ball ist rund, Spiel dauert 90 Minuten, so viel ist schon mal klar, alles andere ist Theorie.
(Schuster quoting S. Herberger, *Lola* 00:02.29)

Schuster looks right into the camera and talks directly to the audience. As soon as he finishes his quote he kicks the ball into the air accompanied by the words “Und ab” (Go!), which can be compared to the jargon used in filmmaking as in “Klappe, und ab” (“Action”). The viewer is invited to see the film as a game. While the camera zooms out into a bird’s eye perspective the spectator can decipher the film’s title from the arrangement of people on the ground. The viewer has an immediate understanding of the film concept, which is a clear advantage over the characters in the diegetic universe that are unaware of this (with the exception of Schuster).

The prologue establishes the rules of the game and its parameters – characters, time, space. The protagonists Lola and Manni are introduced in the prologue not unlike (player) characters in a video game. This can be seen as being part of the ‘game instructions’ or the film’s tutorial. To be able to play the game (the viewer here is invited to play a movie ‘game’) one has to know that she is entering the game. The viewer is immediately cued into this through the visual language of the introduction.

The first scene of the actual plot – the exposition, conflict or setup – establishes the ‘rules of the game’ or the goals, in Thompson’s sense, that the protagonist Lola (played by Franka Potente) has to achieve in the course of the film. Lola receives a phone call from her boyfriend Manni (a homophone of English “money”¹⁰¹; played by Moritz Bleibtreu) who has lost a plastic bag with 100.000 DM in it. These belong to ruthless gangster boss Ronnie (played by Heino Ferch). Manni left the bag accidentally on a train after a collision with a homeless person (played by Joachim Krol). Manni has to meet Ronnie at 12.00h at the water tower in Berlin, otherwise Ronnie will kill him. Lola, still being at her mother’s flat, has

100 For a direct comparison between Field’s and Thompson’s approach, see (cf. Thompson). Especially Thompson’s analysis of *Groundhog Day* as post-classical Hollywood cinema is interesting here (cf. 131–55).

101 Classical platform games such as Nintendo’s *Super Mario* always set out two types of goals for the player: to get to the end of the level (usually by overcoming obstacles and enemies) and to collect “coins”. Manni/money could be a reference to both, the goal in terms of love interest (climax: happy end; the re-establishing of the stable duality of man and woman) and a goal of in terms of high score (“coins” or money).

20 minutes time to get 100.000 DM and to meet Manni at a supermarket close to the water tower. This refers directly to Bordwell’s fourth key convention of forking path films: “Forking path tales are unified by traditional cohesion devices” such as appointments or deadlines which the viewer can structure in terms of space, time and causality, i.e. if Lola does not meet Manni by 12:00h, he will rob a supermarket to get 100.000 DM. This is also referring back to the statement by Tykwer that the unconventional aesthetics of the movie are in direct opposition to the rigidly organized plot which centers around a drastic, clear cut problem: Lola has got twenty minutes (time = 20 min), to go from her flat to Manni (space = distance from A to B in Berlin) and to get 100.000 DM (change in inventory; increasing of value = +100.000 DM) to save Manni (goal). The rules are set out, the goal is clear, run, Lola, run! In the *Video Game Theory Reader* Perron introduces the classification of games by Callois and Huizinga with some amendments to distinguish between interactive *movies* and movie *games* (cf. 237–42).

Following the definitions of French philosopher Andre Lalandé, while keeping with Callois’s terminology, Frasca defines the two activities as follows:

Paidia is ‘Prodigality of physical or mental activity which has no immediate useful objective, nor defined objective, and whose only reason to be is based in the pleasure experienced by the player.’

Ludus is a particular kind of paidia, defined as an ‘activity organized under a system of rules that defines a victory or a defeat, a gain or a loss. (241)

The establishing of goals in *Lola Rennt* connects the film strongly with this concept of ‘game’¹⁰² with regard to its ludic pole: an “activity organized under a system of rules that defines a victory or defeat, a gain or a loss”¹⁰³ The forking-path narrative may be playful in terms of its aesthetics but it is rigidly organized, which refers back to Bordwell’s observation that instead of the infinitive, radically diverse set of alternatives, evoked by the parallel-universes conception and by Borges “The Garden of Forking Paths”, multiple-draft narratives work within a set narrow both in number and in core conditions. According to Bordwell this is due to his hypothesis that narratives are built not upon philosophy or physics

102 Which can in itself not be defined as Ludwig Wittgenstein pointed out; there is only a “Familienähnlichkeit” between the different kind of games (cf. Whalen 33).

103 It is also possible to see the smallest common denominator of all games (at least those which are tending towards the ludic pole) that there has to be a *set of rules*. Otherwise it would be impossible to announce a victory or defeat (or draw) at the end of the game. Additionally, the player has to *know* that she is playing a game; otherwise there would be no need to acknowledge the rules.

but on folk psychology (the ordinary processes we use to make sense of the world) (cf. “Film Futures” 90).

As it was already established in chapter 2.2, there is a generic family resemblance between forking-path narratives and FNs. FNs just like forking-path narratives feature a situation from which all alternate paths stem – Bordwell’s second principle: ‘The fork is signposted’ (cf. “Film Futures” 90), the signpost highlights the beginning of the forking paths. Essentially, it establishes a nodal situation, which is always *the same* situation, from which the *mutually exclusive* alternative story strands branch away from. That nodal situation has to have more than one continuation, in the case of *Lola Rennt*, the nodal situation is followed by three alternative paths. The signpost in *Lola* is the falling down of Lola’s red phone receiver which initiates her running.¹⁰⁴ The nodal situation here, however, is not a single shot but a sequence. The nodal situation consists of the red phone receiver and its falling back on the main body of the phone; then we follow the camera as it zooms through the mother’s living room into the television, which stars a comic Lola running down a spirally staircase.¹⁰⁵ This entire sequence is principally the same in all three versions (*Lola* 00:11:33; 00:33:50; 00:52:21), in conventional films the nodal situation can therefore be a sequence and not just a single shot. The nodal situation leads to three entirely different outcomes, depending mainly on the initial encounter with the first character (all in comic form) in the staircase. Lola accidentally runs into a young man and his aggressive dog in the staircase. The three alternative ‘runs’ are identical in terms of nodal situation, object of the ‘game’, and the reoccurring of the same characters in all three episodes.¹⁰⁶ However, Lola’s reaction to the man in the staircase and his dog determines the entire outcome of each path. In the first run, Lola gets scared of the dog’s growling, in the second run the young man trips her over and she falls down the staircase, which leads to a minor but significant *delay* in the development of the story and in the third run, Lola jumps over the dog and growls back.

104 Furthermore, it has to be mentioned that not just the fork is signposted but also the *end of each path* that will lead to a return to the nodal situation. The tragic endings one and two end with the *plastic bag* (containing the money) being thrown into the air either by Lola or by Manni. The plastic bag is either red (first path) or green (second path). Just before each path returns to the node again, the images of the ‘flying’ bag and the phone receiver are blended into each other by the fast intercutting of the images. The nodal situation, a situation of inscribed divergence, is mirrored therefore by a situation of convergence at the end of each path. Lola and Manni always end up in the more or less same situation and the signpost for ‘game over’ is the flung plastic bag.

105 Compare the comic Lola running through the spiral’s of time in the prologue (also 3 times).

106 The minor characters appear more or less prominently depending on Lola’s run; the homeless person, for example, only plays a major role in the last run, which is due to Lola’s crash into the cyclist, who then sells the bike to the homeless person.

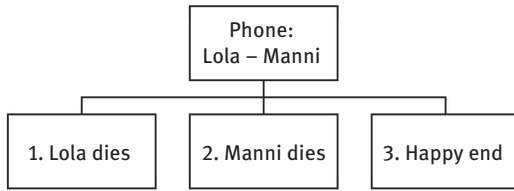


Fig. 3: The forking path architecture of *Lola Rennt* with its three alternate endings

This is an ironic take on the butterfly effect, the “sensitive dependence on initial conditions”, since the runs are identical apart from Lola’s reaction to the dog which leads to extreme consequences: two tragic and one happy end. In version 1 Lola dies, in version 2 Manni dies and in the fairytale version 3 no one dies and Lola wins in the casino.¹⁰⁷ Accordingly this links back to Bordwell’s first principle: ‘Forking paths are linear’. The paths follow a strict line of cause and effect; one moment of choice determines the rest of the plot. With regard to the butterfly effect little differences in timing can have huge effects on the story. However, *Lola* features an exception to Bordwell’s first principle since there are further branchings in the plot, the ‘und dann’ sequences. Lola’s initial decision is not the only determining principle of the film but also her different reactions to minor-characters have drastic consequences for these characters.

The chief exception to my claims about causal linearity and timing in these tales comes in the interpolated flash-forward passages in *Run Lola Run*. These present very quick montages of stills, prefaced by a title (“and then ...”), which trace out the futures of secondary characters. Most of these also adhere to a linear chain of cause and effect, but in one instance things are more complicated. In each trajectory, Lola bumps (or nearly bumps) the same woman on the street, and the film provides a flash montage of the woman’s future; in each story she has a different future. But why should the timing of Lola’s passing create such sharply different futures for the nameless woman? This hardly seems to be an action that could launch radically different outcomes. Tykwer’s insert work well as a mockery of the ‘butterfly effect’, but I suspect that audiences would have difficulty understanding an entire film based around divergent futures that aren’t causally triggered by an inciting incident. (Bordwell, “Film Futures” 93)

107 Also NAFU is not interested in philosophical concepts; I would like to mention the following as a side note. It is also possible to interpret the scene as the film’s essential take on destiny and free will. Man and animal (here dog) embody the two principles in human life: the ability to consciously act (the man trips Lola over on purpose) and the ability to react instinctively (the growling of the dog). Lola incorporates both principles in her third run (she *instinctively* jumps over the man and his dog) and *purposely* growls back at them. It is only in her third attempt that she is finally able to achieve the set ‘goals’ of the film: to get 100.000 DM and to meet Manni at 12:00h.

This observation has two faults: 1. This is not a nameless minor character. Apart from the blind woman, all minor characters whose futures are in one way or another influenced by Lola are featured with ‘mugshot’ and name in the prologue (the name of the woman is Doris); 2. The visual language is very ambiguous here. In (*Lola*, 00:07:07) Manni explains to Lola over the phone that he lost the bag with the money to a homeless man on the train. In the same flash-forward style sequence (apart from the ‘und dann ...’ frame) a multitude of possible locations is shown that the homeless man might have fled to. They are all mutually exclusive and none of them is marked as the ‘right’ one; as a matter of fact he is still in Berlin as we will see later on in the movie. They are mere possibilities, therefore staging the impossible – the filmic conditional. Since film knows only one time of presentation unreliable narrations have to be indicated with visual markers. Since all the possible futures of the minor characters are done in the same visual style as the possible locations of the homeless person, these can be associated with the filmic conditional. They are unlikely but not impossible. The only indicator of them being actual nodal situations is the ‘und dann’ frame which reoccurs every time and is classified by Bordwell as the second principle: ‘the fork is signposted’. If that is the case then there are three more nodal situations. Doris has three possible futures (kidnapping a baby, winning the lottery or becoming a Jehova’s witness), Frau Jäger has two possible futures (suicide or relationship) so does the cyclist, Mike (marriage or death as a junkie). It has to be emphasized though that the screen duration is congruent with the narrated time in each run. Lola has twenty minutes and only twenty minutes time per path and so does the viewer. The ‘und dann’ sequences point to a future that is out of the film’s universe.

In addition, Bordwell should have noted that it is not Lola’s bumping into the woman alone, which marks her alternate possible future but the reaction of the woman. In the first run, the woman yells “Schlampe” (*Lola*, 00:12:35) which is followed by a very negative future development for Doris. In the second run she yells “Blöde Kuh” (*Lola*, 00:34:46), which results in her winning the lottery. And in the third run Lola does not bump into the woman at all, which results in her becoming a Jehova’s witness (*Lola*, 00:53:28). The sensitivity to initial conditions has at least two factors here: Lola and the reaction of the woman herself. And two changed parameters can indeed change a lot with or without employing the butterfly effect.

However, I will focus again on the main story line of the film and the initial nodal situation of Lola’s run down the staircase. Hank argues that once Lola has acted in one way or another in this beginning sequence, the following development of each story strand embraces the concept of causality fully. This is symbolically visualized by the falling of the domino stones in Lola’s television after the

conversation with Manni over the phone just before the first run (*Lola*, 00:10:15). This domino effect symbolizes the action of the movie. It is up to Lola to set the action into motion but once it is set into motion, causality will lead from one event to the other in a cause and effect manner (cf. Hank 10). This, of course, is a false conclusion as already shown in chapter 1.1.2. Causality is not the guiding principle but it is the illusion of causality, that makes the viewer think that each story path had to happen that way. Causality can only be applied retrospectively, which means in this case that once a node has imploded into series of events, the alternate story paths are organized like PNs. That one cause had to lead to a certain effect can only be observed retrospectively. The nodal situation at the beginning of the film is actually showing the fragility of this concept. If causality was a ruling principle and we would enter the same nodal situation and all parameters which have influence on the nodal power (character, space, time) would be exactly the same, the outcome would be exactly the same, each time. This is, of course, a paradox in *Lola Rennt*, since there are three different outcomes out of the same nodal situation. In terms of space (distance and location) and time (20 minutes) the parameters are exactly the same in *Lola Rennt* (cf. Hank 10). Since Hank believes in causality she questions if Lola is the exact same character when she encounters the nodal situation again. If she is the same character, equipped with the same amount of skill and experience, this would mean that according to the principle of causality the whole run would have to be repeated in the exact same sequence. If this is not the case, the character cannot be exactly 'the same' (*plus* experience; even though this seems to be subconsciously so) otherwise the three paths would be identical. This becomes especially prominent in the third run when Lola instinctively jumps over the man and his dog in the staircase (*Lola*, 00:52:52). That slight change in timing will enable Lola to save Manni and gain the money. Further indications are the fact that Lola does not know how to unlock the gun at the end of the first run, when she is helping Manni to rob the supermarket. (Lola takes the gun from the security guard in the supermarket. Manni tells her that the gun is still locked, "Die ist nicht entsichert" And how to unlock it: "Der kleine Hebel an der Seite" (*Lola*, 00:27:23). In the second run, however, Lola manages by herself to unlock the gun that she is taking from Schuster, the security guard at the bank, to threaten her father at gun point (Schuster, after Lola took the weapon from him, "Kind, du kannst doch mit dem Ding gar nicht umgehen" Consequently, Lola unlocks the gun and shoots a couple of holes in a wall (*Lola*, 00:41:32–00:41:37). There are also more incidences that lead to the assumption that all characters must have learned from a previous run or are guided by a supernatural force, which will eventually lead to a positive outcome (cf. Hank 14). For instance, the nuns make way for Lola in runs 1 and 2

but not in run 3. As a consequence, this will make Lola run into the cyclist, who then manages to sell the bike to the homeless man with Manni’s bag.

Another example would be the blind woman who is waiting in front of the public phone box. She stops Manni in the last run, so he can witness the homeless person cycling past, which will lead to him regaining the money. In addition the nun in run 2 is wearing a pair of sunglasses (*Lola*, 00:35:55) and the blind woman both indicate that Lola has to take a ‘blind chance’ to win the game of the film.

Essentially this leaves room for two interpretations in terms of causality for the film.

The first one leads to the assumption that the principle of necessity is counterbalanced to the principle of contingency (or openness). When Lola is ‘giving room’ to chance, the guidance of a ‘higher power’ leads her to success. In run 3 she misses her ‘papa’ at the bank since Herr Meier, earlier on, did not have an accident and is therefore picking up her father at the bank. Both have already left when Lola arrives.¹⁰⁸ She decides to keep on running without knowing the goal of her action, which is accompanied by an inner monologue or prayer: “Was soll ich nur tun? Was soll ich bloß machen? [she continues running with her eyes closed] Komm schon! Hilf mir, bitte. Ich warte, ich warte, ich warte” (*Lola* 01:00:33) (cf. Hank 14). This leads her to the casino where she wins two games of roulette (an *aleatic* game [cf. Perron 240]).¹⁰⁹

On the other hand, it is possible to interpret the film with regard to causality in such a way that it is the only reigning principle and therefore the acquired knowledge or expertise of Lola from run 1 and 2 enable her to win the game (here *agôn*). Consequently, though this would transform the forking-path structure (all paths stem from the same situation, i.e. all parameters [character, time, space] are the same) into a time-loop structure (cf. Hank).

A typical time-loop film would be Ramis’ *Groundhog Day* in which the main character, Phil, is aware of his existence in a time-loop (cf. Thompson 131). He is

108 She is then greeted by the security guard, Schuster, enigmatically with “Bist du endlich da, Schatz” (*Lola*, 00:58:36). This could be interpreted as some kind of pre-knowledge by Schuster. On the other hand, Schuster is part of setting the rules in the prologue and therefore he might be the only character who does actually have knowledge about the fact that the film is a game and Lola is bound to come to the bank.

109 A game that is led by the principle of chance. Another example would be the lottery. Lola’s double win with the same number is highly unlikely. Her power to influence the spin of the roulette wheel or the running of the ball would assume that Lola possess an enormous amount of will power which leads to her developing supernatural forces.

able to increase his knowledge and skills but this has no effect on the time-loop itself since he always wakes up in the same situation again each morning.¹¹⁰

Now, there are two misleading conclusions, the first one has to do with Hank's use of the term causality and the second one with the concept of a time-loop. Since causality can only be applied retrospectively, it is not a reigning principle but the *result* of the viewing process. It is just an assumption that one cause led to a certain effect because the events are shown in that way. It is in no way sufficient to identify a 'causality paradox' with regard to the three different runs in *Lola Rennt*. Apart from that, the nodal situation at the beginning is showing exactly the fragility of the idea of causality. Every moment in time is a *series* of nodes and every node can lead to completely different outcomes. And because of such a *series*, every individual node can lead to completely different outcomes. It is in no way determined, how a path will continue. And this is exactly what is shown in *Lola Rennt*. The nodal situation is always exactly the same and is leading to different outcomes anyway. This cannot be explained by the strict rule of causality. This was also already mentioned when Bordwell's interpretation of the interpolated 'und dann' sequences were discussed. Secondly, a time-loop structure is in no contradiction to a forking-path plot. The only difference is that the (usually the main) character is aware of the existence of the time-loop but this does in no way challenge the openness of the situation. A nodal situation leads to different continuations and this is also how a node works in a time-loop film. The character may be aware of the node and because of the sequential showing of the different developments the viewer might again be tempted to assume that one story line had to be played out first to lead to the next one and so on, but really this is merely another take on the belief of causality as a ruling principle. Structurally speaking, the node *always* possesses the potentiality to lead to all the different outcomes in the film. The character may not be aware of this but this does not challenge the quality of the node. There is always the possibility of more than one continuation. This is what is meant when we say that the nodal situation

110 Another reason why *Groundhog Day* represents a very different kind of time-loop than *Lola Rennt* can also be exemplified by comparing the structure of Ramis movie to *The Butterfly Effect*. In both cases the protagonist may be able to reverse time (Evan) or repeat the same day all over again (Phil) the time for the character is perceived as moving *forward*. Just like time's arrow. This is very different in *Lola Rennt*. There are indications for a learning curve but Lola is unaware of the past futures. "[...] the narration in *The Butterfly Effect* provides redundant cues to make certain the audience understands the causal relationship between protagonist Evan Treborn's flashbacks and the diegetic present tense. [...] *The Butterfly Effect* is similar to *12 Monkeys*. The audience no longer has to spend time hypothesizing about the nature of the events and can concentrate on trying to predict what changes Evan's actions in the past will have on the diegetic present" (Panek 62).

is always *the same situation*. However, *Lola Rennt* is a different from *Groundhog Day* if we think of it as a time-loop film. It shares certain qualities with a video game in the way that the player in a game has knowledge about the game when she starts again.

The film does not explain the links between the stories, and its ambiguity coupled with the themes of fate and all-conquering love which are suggested, seem to align it with art cinema. However, the narrative also offers us the possibility of another explanation which draws on contemporary popular culture, namely that this constitutes a live-action enactment of a computer game: thus Lola keeps playing until she overcomes all obstacles and 'wins'. (Nelmes 87)

She is able to increase her skills and knowledge but the character itself is not aware of that change (which is the logical puzzle). Lola is part player and part avatar. She is unaware of the other alternative paths, but she has somehow gained experience.

[...] Henry Jenkins has mediated on, and sought to mediate in, the dispute between the adherents of ludology and those of narratology. The last decade has seen the emergence of films whose structures clearly resemble the ludic ones of video games, allowing their protagonists a number of 'lives' wherewith to negotiate a certain scenario, suspending both expected outcomes and the notion of narrative teleology itself. (Coates 113)

And further:

The story Tykwer retells again and again can indeed be defined as game-like in that it poses a problem in need of a solution, then tries out a variety of them. Remembering my earlier discussion of 'becoming another person', one is tempted to say that the rule that defines a game as such is that the game-player chooses to enter each new scenario as the same person, not become another person, no to become another one. Any variables involve plot, not character. Lola and Manni always play the same roles; only the outcomes differ. Manni is not a dealer in one scenario and a solid citizen in another (punished or rewarded according to square or hip norms). Despite the vatic, Zen-like opening quotations, the self-correction is not karmic. (Coates 121–22)

Nevertheless, it is dangerous to neglect the actual medium of this particular film. *Lola* is a traditional film, stored on a film reel, and made for the screening in a cinema. The 'learning-curve' that the viewer is able to witness (if there is one) is not a result of the time-loop itself but a result of the sequentiality of the paths because conventional film as temporal medium does not have the possibility to assemble the paths differently each time. *Lola* is merely pointing us to the restrictions of the medium but does not endanger our concepts of node and FN. It is not a game, after all, it is a film. This is exactly the misunderstanding that both

Bordwell (cf. "Film Futures" 100) and Hank (cf. 6) argue for when they assume that the utopian third path taken is the 'true' one then this can only be the case if Lola has 'learned' from the former episodes. Since this would mean that there is always only the possibility for one specific future to be performed at any one time.

The last future we encounter is privileged by its absorption of the lessons learned in an earlier one "Bordwell argues". Instead of calling these forking-path plots, we might better describe them as multiple-draft narratives, with the last version presenting itself as the fullest, most satisfying revision. Once more, this conforms to our propensity to weight the last ending, to treat it as the culmination of what went before it [...] even if what went before couldn't really have come before. (*Poetics of Cinema* 184)

However, as already shown, the node is always carrying the possibility for all three continuations and all that *Lola* shows us that there are FNs that have an inbuilt sequentiality because of the medium specifics but not because of the narrative architecture. This logic is reinforced by the conversion from film reel to DVD. The interactive format enables the viewer to choose 'Szenenanwahl' (scenes selection). But instead of the possibility to choose different scenes from the movie, the viewer can choose between the three alternative runs. By transferring the conventional motion picture from analogue film reel to digital versatile disc, *Lola Rennt* becomes an unambiguous FN since it is obvious that all three runs are equally possible and true alternatives. They are mutually exclusive, each path containing a complete story arch (cf. Thompson; cf. Field) of their own and providing thereby narrative closure stemming from a nodal situation, which is seated outside of the narrative, enabling true choice and agency for the viewer. However, *Lola* was not designed as a Choose-Your-Own-Adventure DVD, but as a cinematic experience. "'Run Lola Run is a movie about the possibilities of the world, of life, and of cinema,' Tykwer told his crew" (Whalen 38) The idea for *Lola* stemmed from the image of a running woman, which encompassed the nature of cinema for Tykwer: the moving image and pure emotions. Therefore it is not indifferent in which order the continuations of the film are watched.

It also has to be kept in mind that the film comes with a prologue. The prologue really establishes the constituents of the *movie game*: The first scene focuses on the pendulum of a clock in a non-space (a green clock in front of a black background). The camera is then swallowed by the clock (time is the *opponent*) just to meet *the players* of the game (the camera seems to arbitrarily navigate through a crowd of people, stopping now and then to set focus on some character) again in a non-space (this time white), it stops at Schuster whose security guard uniform resembles the uniform of a football referee who speaks the famous

words of football coach Sepp Herberger¹¹¹ “Ball ist rund, Spiel dauert 90 Minuten, so viel ist schon mal klar, alles andere ist Theorie” (Schuster quoting S. Herberger, *Lola* 00:02.29) (Schuster states *the rules of the Lola game* because he as referee is aware of the rules on a metalevel since he is not directly involved in the game, this is also why he looks directly into the camera). After that Schuster kicks the ball into the air to open the game. The ball falls through the O of the title ‘Lola Rennt’, the image resembles the tracking shot of the camera through the mouth of the clock and then we witness a comic Lola running after the ball through a blue comic style tunnel (which is essentially a spiral) (*Lola*, 00:02:52). Then she runs (still in comic form) through the mouth of another green clock into another green tunnel/spiral (this time with teeth) just to be swallowed again by a clock and this time she is entering a *third* tunnel, which morphs directly into a spiral. Lola becomes disoriented and when she is spit out again, we see the players or main and minor characters in close-up still frames, like mugshots accompanied by the shutter click of a camera, the *team(s)* (*Lola*, 00:03:47). Finally, the camera features a satellite shot from Berlin (*the pitch*) only to zoom in right onto Lola’s red telephone (*the signpost*). The prologue is the synopsis of the entire movie. It is not just the establishing of the rules of the movie game but it also gives all the answers that the viewer will raise during the film.¹¹² The prologue establishes the character of the film as game, which is picked up by Tom Whalen:

- 1) Games exist, as much as possible, in a zone of safety. Like Wile E. Coyote, a game character can’t (or shouldn’t) be harmed. No one dies in Run Lola Run.
- 2) The player should be able to affect the outcome of the game. Lola is determined beyond all logic (so determined that she rises above the logically possible) to win the game. But can a player affect the outcome even of a game of chance such as roulette? Yes, in this case especially roulette. (34)

It is also clear that Lola has to face her opponent, the clock, three times. She runs through three tunnels (the first one being kind of friendly, the second one has teeth, which resembles the brutality of the second run, when Manni gets run over and Lola threatens her father with a gun; the third one being a spiral leads

111 Just as another side note, it may be pointed out that Sepp Herberger is partly responsible for the German win of the football world championships in 1954. This is commonly referred to ‘das Wunder von Bern’, so *Lola* is the wonder from Berlin. Football is a ludic game but like any good game there is always room for chance. It is probably best to describe this film not just as Tykwer’s tribute to cinema but also as a tribute to football, also a game of motion and emotion.

112 This refers to Carroll’s concept of ‘erotetic narration’: the exposition of a film construes a question in the mind of the viewer (will Lola win the game?), the viewer will make hypotheses in the main part and the resolution will provide her with a final answer to the initial question (cf. Hank 3).

to the end of the tunnel) in the exact same sequence as it is later on presented in the movie. Additionally, the prologue is accompanied by the voice over narration of the famous storyteller Hans Paetsch. This indicates the true nature of *Lola Rennt* as fairytale. A fairytale is an initiation story from dependence (family ties represented by her father) to independence (Lola gets the 100.000 DM without the help of her father), combined with magical elements (not just Lola's ability to influence the ball in the roulette game, but also the fact that the last, magical run has a positive outcome) and it always leads into a happy ending (run three). The sequentiality of the runs is therefore not at all indifferent but everything has to happen in the exact same order just like a fairy tale starts with 'once upon a time' and ends with 'and they all lived happily ever after'. There is a clear 'recency effect' in Bordwell's terms. The continuations are not true alternatives to each other but have to happen in that exact sequence, just like the narrative of fairy tale (and I cannot think of a fairy tale that is a FN).

The structure of *Lola Rennt* therefore combines the forking-path plot with the time-loop (Lola being the unifying centre of consciousness) which leads to a more complex structure. Instead of a loop or a tree, *Lola's* narrative structure describes the concentric circles of a spiral in which every entry point is describing a new circle. However, the pre-knowledge from the former run transforms the circle so that it becomes a spiral. A spiral, as Vladimir Nabokov states, "is a spiritualized circle. In the spiral form, the circle, uncoiled, unwound, has ceased to be vicious; it has been set free" (quoted in Whalen 35).

This compares to Bordwell's third and fifth principle: 'Forking paths intersect sooner or later' – forking path films have the tendency not to use too many varied characters, most of the characters appear in all the paths. In *Lola* the 'teams' as introduced in the prologue are featured in every path. And 'forking paths will often run parallel', the paths are variants of each other because of the reoccurring of the same places, cast of characters and situations. This is a viewer friendly device, since even little differences in the alternate versions can be spotted easily. There are many 'intersections'¹¹³ in *Lola*, for example the red ambulance or the men carrying the glass panel (the ambulance stops before the glass panel in run one, but smashes through it in run two). These parallels should be logically only detectable by the viewer in mutually exclusive story strands. When, however, the experience from a former run has direct consequences on the subsequent path taken due to the altered behavior of the protagonist, such as the safety lock example in *Lola*, Bordwell speaks of a contamination of the parallel universes (cf.

¹¹³ Intersections are meant here in a Bordwellian sense. Bordwell argues that it is already enough that there is an extreme closeness between the story strands in terms of characters, settings and timing. It would be better to talk of *parallels* to avoid any confusion.

Bordwell 92). This is logically impossible in forking-path plots, though exactly this fact is often used as a springboard for 'impossible' contaminations as in Howitt's *Sliding Doors* (cf. chapter 2.3.4.).

Moreover, [...] Tykwer's film shows the second story's Lola removing the safety catch from her gun – something Manni had to instruct her to do in the first story – while Lola 3 now knows to jump over the threatening dog and to let herself into the ambulance rather than make the mistake of requesting a ride. (Coates 116)

The shifting or cross traversing between alternative strands can be realized in new media narratives with a hypertext or network structure, but the sequentiality of the 'old' medium film turns the contamination of the branches into a time-loop which features some of Bordwell's principles for forking path narratives. The contamination of story strands has direct consequences for the narrative architecture of *Lola Rennt*. The film cannot be exclusively described as a forking-path film (due to the contamination), but it is also not a pure time-loop film (Lola is unaware of her revisiting the same situation; the changes in behavior are instinctive or supernaturally guided). The spiral is therefore the film's leitmotif. It reminds us that Lola's journey is not essentially circular. "Time for us and for Lola is not circular, but (dialectically) spiral. Significant and insignificant events deviate from round to round. Lola's game is not circling but spiraling"(Whalen 35)The spiral opens the closed time structure of conventional film making (represented by the O or the mouth of Chronos) for a freer, cinematic form – a form of pastiche in terms of media mix (from still frames, to animations, to hand camera shots, to conventional cinematic image). It also allows for a post-classical plot structure (episodic). It frees the motion picture from its strict uni-linear temporality, but reunites the different plot levels since there is an inbuilt sequentiality. *Lola Rennt* represents a new kind of cinema which combines the openness of a FN with the visual possibilities of the conventional motion picture.¹¹⁴

Just like the introduction of the nodal situation explodes the narrative (from the actualized, singular event to a space of possibilities/ potentiality), the introduction of a FN architecture explodes the concept of conventional motion pictures. This disruption of an established order is exemplified by the main structural principle in *Lola Rennt* on the story level – *Lola* is working like a traffic light:

Radical openness can never be established in conventional motion pictures due to the dominance over the temporal ordering by the medium itself. And even

¹¹⁴ Again, I would like to point out that a new kind of cinema is not meant in terms of database (cf. Cameron) or the idea of film as game (cf. Grieb), but as the staging of openness on a structural and aesthetic level.

if a film like *Lola Rennt* features a “number of parallel universes” which is “really little” (cf. Bordwell, “Film Futures” 92), the visual ordering of elements has to be drastically pointed out so the viewer does not lose orientation and is able to compare the similarities and differences between the alternate versions. The navigation through the narrative becomes feasible for the viewer by establishing visual guidance markers: colors. The signpost of the nodal situation is clearly marked by the reigning color of the film: red. Just like Lola’s flaming red hair, her telephone is red, too. It is this technical device which enables her to start her run again. It is the visual signpost for the start of the fork. Additionally the ‘gameover’ situation at the end of paths one and two is filmed with a red camera filter. These scenic inserts seem to take place in a non-space (probably a flashback into the past of Lola and Manni) and a non-time (the dynamic rhythm of the music which accompanies Lola’s running style is exchanged for the complete lack of any musical score, which indicates stasis instead of motion). The entire scene is visually linked to the signpost which indicates that this is not a ‘game over’ but a ‘continue’ screen as the viewer is directly propelled back into the nodal situation. However, red is not the only color that is dominating the visual language of the film. Manni’s hair is yellow, so are the clothes of the men carrying the glass panel and the phone booth. In the prologue, the opponent of Lola, the clock, is green and the first introduction of her father is in front of a green cupboard (*Lola*, 00:13:58) (generally, all the bank scenes are dominated by the colour green). Three main colours and three alternative futures, *Lola*’s main structuring device is the trichotomy of things. But just like the forking-paths in this film, the colors are not entirely distinct from each other, either. The plastic bag in the third run is also green, which should indicate the defeat of Lola, but that is not the case here. This refers back to the film’s main metaphor: the film is regulated like urban traffic. Lola’s role compares to the red light. She is able to stop the roulette wheel, and she can stop the course of time so she can reenter the nodal situation. The green clock refers to the flow of time or the flow of traffic. And all the characters who abide by the rules, like her father, who is more a function than a person, or the police, are direct opponents to Lola’s red. Manni is associated with the colour yellow. When a traffic light switches to yellow everything is on a ‘hold’ position. It is clear that yellow follows either the switch to green (flow) or red (stop). The yellow hold position visually encompasses Manni’s function in the story. He has to wait for Lola. He has to wait for something to happen, and if Lola is not able to stop the flow (of traffic, i.e. Herr Meier or time) Manni becomes the victim of the clock.¹¹⁵ Lola’s red, however, is not just the stop function of a traffic light. She is

¹¹⁵ To strengthen this reading I would like to point out that Jutta Hansen, the girlfriend of Lola’s father has yellow hair, too. She is also in a hold position since she has to wait for the decision of

constantly running. But it is also an indicator for disrupting a well-established order. She is the unconventional character, which causes the structure of classical filmmaking to break open, she causes the structures of society to give way to her as an unconventional heroine (for example, her entering the casino, although the way she is dressed is inappropriate) and in general she wins the game by breaking the rules. Only when Lola, who is associated with a roulette ball from the beginning of the film on¹¹⁶ (*Lola*, 00:10:19), decides to abandon all logic and causality, which make the corset of narrative film making, she is able to save Manni, the money and herself. She embodies room for contingency in contrast to the uni-linearity and causally linked chain of events presented by the green clock. Her literally shattering scream unhinges the space-time-continuum and opens the narrative.¹¹⁷

The red phone is the signpost of the nodal situation, and Lola is the prototype FN heroine. Her running through the architecture enables the FN to unfold its full potential by giving way (at least within the story world) to chance and contingency. *Lola Rennt* is a game, but not just of one specific kind. It is part *agôn*, part *alea* and part *ilinx* (cf. Perron 240). The introduction of film as game has also far reaching consequences for concepts like ‘authority’ as Coates points out:

If the distinctions between film and video game are indeed quite robust, one may ask whether film can be said to ‘just game’. Is its generic play, a play with and against pre-existing scenarios, ever just play? [...] Such questions become particularly acute in the case of films that explicitly entertain alternative scenarios and so seem to offer spectators the opportunity to follow in the footsteps of a filmmaker who declares the material of character and narrative endlessly subject to revision, to enjoy a video-game like ‘eternal return’. Is the attitude necessarily playful – which may mean ‘postmodern’ – or could it also be adumbrated in modernism, as part of its reaction to the evaporation of authority; or is it even perennial, logico-philosophical? (114)

Lola’s father, whether or not he wants to be with her, although she is expecting the child from another man. The conversation also leads to positive and negative outcomes, depending on the disruption by Lola (path one and two) or no disruption by Lola but by Herr Meier (path three).

116 The camera is spinning around Lola like a roulette wheel while still frames are inserted into the shot of all the possible choices Lola can make. She is constantly asking ‘Wer?’ (who?) could have 100.000 DM. Until finally the camera tracking stops and we see Papa. He is a number on a roulette wheel. A random choice. This association is strengthened by the insertion of an animated croupier saying “Rien ne va plus” (*Lola*, 00:10:38). The bets are made, all the parameters are set, the game has begun.

117 “Games, like films, are usually time-bound, and Lola (Franka Potente) is a most time-bound character: she has 20 minutes [...] to save the life of her boyfriend Manni (Moritz Bleibtreu). Games can also be played again; if you lose one game, you can always try again. So if film is like a game, then why not give Lola a second chance to win, or a third? ‘The space-time continuum is unhinged, so what?’ Tykwer said in an interview, ‘We’re at the movies!’” (Whalen 34).

It should be pointed out on the story level that Papa tells Lola that she is not his child (first version).¹¹⁸ This automatically propels Lola out of the well-established norms of society, and through that extra position she is able to set her own order, a post-order of a post-classical film. In terms of location it shall be noted that *Lola Rennt* is set in Berlin just a few years after the reunion of East and West Germany. Before that, Berlin was the collision zone of two different world views. That non-space in terms of a city that had yet to find its identity is the ideal setting for *Lola* and, as we will see in the next case study, the potential which is inscribed in such a location forms the ideal playground for a future narrative.

To sum it up, *Lola Rennt* is the ideal first case study since it is possible to point out the basic elements of FNs: nodal situations (which can consist of a signpost and a recurring sequence of shots), uni-directional paths (forking-paths) and/or bi-directional paths (time-loops).¹¹⁹ This results in a FN architecture that resembles a tree with a certain degree of complexity by the contamination of branches (spiral structure). Furthermore the continuations are shown in seriatim, which is not the only possible mode of presentation. Bordwell's seven principles for forking-path plots are helpful for identifying FNs in film (although primacy and recency effect are debatable concepts). Furthermore the peculiarities of FNs in films in terms of visual language can be pointed out: the node is usually a series of shots, not just a single frame, but there is always a prominent signpost. Colours play a main role as a guide through the FN for the viewer. This also means that special visual guidance is needed so the alternate story strands do not become disorienting. As Bordwell has already pointed out, only a limited number of forking paths can be shown with a limited core cast, in a limited space within a reasonable period of narrated time. This is due to the dominance of the medium, film, over the reception speed and mode. The viewer has to be able to follow the plot without difficulties. This set of rules binds the concept of FNs in conventional motion pictures to the concept of games, since these also come with a clear set of rules so the player is able to play the game. *Lola Rennt* emphasizes the similarities between games and films not just on a structural level but also on the content level. FNs in film generally tend to play with the metaphor of film as game. However, it is always the protagonist who is performing the nodal situa-

118 Papa: "Kuckucksei wie dich hätt ich sowieso nicht in die Welt gesetzt" (*Lola*, 00:21:14).

119 This clearly depends on the interpretation of the movie. Bordwell interprets the film as a forking-path or 'what if' plot, Hank as a time-loop, Mundhenke as 'entweder-oder' / 'either this or that' film (Mundkenke). I think the movie does not give a definite answer to either interpretation. The openness on the side of the narrative is mirrored in the logical impossibility that Lola might learn from her former futures. This leaves room for interpretation, which reflects the idea of a horizon of options for the viewer. Although rigidly organized, like a game, the film still leaves room for ambiguity, which also indicates the idea of film as artwork. Art is always ambiguous.

tion, who is playing the film game (‘running’). Ultimately this leads to a new kind of cinema, which is post-classical in its narrative structure and aesthetics. It adds to the artificiality of the movie since the protagonist can return to a situation and play again: “The opening of *Run Lola Run* is both aggressive and supercilious in its playfulness: ‘after the game is before the game’, an epigraph tells us, implying that the game is never-ending” (Coates 120)¹²⁰

The never-ending game is unfortunately impossible for a real-life human. This creates a gap between the movie and the viewer. Therefore the aesthetics of the film are foregrounded which points to the character of film as artwork. The reduction of cast, location and time-frame adds to this notion. FNs in film explode the concept of film and introduce a degree of openness into this well-established art form.

2.3.2 Kieślowski’s *Blind Chance* – or ‘Take It Easy, Lola!’

Suppose you watch a straight line growing – a vapor trail in the sky or a black mark in an animated film or on the pad of an artist. In a world of pure chance, the probability of the line continuing in the same direction is minimal. It is reciprocal to the infinite number of directions the line may take. In a structured world, there is some probability that the straight line will continue to be straight. A person concerned with structure can attempt to derive this probability from his understanding of the structure. How likely is that airplane suddenly to change its course? [...] The information theorist, who persists in ignoring structure, can handle this situation only by deriving from earlier events a measure of how long the straightness is likely to continue [...]. Being a gambler, he takes a blind chance on the future, on the basis of what happened in the past. (Arnheim 16)

120 Coates explores his take on “after the game is before the game” further by associating it with a “love can do anything” game: “The initial accompanying quotation from T. S. Eliot toys with a seriousness undercut by the deadpan Zen of that ‘after the game is before the game’, and the mock-serious effect is reinforced by the opening voiceover’s reflections on mystery and the relationship of question to answer, [...] but not before the work has played yet again with the idea of the game by placing in the mouth of a doltish security guard the platitude that the game lasts ninety minutes – the game in question being of course the so-called beautiful game (art as a game of beauty?); he then kicks upward the soccer ball that lands as the camera does in Lola’s apartment, starting this film’s game. The implication is that although games may model experience for a Wittgenstein or a Lyotard, they should not be taken too seriously. The possibility that a high philosophy might be an appropriate accompaniment to game-playing is parodied by the platitudinously low one of the proverbially extends his game with temporality into self-parody, as his own film [...]. Should the game-within the game need a title, it could be ‘Love Can Do Anything’, which Manni derisively declares is Lola’s credo as he grows ever more hysterical at the thought of the consequences of the loss of the money” (120).

Rudolf Arnheim's essay from 1971 considers itself with entropy, one of the main principles of thermodynamics. It describes the omnipresent development from order to chaos. Hotter systems, or more dynamic systems, lose energy while cooler areas, such as space, gain energy. It is the reason why smoke rises from a lit cigarette – but it is also the reason why that smoke never returns to the cigarette.¹²¹ Entropy is an irreversible process – just like time. FNs are in some way a counter concept to that second law of thermodynamics. The underlying narrative architecture enables the return to the same situation. FNs feature a nodal situation from which a branching of more than one continuation takes place. It opens a horizon of options which is presented to the viewer through the introduction of a forking-path plot. This is not just the case for *Lola Rennt*, but also for its predecessor, Krzysztof Kieslowski's *Blind Chance* (orig. *Przypadek*) (filmed in 1981, released in Poland in 1987).

The script of *Przypadek* (*Blind Chance*) was written before the Solidarity period and was later published in 1981 in a prestigious journal on drama, *Dialog*. Produced in 1981, the film was immediately shelved by the authorities after 13 December of that year. A still from *Blind Chance* appeared on the front cover of the last issue of the monthly *Kino*, published before the introduction of martial law in Poland. Six years later, in 1981, *Blind Chance* was quietly released with a group of other distinguished banned films [...]. (Haltof 55)

Kieślowski, a Polish filmmaker, died in 1996 at the age of 52. Although he died young, he left an impressive filmic heritage including the “three colors blue – white – red trilogy” (1993–1994), which eventually gained him international far-reaching recognition. His entire oeuvre is centred on the recurring themes of contingency and predetermination in human life (cf. Mundhenke 53). His films are “variations on destiny and chance” (cf. Haltof). *Blind Chance*, especially deals with *variations* also on the level of plot structure. Just like *Lola*, the protagonist of Kieślowski's film, Witek Diugosz, is thrown into a nodal situation, which determines the varying developments of the three alternate story strands.

Witek runs after a train. Three variations follow on how such a seemingly banal incident could influence the rest of his life. One: he catches the train, meets an honest Communist and himself becomes a party activist. Two: while running for the train he bumps into a railway guard, is arrested, brought to trial and sent to unpaid labour in a park where he meets someone from the opposition. He, in turn, becomes a militant dissident. Three: he simply misses the train, returns to his interrupted studies, marries a fellow student and leads a peaceful life as a doctor unwilling to get mixed up in politics. He is sent abroad to a symposium; the plane he is on explodes in mid-air. (Žižek, *The Fright of Real Tears: Krzysztof Kieślowski Between Theory and Post-Theory* 80)

¹²¹ This is, of course, a simplified example. This study is only peripherally concerned with thermodynamics, for further information cf. Arnheim.

Witek’s fate is not entirely dependent on whether or not he will get on a train to Warsaw. In fact, it is not so much him catching the train or not which will determine the outcome of the story, but whether or not he bumps into a tramp on the way to catch his train. This sequence will be discussed again in further detail since it is the actual nodal situation of this film. Just like in *Lola Rennt*, little differences in timing have an enormous impact on the otherwise purely causally linked events of each story arch.

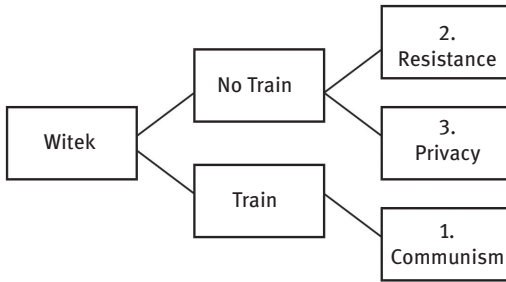


Fig. 4: The Forking-Path Structure of *Blind Chance*

The two films share further similarities not just with regard to plot structure but also in terms of visual language. Both feature what Tykwer has described as the visual encapsulation of cinema, the displaying of motion and emotion through the running human. In both cases the run determines the fate of each story branch. This run, however, is also dependent on a moment of contingency. Whether or not Lola manages to avoid the young man and the dog in the staircase and whether or not Witek runs into the homeless person will lead to a slight difference in timing which results in a dramatic difference for the development of plot line. The moment of contingency is counterplotted by the other repetitive visual image in both films, the shattering scream. Lola’s scream encapsulates her (super)human will to change the fate of Manni and her. Chance (arbitrary) is directly opposed to will (conscious). Witek’s scream at the very beginning of the movie, which is accompanied by something that sounds like “niet” (*Blind Chance*, 00:00:35), sets of the action of the film. It reverberates in Manni’s “Nicht” at the end of the second path in *Lola Rennt*. It is an answer to Lola’s statement “Du bist aber nicht gestorben” in the second continuation (*Lola*, 00:52:00–00:52:06). Witek’s scream is the first scene and therefore sets of the entire action of the movie. His “niet” seems to indicate his will that it is not over yet. It is the negation, which introduces the forking-path plot. The similarities in structure, visual language and theme led Žižek to the assumption that:

Tom Tykwer's *Run Lola Run* (1998) is a kind of post-modern frenetic remake of *Blind Chance*. [...] Although, in its tone (the frenetic, adrenalin-charged pace, the life-asserting energy, the happy end) *Lola* is the very opposite of *Blind Chance*, the formal matrix is the same: in both cases, one can interpret the film as if only the third story is the 'real' one, the other two staging the fantasmic price the subject has to pay for the 'real' outcome. [...] One should resist here the temptation to oppose *Lola* and Kieslowski's *Blind Chance* along the lines of the opposition between low and high culture (Tykwer's video-game techno-rock MTV universe versus Kieslowski's thoughtful existential stance). Although this is in a way true – or, rather, a truism – the more important point is that *Lola* is much more adequate to the basic matrix of alternative spins of the narrative: it is *Blind Chance* which ultimately appears clumsy and artificial, as if the film is trying to tell its story in an inadequate form, while *Lola*'s form perfectly fits its narrative content. (*The Fright of Real Tears: Krzysztof Kieślowski Between Theory and Post-Theory* 80–82)

This reading of the two films by Žižek implies two assumptions: *Blind Chance* is not able to stage alternative story strands as well as *Lola Rennt*, and the metaphor of film as game, which accompanies the idea of revisiting a nodal situation, is better implemented in *Lola* than in *Blind Chance*.¹²² Žižek's first assumption points to the architecture of the narrative. He claims that *Lola* is the better narrative to stage alternative outcomes. This would make *Lola* superior to *Blind Chance* with regard to its status as FN. But is this the case? A closer look at the film itself will give us the answer.

Blind Chance does feature a nodal situation which leads to more than one continuation. It therefore qualifies as a FN. Bordwell's second principle 'the fork is signposted' is also applicable to *Blind Chance*. The beginning of the fork or the nodal situation is again a sequence of recurring shots just like in *Lola Rennt*. It indicates that this sequence is *the same situation* in all three runs. In all three versions the following shots are the same: Witek runs to the train station, he bumps into a woman, who yells at him, we see a coin rolling through the train station, which gets picked up by a run-down looking man, the man buys a beer with that money, Witek runs to the ticket counter and buys a "student ticket to Warsaw" (*Blind Chance*, 00:06:44–00:07:32). This sequence of shots is always the same in all three runs. The next sequence is the actual nodal situation. In the first run, Witek brushes the arm of the homeless man, which does not cause him any delay. Therefore he manages to get on the train (*Blind Chance*, 00:08:06). We can see the guard on the platform from the train and the first words spoken to Witek are by Werner, who will later on

¹²² Following Coates, Margit Grieb comes to the same conclusion in her chapter on *Lola Rennt*: "In an essay on one such film, *Run Lola Run* (1998), Margit Grieb likens Tom Tykwer's filmic *Lola* to the Lara Croft of the eponymous video game. And given the clear connection between *Run Lola Run* and Kieslowski's *Blind Chance* (1981, released 1987), one may be tempted to read the Polish director's film as a primitive anticipation of video-game structure" (Coates 113).

persuade him to join the Communist party: "You're lucky not to have missed it" And Witek replies: "It was a near thing" (*Blind Chance*, 00:08:31)

The second time Witek revisits the nodal situation he bumps into the shabby looking person, which results in him dropping his beer. This causes a delay of a few seconds, which makes Witek miss the train. He also bumps into the guard on the platform, which results into a short scuffle and Witek gets arrested (*Blind Chance*, 00:57:24). This again results in Witek joining the resistance in the second run.

In the third run, Witek does not bump into the homeless person, but he tries to swerve around him. This causes a few moments of delay which result in Witek missing the train again. This time he does not bump into the security guard. Instead he notices a girl from university on the same platform. He explains to her "I was five seconds late" (*Blind Chance*, 01:32:53). This results in his third future, a marriage, children and a career as a doctor.

Therefore chance and contingency have a further reaching effect in this film than in *Lola Rennt*. In *Blind Chance* the missing of the train can result in either death (the third run ends with Witek being on board of an exploding aircraft) or some sort of happy end (the second run ends in a still frame in which Witek is hugging his aunt while she is listening to Radio Free Europe); she says to him "I'm glad you haven't gone abroad now" (*Blind Chance*: 01:31:41). Although both, *Lola Rennt* and *Blind Chance*, feature only one nodal situation with three continuations and the architecture of both films is similar, the actual openness, or the potential 'space' between the different continuations, is wider in Kieślowski's film. Witek's behavior in the nodal situation has further reaching consequences than Lola's. He does not only die or not, but he is also the love interest of a different woman in each story strand. Unlike Lola and Manni who are constants in both films, the only true constant in *Blind Chance* is Witek. Furthermore, the performance of the nodal situation has also consequences on the location of the alternate paths: Warsaw or Lodz. Although Witek is unaware of the consequences of his choice in the situation, the degree of consequence is far higher than in *Lola Rennt*. Žižek's assumption about the inadequacy of *Blind Chance* can be questioned with the regard to nodal power. *Blind Chance* stages a higher degree of openness with regard to the development of the main character in the different runs, but also with regard to the actual space that is sketched out in the story-world. Whereas *Lola* is only set in one confined space, Berlin, *Blind Chance* features at least two settings and a possible third if we acknowledge the plane in run three as an actual space.

The film is also far more open in terms of core cast and location than *Lola*. Although there are certain story elements that reoccur in the different continuations (for example, the airport at the end of run one and three features the same characters in the same location), there is no contamination of parallel universes.

Lola's behaviour showed the probability for a learning curve from run to run, Witek's does not. There is absolutely no indication that the three alternate paths are logically contaminated. This makes *Blind Chance* a true forking-path film and a very consequent FN. The three paths are just as likely as each other. Although the temporality of the medium forces the viewer to watch the runs in a certain order, there is no inbuilt hierarchy between them. Although the conversion from film reel to DVD did not result in an interactive menu that enables the viewer to choose between the three versions as in *Lola*, it would have been more appropriate here than in Tykwer's film due to the indisputable exclusiveness of the alternate paths.

Blind Chance is a forking-path film; however, all of Bordwell's conventions cannot be applied to it. For example, Bordwell's fourth principle 'forking path tales are unified by traditional cohesion devices' such as appointments or deadlines can only be applied with restrictions. The film features one appointment, which is recurring in all three continuations: the time of departure of the train. The other appointment, the flight to Paris on the eleventh of July, is only consequential for paths one and three, since Witek decides against the flight in path two. Interestingly enough, both appointments feature a vehicle of transport. Once a human enters a vehicle like a plane or trains, he will be propelled forward without any influence on the pace or route. He is at that moment giving up the control over his own destiny, which reminds us on the function of the colour green in *Lola*. It is also a direct metaphor for the medium film, since once the viewer enters a movie theatre she also succumbs to the medium; she has no direct influence on what is happening to her and on the screen.

To come back to Bordwell's fourth principle: if we are to look at the cohesion devices in *Lola*, it becomes clear that *Lola* has very strict rules of the game with regard to time, duration, pitch and goals. Also the duration of each run is always the same; it is congruent with the screen duration for the viewer. This corset of rules is counterbalanced by the aesthetic openness of the narrative. The pastiche of images, sounds, fast cutting rate does not make the viewer disoriented because the rules and visual guidance markers are unambiguous. *Blind Chance* does not need those rules since it is a very different kind of game, which brings us back to Žižek's second assumption: *Lola Rennt* is a better (FN) film because it encompasses the idea of film as game better than *Blind Chance*. However, Žižek has a very clear idea of game in mind – the idea of a ludic video game, which is associated with the *agôn* part of Callois' four rubrics. These are games with a clear set of rules that define a goal. Whether or not the player is able to achieve the goal by the end of the game defines the victory or defeat of the player. *Blind Chance* is a very different kind of game, which is already indicated by the artwork on the cover of the DVD. It shows a man who has a die instead of a head and who

is also carrying a die, which is hollow. Whereas the artwork on the cover of *Lola* resembles a video game, we can see a stylized heroine in action, the cover of *Blind Chance* points to its aleatic nature. This filmic game is based on the concept of chance, but like in the lottery or in roulette, the chances of winning are very slim. *Blind Chance* features the metaphor of film as game, but this film does not resemble a video game. The focus is not on achieving a goal but on the arbitrariness of life. After the dice have been rolled, in this case whatever happens in the nodal situation, there is no goal to achieve. Whether Witek gets on the train or not does not result in a determined happy ending. Furthermore, it is equally indifferent whether he chooses to become a communist or join the resistance. Life in *Blind Chance* is a game you cannot win, and each continuation is only worth playing for the sake of playing. There is no right or wrong behaviour in each situation. All it needs is *some* kind of behaviour so the action can develop, the dice can roll. It is therefore not valid to disqualify *Blind Chance* as an inadequate attempt to stage alternate scenarios, but one has to acknowledge that the openness that is staged here is of a very different kind than the one in *Lola*.

Although the idea of the game is more obviously and blatantly relevant to Tykwer’s film, inasmuch as games and chance are related – with each configuration of game events being unpredictable – comparison with Kieślowski is also warranted: all the more so because chance not only furnishes his film with its title but is also a leitmotif of the Polish director’s interviews. But although chance is a recurrent theme in Kieślowski’s work by beginning *Blind Chance* with Witek’s scream and by deploying opposite scenarios that logically require a middle one to complete and close them, he gives it a structure that preserves it from succumbing entirely to the dictates of the random. (Coates 117)

Blind Chance also comes with a prologue which is establishing not the rules of the game, but the visual guidance markers for the viewer. Although it has to be noted again that the first scene, “the primal scream” (Žižek 80), negates whatever is happening from then onwards in the narrative. All three futures are hierarchically equal with regard to the structure of the film. The prologue continues after Witek’s scream with a few more equally enigmatic shots. In the second scene we can see a woman’s leg in stockings on a hospital floor and wounded or dead bodies which are getting dragged about. The next scene focuses on a young Witek in front of a book. He is getting told: “Write” by a man, probably his teacher or his father. After that we see a young boy who is telling Witek that he is just going to Denmark. This is followed by a scene in which we see a young woman, probably Witek’s first love. After that an autopsy is shown and we see a different woman. In the following scene we see his father who tells an up grown Witek that he was most proud of him when he beat up his teacher. He says that he has never cared about grades but he did care about Witek’s attitude. Then we see his father

and some woman. This is followed by a scene in which we see Witek outside the train station at night. The last scene centres around Witek's 'lack of vocation' to become a doctor, this is the reason why he wants to leave Lodz. He wants to leave his old life and his university career behind. Therefore he plans to move to Poland's capital Warsaw.¹²³ All the characters and some scenes of the prologue will be picked up again during the course of the film. Most striking about the prologue is its unusual aesthetics. It is not shot with the conventional Hollywood style of 'shot – reverse shot' technique. The start of the film shows causally unlinked scenes that seem to spring right from Witek's mind.¹²⁴ In conventional cinema the main character is usually shown with an 'over the shoulder' shot but not here. The camera eye seems to be subjective and we see directly what Witek sees. However, he now and then appears in the scenes and the point of view of the camera remains ambiguous. Apart from the unconventional aesthetics, the randomness of the scenes is striking, too. There is no connection between them apart from Witek who is present in each scene. These scenes of the prologue work like the pips on a pair of dice. Any combination could show up and so they do. All scenes from the prologue are repeated in one way or another during the development of the entire narrative.

So far we have identified the nodal situation, the forking-path architecture and the function of the prologue of this film. It is now time to take a closer look at the three continuations. Although it was already said why Bordwell's conventions are not always helpful for analyzing FNs, because he focuses mainly on the reception side whereas NAFU focuses on the structural aspects, we will take a look at Bordwell's analyses of *Blind Chance* since it raises some questions about the hierarchical organization of the overall architecture itself. Although NAFU is not interested in the effect of a film on a particular viewer, Bordwell's sixth and seventh principles have to be considered here. They point out a logical problem of the film. The first future is by far the longest path in terms of screen duration. It is also the only path in which Witek gets on the train to Warsaw. The first continuation, in which Witek joins the communist party, ends at the airport. The second path does not end at the airport, but the last one does, which indicates a narrative

123 During the course of the film we realize that this links back to the last words of Witek's father who tells him to "become a doctor but you don't have to" over the phone. Witek's father dies shortly after this phone call and the protagonist finds himself in a disoriented state, which is indicated by his behaviour at night at the train station. There is no train coming to take him away, Witek would not know where to go to anyway.

124 This notion gets confirmed in the second future, when Witek tells his childhood friend Daniel about their last encounter; Witek retells the scene, which we have seen in the prologue; Daniel, however, replies: "There was no car" This implies that Witek is an unreliable narrator or at least his own memories are faulty.

proximity between futures one and three. Bordwell states that the first continuation establishes a blueprint in the mind of the viewer (primacy effect) that all other continuations are compared to. This is only true to a certain extent since the story strands vary not just in core cast but also in character development, settings and screen duration. The primacy effect is only in so far established as the first and the last locations (at least for futures one and three) are introduced. Bordwell's conventions can only be applied with restrictions here. However, the more problematic case is Bordwell's seventh principle. The recency effect, 'the last path taken, or completed, is the least hypothetical one', is interpreted by Bordwell in a radical way for *Blind Chance*. He associates Witek's scream at the beginning of the prologue with the end of the last path, the explosion of the airplane. Only in his third future Witek manages to get on the airplane. Bordwell further assumes that the second scene of the prologue, the hospital scene, must be Witek's perception of the dead bodies after the plane crash, which links back to Bordwell's interpretation that *Blind Chance* is a circular narrative. Interpreted in that way, only the third future is the actual one since it leads to the first scene of the film (cf. "Film Futures" 100–01). All other futures are just in 'mind-games' to use Elsaesser's term. The film would therefore be not just a mind-game for the viewer who has to guess which future is the one 'that really happened', but also for the protagonist himself. The three alternative futures are just 'mind-games' of Witek's dying mind. He imagines all the possible ways in which his future could have developed. In Bordwell's terms this would make *Blind Chance* a 'what if' film. It has to be noted though that Bordwell draws a false conclusion from the hospital scene. It might be Witek's perspective that we get, he might be the focalizer of the scene, but it cannot be Witek's leg that is taking up most of the frame. Unless we assume that Witek was wearing stockings under his trousers, which is highly unlikely; just as unlikely as him surviving a plane crash that happened in midair. The explosion during the ascent of the plane would have caused enough damage for no one to survive, however badly hurt. Instead the scene should be interpreted as a visual clue that is later on picked up again. Witek drinks a glass of vodka in the first future and explains to his girlfriend the hospital scene:

'Where have you been born?'

'June, 1956, in Poznan. There were tanks in Poznan at the time. Father stayed at the factory. When mother knew her time had come she went to the hospital alone, gave birth to us and died. My brother and me. I was born first, that's why I am alive. It seems to me that I remember the moment I have the picture under my eyelids.' (*Blind Chance*, 00:45:54)

The scene ends with the sound of a siren and the direct repetition of the hospital scene from the prologue. Of course, it is debatable whether it is possible to have

any visual memory from the day of birth, but at least Witek's description explains the stocking on the naked leg and the dead bodies. They are not victims from the plane crash, but casualties from the Poznan riots in June, 1956.¹²⁵ Witek's first memory would therefore be the result of the cruelty of the communist rule in Poland at the time. It also explains why his mother is not appearing in the further course of the film.

It also has to be mentioned that Witek's story about the death of his mother includes his twin brother. The death of Witek's twin brother predestined Witek to a life of chance since the very first moment of his life could have also been his last one. The arbitrariness of existence comes into full play here. This, of course, is only true if we assume that Witek is a reliable narrator and that the scenes from the prologue are his actual memories.¹²⁶ This never gets verified during the development of the story. Again, this is why Bordwell's concepts are insufficient for the description of the narrative architecture of a FN film. They merely state the effect on the viewer and so does Elsaesser's concept of mind-game. Bordwell's focus on the viewer questions the status of the different continuations. His interpretation leads us to the assumption that the paths one and two are presented in the filmic conditional and that the prologue and the last path are what really happened. This leads us to two problems. First of all, the logical validity of the scenes in the prologue is questionable as well as how reliable Witek is as a narrator when it comes to his memories. Secondly, the architecture of the narrative must remain independent from the effect it has on the viewer. In other words, the architecture is that of a forking-path narrative which is independent on how the prologue is to be interpreted. It features a nodal situation which leads to three mutually exclusive continuations. Witek 1, 2, and 3 are unaware of their parallel existence. There is no learning curve and there is no sign of contamination of the worlds. The continuations are all equally true and Witek's 'niet' is not an affirmative statement to any of them. They are all equally true or false. Coates' analysis of *Blind Chance* and *Lola* comes to a similar conclusion when he states that neither

125 "The Poznań 1956 protests are seen as an early expression of resistance to communist rule. In June 1956, a protest by workers at the city's Cegielski locomotive factory developed into a series of strikes and popular protests against the policies of the government. After a protest march on June 28 was fired on, crowds attacked the communist party and secret police headquarters, where they were repulsed by gunfire. Riots continued for two days until being quelled by the army; 67 people were killed according to official figures". (Wikipedia, *Poznan*).

126 Coates goes even so far as to interpret the story of Witek's dead brother and the negating scream at the beginning of the film as "Witek's abortion" and the following non-existence of at least two of the three possible futures: "Witek's abortion? [...] but his eventual nonexistence may well correlate with the mutual cancellation of the two scenarios that precede his arrival, their reciprocal nullification rendering him 'always already' a nullity. *Tertium non datur* indeed" (123).

of the two films gives an explanation for the revisiting of the nodal situation. This marks all three paths of *Blind Chance* as true alternatives and not as mere fantasies of a dying mind:

However great the differences between Tykwer and Kieslowski, they resemble one another in their refusal clearly to identify the source of the replay facility. Tykwer's opening reference to the playing of a ninety-minute game signposts only the possibility of game-like procedures, not how the protagonist is able to access them for a revision of her life, despite strong suggestions that her triumph is a possibly alarmingly stereotypically 'Germanic romantic' one 'of the will': Lola simply refuses to leave or to let Manni go. 'Just one more game, she replies to the casino attendant seeking to escort her out as inappropriately dressed. Kieslowski's mechanism, however, is far more enigmatic: the hypothesis that each of the first two scenarios represents Witek's fantasy reaction to death is worth entertaining, but the work itself does not clearly code the scenarios as his fantasies. (Coates 119)

And further:

One may also wonder whether the third section really can be called 'the most real' in each case. [...] However, even *Blind Chance* issues conflicting signals regarding the relative degree of reality of the three sections: the final one may link up with the beginning by explaining Witek's scream 'No!' and so seems to offer the real context of the others, but the decreasing length of the stories appears to obey a law of diminishing returns, as if each were in fact a reconjugation of the longer prototype that is the first story, which thus can feel 'the most real'. (This effect is even more pronounced in the posthumously published treatment, in which story one is twenty-seven pages long, story two is six, and story three only three-and-a-half pages [Kieslowski 141–77]). (ibid. 115–16)

Additionally, Witek does not experience the parallel futures in seriatim, although this is the mode of their filmic presentation. The absence of Witek as unifying centre of the narrative opens the story arch in the same way as in *Lola Rennt*. All three plots are composed according to Thompson's four components of narrative cinema. Again, the introduction of a nodal situation explodes the filmic narrative into episodes which are all equally true. This, of course, adds to the artificiality of the film's aesthetics. Especially the unconventional shots from the prologue are a good example for this. The fact that Witek decides in all three plot strands to stand for opposite values and life plans adds to the arbitrary feel of the narrative and makes it hard for the viewer to identify with the protagonist.

The dominance of the medium is subverted by the narrative architecture. The nodal situation opens a space for a new kind of cinema as early as 1981. This emphasizes the power of the imaginary, here film, with regard to FNs. Although the film is ultimately negating all three possible variations, the mere fact that there is a moment of choice, however arbitrary, for the protagonist subverts the notion of the authority of conventional cinematic mode over the way a story

should be told. It subverts the political orthodoxy that there is only one option. It should be mentioned again that the film was banned by Polish authorities just after its release date.

Blind Chance is a film about choice and chance and both are political concepts in this movie. According to Mundhenke chance introduces arbitrary elements, such as ludic properties, into a regulated order. The established order is subverted by these elements of chance (cf. Mundhenke 13). The arbitrariness of Witek’s decision to become a communist, a rebel, or an academic is also a political statement. *Blind Chance* therefore exemplifies how two political concepts can be introduced on the plot level by employing a FN architecture.

Since this chapter started with Žižek, I would like to come back to him with regard to his Lacan inspired take on films. In Lacanian terms the established order of a society is represented in the realm of the “symbolic” (one of the “three orders”¹²⁷) and embodied through the concept of “the father” (cf. Lacan 199–32). The father function sets the rules of a society (‘father’ should be understood metaphorically, it can also mean law, church or any kind of ideology). In *Blind Chance* Witek’s father gives him a choice just before the nodal situation is shown – to become a doctor or not. Shortly after that his father dies. Therefore Witek finds himself in an open space at least with regard to the symbolic. He has to set the rules now and he is not able to do it. At this point he enters the nodal situation. He has to decide what to do with the rest of his life. The vacancy of the father position has to be replaced to reestablish order in Witek’s life. In all three paths Witek finds a father substitute and adopts with that function the accompanying ideology – Werner (communism), Stefan (religion), and the dean (career and family). Especially in the third future it is apparent that the dean is literally asking him to “replace” him at a conference in Libya. Witek immediately agrees to adopt the metaphorical father position. This is also the only future in which Witek has children of his own. He is a father. However, this path ends in death. The political power of FN architecture is reflected in the content of the film. Just like the nodal situation demands a new kind of cinema, a character in a nodal situation should also be prepared to go new ways. Witek does not break the mould. In all three futures he adopts a father figure and his values or even becomes a father himself by replacing the dean. Therefore the message of this particular FN is *not*

127 “Jacques Lacan’s triad of the Real, the Imaginary and the Symbolic is by all means a complex configuration, made even more difficult by the fact that throughout his entire work, the famous French psychoanalyst constantly developed these concepts and added to their intricacy. For our purposes, however, it will suffice to give a broad outline of Lacan’s [...] of the Symbolic, the order of language and signs (the Law / *name-of-the father* [...])” (Brockmann).

that choice does not matter and that life is entirely arbitrary (it can always only end badly). But that this movie game has to be played by breaking the rules.

In one of the futures Witek witnesses two jugglers who are juggling a massive amount of balls. This is accompanied by a character's statement that these two jugglers are the only two people in the world who can juggle that many balls at the same time. A few scenes later we witness Witek's attempt to juggle three apples. It is impossible for him. He ends up 'juggling' only one apple. A clear metaphor for his ability to lead only one life at a time (the story strands are mutually exclusive after all).¹²⁸ But it is also a metaphor for the film as FN. Witek does not fail because he tries to juggle too many balls but because he tries to do something that has already been done. The two jugglers are doing something completely new, something which was thought impossible. This is the political impact of *Blind Chance*. This is also reaffirmed through the setting of this movie. Just like *Lola's* ideal setting is Berlin, *Blind Chance's* ideal setting is a pre-1989 Poland. The rules of the game of communism, a rather arbitrary game as shown in Witek's first and second runs, needed to be broken to make room for a new way of life. Indeed the nodal situation that Witek is in referred right back to the actual audience. In this case we have to come back to Žižek's interpretation of both films and ask whether he was right after all in saying that *Lola* is the "better" FN.¹²⁹ It might not be with

128 Coates interprets the juggling of Witek and the two jugglers in that way: "Imagining alternative versions at one and the same time issues in a 'whole-field' effect of mutual suspension and vertigo akin to that of the viewer of the innumerable balls held in the air by the two jugglers in the final story. In the alternative version of this scenario of virtuosity, the one that affects Witek 3, all narratives collapse at once: as he attempts to juggle, his apples fall when he adds the third that is possibly an image of himself. The jugglers' balls would then be mise-en-abyme images of *Blind Chance* as a whole, not of the story of Witek 3 within which they appear. Thus, it may well be the nearness to the end of the third story that permits the suggestion of totalization embodied in their appearance" (122)

129 Coates states that both films subvert their own logic and therefore subvert authority itself. This is why both of them introduce a new, post-modern type of cinema: "In any case, the form of storytelling both Kieslowski and Tykwer employ results in a thoroughgoing digitization of their works, their Zeno-like splintering into a potentially infinite array of atomized, substitutable elements. One could also speak of a punctualization, an endless openness to editorial punctuation and temporal shifting. The work becomes a series of points digitally marked as ones or zeroes depending on whether or not a new element comes into play (if one likes, score one in the game for each new element, and zero – in the sense of 'no new information' – for each repetition). It is of course a truism that a combination of difference and repetition [this refers to Gilles Deleuze reading of difference and repetition] animates all storytelling, and all conceptualizations of eventfulness per se. [...] The Kieslowski/Tykwer narrative mode responds powerfully and modernistically to an evacuation of authority, the lack verbally thematized in Witek's father's statement that 'you don't have to do anything.' The narrative's only authority may well be its own first incarnation, whose setting of parameters it can never escape entirely. It has another authority, though,

regard to the points that Žižek discusses, but *Lola* might be the better FN heroine since she does break the rules of the game. She is disrupting the flow of traffic and of time. She can unhinge the space-time continuum because she does not care about the rules. This is maybe why *Blind Chance* is a predecessor to Tykwer’s film and *Solidarność* had to happen to make a FN like *Lola* possible.

2.3.3 Artificiality and Complexity in Resnais’ *Smoking / No Smoking*

It’s not so much I don’t believe in it [linear storytelling], it’s not the fact that I’m on this big crusade against linear storytelling [...] but it’s not the only game in town.

Quentin Tarantino (quoted in Berg 5)

The last of the three movies, which present the alternate story strands in seriatim, is Resnais’ 1993 film duo *Smoking/No Smoking*. It is the ultimate conversion of the FN architecture onto the movie screen. It exceeds the complexity of both *Blind Chance* and *Lola Rennt*, and the raised artificiality of its aesthetics adds a new dimension to the concept of film as game. Furthermore, *Smoking/No Smoking* blurs the boundaries between film and theatrical performance. This extraordinary film duo sets a standard for what is possible for cinematic FNs and how arborescent structures challenge the threshold of the medium itself. Alain Resnais started his first attempts as a film director within the context of the French *Nouvelle Vague* movement. His idea of cinema, however, differed from the implicit manifest of this movement (cf. Mundhenke 106). His first movie *Hiroshima Mon Amour* and his probably most famous movie *Last Year at Marienbad*¹³⁰ both encompass traumatic events and their effect on the protagonist. The trauma (Greek: wound) shatters the ordered perception of reality in terms of chronology and causality. This is reflected in the disrupted narrative (*Hiroshima*) and the unconventional aesthetics (*Marienbad*) of both films. The movies are posing more questions than providing answers and the viewer is left with an unsolvable puzzle. Especially *Marienbad* could be analysed with Buckland’s concept of *puzzle films*. The movie

antecedent even to that first telling: the moment at which it theorizes its own procedures, be it in what one may call the pre-story of *Blind Chance*, when the father makes this remark – a section that is not repeated at all – or in the epigraphs and vatic pseudophilosophical meditations that begin *Run Lola Run*. This habit of self-reference is the persistence of modernism in these works, though Tykwer’s may be seen as balanced precariously on the point at which modernism tips over completely into postmodernism. Kieslowski and Tykwer kill their own stories to turn them into the ghosts that can haunt their work” (124)

130 Screenplay by Alain Robbe-Grillet who is also the director of the equally enigmatic movie *La Belle Captive*.

features anonymous characters in unclassifiable settings in which the action seems to circulate always around the same topic, a filmic riddle that cannot be solved. Also Resnais' film duo *Smoking/No Smoking* is a puzzle for the viewer, but this time it does not come in form of a trauma-memory-narrative, but as a light-hearted forking-path story with ironic undertones. Resnais' movie(s) is based on Alan Ayckbourn's play *Intimate Exchanges* (premiered June 3, 1982) (cf. "Alan Ayckbourn Plays: *Intimate Exchanges*").

Intimate Exchanges is an epic which comprises of eight plays generated from a single opening scene. At the end of each scene, a choice is made and the play divides into its various permutations from this, leading to a basic structure of one prologue; 2 first scenes; 4 second scenes; 8 third scenes and 16 fourth scenes. Although there are 16 different permutations, the play is split into eight distinct plays, each of which has an alternate ending. (ibid.)

The plot is brought forward from an initial nodal situation, in which one of the main characters makes a decision and two quite different continuations develop from there. Those continuations lead to nodal situations again and so forth. There are only two actors who play a total of ten roles (cf. ibid.). Resnais' reduced the alternate endings for *Smoking/No Smoking* to twelve and instead of eight plays, he decided to split the narrative into two separate films: *Smoking* and *No Smoking*. In 1993 both films were screened in theatres at the same time, and it was up to the viewer to decide in which sequence she wanted to watch the two films (cf. Mundhenke 107). Apart from the screening mode the movies follow the structure and thematic content of Ayckbourn's play. It is set in the Yorkshire village of Hutton Buscel and encompasses the (possible) relationships of nine inhabitants: Toby Teasdale, Celia Teasdale, Miles Coombes, Rowena Coombes, Lionel Hepplewick, Sylvie Bell, Joe Hepplewick, Josephine Hamilton and Irene Pridworthy.

Both films start with the same scene: Celia Teasdale, the wife of the school's headmaster Toby Teasdale, enters the garden of the mansion and contemplates taking a break from the house work. She spots a packet of cigarettes (the brand is "Players") on the table. The camera focuses on the packet and the mode switches from motion to still picture. The still frame indicates the first nodal situation and the first branching of the plot continues from there on. In *Smoking* she chooses to light a cigarette and in *No Smoking* she chooses not to. The inevitable has to happen and, as we have already seen in *Lola* and *Blind Chance*, the sensitive dependence on initial conditions causes large differences in the mutually exclusive continuations. From Celia's patio a true Borgesian garden of forking paths develops. In *Smoking* Celia hears Lionel Hepplewick, the school's janitor, ringing the doorbell. She opens the door which results in a flirt with Lionel. Eventually both will start a party service together. In *No Smoking* Toby's best friend Miles Coombes preempts the situation which results in an affair between him and Celia.

Although the main focus is on Celia and her relationships, the other characters are entangled in altering enmities and friendships in the further developments of the alternate plot lines.

The first path of Celia is narrated in a coherent single narrative. The shift of locations, and therefore scenes, is always indicated by the insertion of still frames with the comic illustrations of the upcoming setting and a time designation.

Der zeitliche Rhythmus der Intervalle wird durch die Einheiten ‘5 Sekunden’, ‘5 Tage’, ‘5 Wochen’ und ‘5 Jahre’ vorgegeben. Diese Zeitsprünge und Darlegungen von Alternativen werden mit Zwischentiteln dargestellt, die in Form von Zeichnungen die Bewegung der Filmbilder deutlich unterbrechen. Sie leiten den Zuschauer somit an einen anderen Ort der Handlungsstruktur. Lediglich die erste Entscheidung um die Zigarette wird durch ein eingefrorenes Bild dargestellt.¹³¹ (Hank 7)

When Celia’s first path ends the screen becomes black, but instead of “Fin” we see “Ou Bien”¹³² written in white letters on the black screen. This is not the end. The narrative shifts back to a former nodal situation. The first path in *Smoking* ends in “ou bien”, which is followed by another comic still. This time it is an illustration of Lionel framed by the words “ou bien [Lionel] il dit” (*Smoking*, 00:58:19).

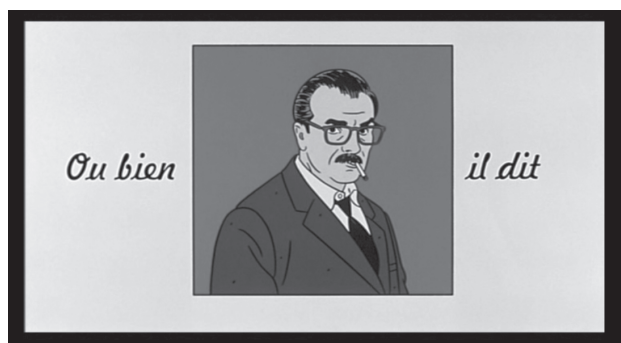


Fig. 5: The switchpoint to a former nodal situation is indicated by a comic still (screen shot taken from the second path in [*Smoking* 01:04:04])

¹³¹ Hank is referring here to Rudolph’s article (cf. Rudolph 157). However, this is not entirely true. The comic insert is *always* followed by a still frame for example in (*Smoking*, 00:58:33; 01:04:11; 02:08:41; etc.). The comic inserts serve as signposts for the nodal situations but the actual situation is always written back into the medium of the film through a *filmic* still frame.

¹³² ‘And Then’ which is directly quoted in *Lola* by the ‘Und dann’ inserts although these are written in black on a white screen and do not indicate the return to a former switch point in the narrative but the future development of a minor character.

The nodal situation is indicated again by the freeze frame of a formerly visited situation in Celia's path. We see Miles Coombes in front of Celia, who is wrapped in paper due to a nervous breakdown. Instead of Lionel, Toby enters the scene. He asks: "Elle est morte" The narrative is interrupted again and the same comic still of a church and a graveyard as in the first path is inserted with the same time reference ('5 years later') but instead of "un enterrement" (*Smoking*, 00:51:05) as in the first path, this time the same picture is underlined by the words "une nouvelle femme" (*Smoking*, 00:59:24). This indicates that this path has also reached the ultimate scene of this path again and is consequently followed by another 'ou bien' screen.

Ein weiterer Durchbruch der Konventionen der Dramaturgie der geschlossenen Form ist die gebrochene Linearität. Durch die Zeitschleifen-Struktur liegen inhaltliche Ereignisse wegen der zwischengeschobenen Episoden nicht in einer chronologischen Reihenfolge. Somit entstehen zwei verschiedene Konzeptionen von Zeit: Die linear fortschreitende Erzählzeit zum einen, und zum anderen die reversible Zeit, die einen Schluss durch die kausale 'Schlussfolgerung' verhindert. Dadurch kann eine parallel existierende Erzählwelt mit einer identischen Zeit und einer identischen Figurenkonstellation entstehen. (Hank 8)

The first path taken has the longest screen duration and establishes all locations and their temporal designation. The first scene, Celia in the garden, the primal scene in which he has to decide whether she wants to give in to temptation (smoking a cigarette not eating an apple) designates the first stage of the film and depicts the initial nodal situation from which all other branches stem. These are not narrated in consequent seriatim as in *Lola* and *Blind Chance*. Instead the narrative is divided into segments: 'five seconds later', 'ive days later', 'five weeks later' and 'five years later'. The deictic later always refers to the original nodal situation: the garden scene. The ultimate stage, 'five years later' is always the point of *convergence* of the narrative (in terms of location, similar to the airport in *Blind Chance*) the town church with the adjoining graveyard. The middle stages (five days and weeks later) are always set in some other location, for example a hotel or a golf course. The multi-linearity of the narrative is given in terms of nodal situations but the proximity of the narrative strands is emphasized by the convergence at the graveyard (every possible life will eventually end at the graveyard, in Resnais' films this always happens 5 years later). Real 'openness' in terms of location can only be created in the middle part of the narrative. And even that staging of openness is immediately cut back by inserting the ever same time designations with the ever same two actors (in whatever role).¹³³ The narrative coherently tells

¹³³ This, of course, resembles the entire structure of the narrative. Essentially it is not so much presenting multiple arrays of constellations but organized in established opposites: garden –

each separate story strand until the 'ou bien' screen. After this it does not shift back to the initial point of divergence, the garden, but to a switch point set either at the 'five days' or 'five weeks later' marker.

This results in the following complex architecture:

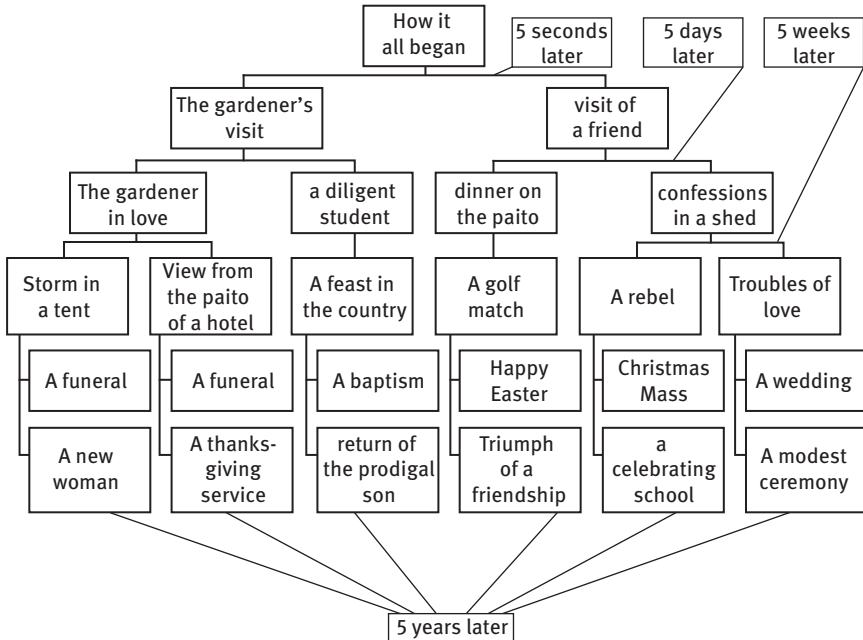


Fig. 6.: Translation of the DVD inlet

The architecture of the separate films *Smoking* and *No Smoking* resembles a tree with its many branches. The narrative is structured in '5 seconds', '5 days', '5 weeks', and '5 years' later rhythm each indicating a nodal situation. There are 12 (6 per film) alternate endings and 13 nodal situations (the initial nodal situation and the other 6 nodes per film). The development over the narrated time of five years enables the viewer to pursue the consequences of a single decision and how that decision played out over that long stretch of time.

graveyard, man – woman, smoking – no smoking etc. It is a tree of possibilities but with structuralist roots. The opposition is always stable. Society is stable. It is just a play of possibilities that are never radically different. This is very unlike Borges' *Garden* – a postmodern garden of rhizomatic, unhierarchical *Forking Paths*.

Dabei verfolgt Resnais eine rigide Struktur, die den Baum von Schaltstellen exponential anwachsen lässt: Eine Entscheidung am Anfang bedeutet schon vier parallele Entwicklungen auf der zweiten Ebene (also nach fünf Tagen) und schließlich sogar zwölf Schlusszenen auf der letzten, vierten Ebene. Dass dieses Konzept funktioniert liegt nicht zuletzt an der Strenge der formalen und gestalterischen Mittel: Alle Szenen des Films sind im Studio mit Theaterdekor gedreht und erscheinen – obwohl sie nie in Innenräumen spielen – sehr unwirklich, haben durch die artifiziellen Dekors aber auch einen hohen Wiedererkennungswert. Außerdem weicht der Film nie von der Struktur der Orte (der Garten der Teasdales zu Anfang, der örtliche Friedhof am Schluss) und Zeiten (fünf Tage, fünf Wochen, fünf Jahre nach dem Anfang) seiner Verästelungen ab; überdies werden alle Figuren von nur zwei Schauspielern gespielt, was zur Folge hat, dass das Geschehen immer nur aus zwei Handelnden besteht. (Mundhenke 107–08)

Smoking/ No Smoking is the most complex FN in conventional motion pictures with regard to the quantity of nodal situations and ever branching story strands. It also exceeds the regular screen duration of conventional films. Both movies watched together add up to almost exactly five hours of viewing time. This, of course, pans out well with the rigidly organized five step rhythm of the narrative. Although the narrative shifts between trajectories it is definitely a tree structure or forking path plot since all developments stem from one initial nodal situation. The continuations are all mutually exclusive. The protagonists in the alternate universes are unaware of their parallel existence, which makes *Smoking/ No Smoking* a FN without any indication of Bordwell's contamination between the alternate variations. Most of Bordwell's seven principles are applicable to the narrative which also points to the film as forking-path plot. However, Bordwell's first principle is not applicable to this film duo: 'Forking paths are linear': The paths taken follow a strict line of cause and effect. One moment of choice determines everything. Although the alternate paths seem to follow a causal linking of events, there are switch points in the narrative. There is a further branching which opens the narrative to more forks in the path. In fact, the split of the narrative into two films makes this FN architecture not just into a decision *tree* but into a *forest* (of two trees). An element of choice is already present before the first nodal point within the narrative, as it is up to the viewer which narrative she wants to watch first. This frees the narrative from its filmic corset with regard to the dominance of the medium over the narration speed and the sequentiality. The introduction of a vast quantity of nodal situations does not just explode the narrative and opens a new kind of cinema as in *Lola* and *Blind Chance*, but it actually challenges the conventions of reception by staging two movies at the same time. This is also mirrored in the conceptualization of the narrative. Resnais never conceals the proximity of his double feature to its source: theatre.

Es ist nicht einfach eine Adaption des Theaterstücks, die Resnais geleistet hat, sondern eine Durchdringung der beiden Medien Film und Theater, die – so Resnais – von vornherein sich schon in Vermischung befinden. Der Filmemacher fragt: ‘What is cinema? What is theatre? Are they really opposites or are they deeply intertwined?’ (Mundhenke 120–21)

The artificiality of the production, as mentioned by Mundhenke, is especially obvious with regard to setting and props. It is also possible to say that the only possible location for this movie is the artificial theatre style setting. If Berlin was the ideal setting for *Lola* because the city was still looking for an identity, the rules were still flexible and provided the best possible matrix for an authority-subverting FN like *Lola*, the only choice of *Smoking/No Smoking* has to be a setting that subverts the filmic “Realitätsnähe” (proximity to reality) (cf. Monaco 21) in terms of aesthetics – an artificial setting.

The notion of artificiality is also enhanced by the staging of the actual nodal situations. The complexity of the FN architecture is reflected in the fact that the fork is *not* just signposted (Bordwell’s second convention) in *one way* with regard to various layers. The first node, the garden scene, is just a freeze frame, but the other nodes in the narrative, which always indicate a shift in time and location, are also signposted by a switch in mediality: from film picture to comic illustration. This also reminds us on the style in *Lola Rennt*. The nodal situation there is also a mix of conventional film and animated sequence.

Resnais, however, distills the picture from any kind of motion and therefore subtracts the very essence of the term *motion* picture from the nodal situation. The actual node is always a freeze frame of a formerly visited point in the narrative. When Tykwer stated that *Lola* encompassed the meaning of cinema by combining motion and emotion, Resnais’ film does the exact opposite. He subtracts motion and also emotion. The fact that all characters are played by only two actors points out their *function* as *actors*. Resnais links his movies back to theatre. Modern theatre is not trying to immerse the viewer through identification and emotional engagement, but by forcing the viewer to recognize the gap between the artwork and the viewer’s reality. Much like Brecht’s epic theatre which employs various ‘Verfremdungseffekte’ (alienation effects), for example by letting the actors carry signposts onto the stage to remind the viewer that this is theatre, Resnais’ nodal situations have the same effect. They are literal signposts that propel the viewer out of the narrative to recognize the film as artefact.

Dem Zuschauer bleibt es ohne offensichtlichen Zwang und vorgegebene Lösung des Autors selbst überlassen, welche der Varianten er persönlich für den Ausgang der Geschichte bevorzugt. Es wird klar, dass es sich bei den zwölf Episoden nicht um eine Darstellung des

kompletten Potentials handelt, sondern lediglich um zwölf verschiedene Möglichkeiten in einem unendlichen Kombinationskosmos.¹³⁴ (Hank 8)

The stereotypical characters and settings remind the viewer that she is watching a cross section of society. The alternate paths taken are displaying always new constellations of oppositions and alliances that are just as likely.

Die Widersprüchlichkeiten und die Enge des gesellschaftlich konditionierten Daseins werden durch das bühnenhaft verhandelte Geschehen beispielhaft erfahrbar. Der zunächst aufdringlich wirkende Illusionismus hält den Zuschauer auf Distanz und dient – gleich einem Verfremdungseffekt – zur Warnung, sich dem Geschehen nicht vollends hinzugeben, es nicht unhinterfragt zu rezipieren und fragt so letztendlich auch danach, ob nicht jede eigene Lebenskonstruktion in der Gesellschaft ein größeres Trompe-l'Oeil darstellt als dieser filmische Entwurf. (Mundhenke 132)

Ultimately, the entire reception of both movies does leave the viewer with a Bucklandian puzzle, which does not ask though which of the alternate story paths the 'real' one is, or what 'actually' happened, but it asks the viewer to reflect on the relationships between the characters, however arbitrary as they seem, like a mosaic of society. This is reflected in the film's central motif in Celia's garden: the mosaic of a cat. The ultimate question that Resnais' films ask, with regard to FNs, is whether the introduction of a complex architecture in conventional motion pictures can only be achieved by breaking away from narrative cinema, not just in terms of plot structure and aesthetics as in *Blind Chance* and *Lola Rennt*, but by radically bringing the mediality of film into question. Resnais achieves this by stripping it from its two main components, viz. motion and emotion, in the nodal situations. It is no coincidence that this is also the movie which stresses the actual moment of *choice* and not chance as its central motif. The viewer has to make a choice as to what movie she wants to see first and also the characters do get a choice, although they are unaware of it in the actual plot line, in the nodal situation: 'Il dit!' (cf. Fig. 5)

In *Smoking/No Smoking* scheint es nicht der unbändige freie Wille einer einzelnen Figur zu sein, der die Urepisode und somit das Schicksal ändern will, sondern eher das Aufzeigen von Möglichkeiten durch einen auktorialen Erzähler. [...] die Figuren können selber bestim-

134 That cosmos may be infinite on the first view, but it should also be clear that the combinations are only working with the ever same oppositions: two characters only, man and woman, somewhere between garden and graveyard. The possible combinations can be finally exhausted. My reading of these films counterposes the positions of Hank and also Heller in that aspect (cf. Heller).

men, wie das Leben verlaufen soll, auch wenn dieses nicht reflektiert, sondern unbewusst geschieht. (Hank 15)

This can only be answered by backpedalling to another common feature of FNs in film, the allusion to *film as game*. Just like *Lola* and *Blind Chance*, *Smoking/No Smoking* also comes with a prologue that sets the rules of the game. In a combination of *Lola* (there is a voice over narration) and *Blind Chance* (all introduced characters and scenes will recur during the course of the film) the movie is explained as a playing field with tokens embodied by the characters. In fact, just as *Smoking/No Smoking* is the only film that incorporates an actual choice on the side of the viewer, it is also the only film that comes with game instructions in form of the accompanying booklet of the DVD version (cf. Fig. 6). The booklet contains the entire prologue with the settings, characters and the words spoken by the voice over narration (the rules of the game) as well as a map that shows the diverging, intersecting and converging paths through the narrative. Much like modern video games that come with a map through the game world (as for example *Skyrim*), *Smoking/No Smoking* comes with a map through the story world (cf. Fig. 6).

The spatiality of FNs is actually visualized here even before the game starts. The question is, however, what strange kind of game this is – a game in which the viewer already knows the outcome of each continuation. It is not a game in the sense of *Lola Rennt* with a clear goal. Bordwell’s fourth principle ‘forking path tales are unified by traditional cohesion devices’ such as appointments and deadlines cannot be applied to this narrative.¹³⁵ In the same way it negates Bordwell’s recency effect (seventh principle). The last path taken is just as likely as any other path.¹³⁶

Dem Zuschauer bleibt es ohne offensichtlichen Zwang und vorgegebene Lösung des Autors selbst überlassen, welche der Varianten er persönlich für den Ausgang der Geschichte bevorzugt. (Hank 8)

Be that as it may, *Smoking/No Smoking* does not succumb to the concept of *agôn*¹³⁷ in terms of movie as game, like *Lola Rennt*. There is no goal to achieve, no deadline to match and the number of happy and tragic endings is also almost equal.

135 As a matter of fact, most of Bordwell’s principles do not hold true for Resnais’ masterpiece, which is probably why Bordwell did not discuss this film as a case study in his article.

136 There is a primacy effect (Bordwell’s sixth principle) with regard to the original nodal situation. The first path taken is the only one which actually shows the initial node, the garden scene. It is also the longest continuation in terms of screen duration.

137 One of Caillois’ four game types. Those games are mostly competitions of some sort in which the player has to achieve a certain goal. Those games are also always strictly rule bound.

It is also not an aleatic game¹³⁸, like *Blind Chance*. Resnais’ films do have a moment of *alea*, there seems to be some kind of butterfly effect, but the story strands do not develop in completely different ways, as they do in Kieślowski’s film. As a matter of fact, Bordwell’s fifth (‘forking paths will often run parallel’) principle is strengthened here. The proximity between the paths makes the switch to the different situations in the narrative architecture possible. Also the fact that only two actors are employed stresses the idea of parallelism and makes it easy for the viewer to spot differences and similarities. But the fact that all narratives branch from the garden (of Eden) and end at the cemetery always five years later does make this a very rigid architecture with little permeability for the disrupting power of chance. The fact that the actors do speak and therefore make a voiced choice in the nodal situations does also not contribute to the concept of film as aleatic game. Instead there is a moment of ‘mimicry’ (playing “pirate, Nero, or Hamlet” [cf. Perron 240]) as both actors are *playing* their characters. They are figures, functions or tokens,¹³⁹ on the playing field and the viewer is invited to enjoy their performance as each single character (and indeed Sabine Azéma and Pierre Arditi deliver excellent performances). The game is regulated but it is also an invitation to the viewer to simply enjoy the performance, only to leave with a mental mosaic of the depicted social constellations.

In his article on movie games Perron (following Frasca) introduces the concepts of *paidia* and *ludus* as opposites on a scale of what is commonly understood by the term ‘game’.

Paidia is ‘Prodigality of physical or mental activity which has no immediate useful objective, and whose only reason to be is based in the pleasure experimented by the player.’

Ludus is a particular kind of paidia, defined as an ‘activity organized under a system of rules that defines a victory or a defeat, a gain or a loss.’ (Perron 241)

According to Perron every game is either free play or an organized rule based activity. However, *Smoking/No Smoking* is neither *paidia* nor *ludus*, it is both. The introduction of a radical FN architecture does not just subvert the concept of film in terms of narrative but also in terms of mediality. Openness is staged in a way that ‘the film as game metaphor’ is moving towards ‘play’. It is a play indeed, a *theatrical* film, a *play* movie. The power of the imaginary is therefore not political in Resnais’ films but mainly medial. The FN architecture has the power to subvert the medium film and to ultimately subvert the notion of movie game as well.

138 Another of Caillois’ game types. These games rely on chance like playing the roulette.

139 Note that the cigarette label which visualizes the first nodal situation is called “Players”!

If *game* and *narrative* are the two cultural achievements which make us human, then the introduction of a radical FN architecture into film makes this a truly 'human' experience. Openness is not just staged but made tangible. FNs open a space for choice and play even in the most dominating medium of all: film.

2.3.4 Parallel Streaming: Howitt's Sliding Doors

The previously discussed case studies served well to explain the architectures and operating principles of FNs in conventional motion pictures. It could be shown that FNs in films develop from an original nodal situation that is established in one of the first scenes. Those nodal situations are usually not one still image but a sequence that is repeated again at the start of each path, for example the staircase scene in *Lola Rennt*. The continuations develop from there and lead to alternate endings. Those continuations are mutually exclusive, even if they show signs of Bordwell's contamination. Nevertheless, each path is following its own story arch. They often run parallel and mostly end in a 'space of convergence'. This is a setting, for example the supermarket in *Lola Rennt*, the airport in *Blind Chance*, or the graveyard in *Smoking/No Smoking*, which is featured in each continuation.

Furthermore it has to be mentioned that the paths are bidirectional. After the ending of each story continuation, the narrative jumps back to the original nodal situation or to a different former nodal situation as in *Smoking/ No Smoking*. Therefore the architectures are hierarchically organized. This is especially true for Resnais' films since there is more than one node in his film but the story always develops in the same sequence of nodes. This means that the architectures of all films are hierarchically organized. They are tree structures. This rigid architecture is also guided by a set of 'rules' that is established in the films' prologues, for example the 'game instructions' in *Lola Rennt* that explain the time frame, objective, players and location of the movie game.

Although each film can be discussed with regard to its game aspect, the games are very different oscillating between *agôn* and *alea*, *ludus* and *paidia*. Apart from these differences all films have presented their continuations in seriatim. This mode of filmic narration enhances the arborescent effect, since each branch is followed separately and then the narrative jumps back to the metaphorical trunk of the tree. In the following chapters we will see what happens when the mode of presentations changes from serial presentation to parallel streaming and if and how this is affecting the architecture of the FN films. The following examples are therefore not discussed in great detail with regard to their content but with focus on their structuring principles.

Howitt’s *Sliding Doors* hit the cinema screens the same year as Tykwer’s *Lola Rennt* in 1998. But this is not the only similarity. Both films feature a female protagonist whose relationship is in some way endangered. In *Lola* it is due to outer circumstances in *Sliding Doors* it is due to the behaviour of one of the male main characters. The protagonist, Helen (played by Gwyneth Paltrow), works as a PR agent in London’s business district. The film opens with Helen being fired from her job. She is frustrated, leaves the office, enters the elevator and drops her earring which is picked up by her future love interest James. Helen does not pay further attention to this. In the next scene we follow Helen running for her train to a subway platform.¹⁴⁰ This is the nodal situation of the film. From here on two mutually exclusive continuations develop.

The nodal situation is a sequence of shots: Helen is running down a set of stairs to catch the Tube. On her way down she almost crashes into a little girl who is playing with a blonde female puppet on the handrail. Just like in *Lola* and *Blind Chance*, little differences in timing will have major effects on the outcomes of the alternative paths. In path one Helen swerves around the little girl which makes her miss her train (*Sliding Doors*, 00:05:19). From then on we see the film reel run backwards until we see Helen again at the top of the stairs. This is underlined by a magical music tune which indicates the extraordinary nature of the time reversal.

“*Sliding Doors* employs a rewind mechanism; Helen fails to catch the train, but the action is then reversed so that she strides backward up the stairs, and out into the street” (Bordwell, “Film Futures” 94)

In the second continuation Helen is also running down the stairs but just before she is about to collide with the little girl the girl’s mother pulls her out of the way. As a result, Helen is faster than in the first run and manages to catch the train (*Sliding Doors*, 00:05:50). The first plot follows the Helen who manages to catch the train. On the subway she meets the man from the elevator, James. He manages to cheer her up. A dialog follows:

James: “I suppose being a Gemini does have its down sides. Hey, remember what the Monty Python boys say”

Helen: “What? Always look on the bright side of life”

James: “No. Nobody expects the Spanish Inquisition” (*Sliding Doors*, 00:10:59)

140 This, of course, immediately brings *Lola* to mind (another running female) but also *Blind Chance* (again, a train, again little differences in timing will determine whether Helen catches the train or not). As a matter of fact, on the special features of *Blind Chance* Kieślowski’s translator explains that Howitt’s film is a direct quote of *Blind Chance* (*Blind Chance*, “Special Features”).

She arrives home early and catches her partner, Gerry, red-handed in bed with his ex-girlfriend, the fiery Lydia, who is the exact opposite of Helen. Lydia is a strong, decisive female who also has a top position in the financial world, whereas Helen is portrayed more in the terms of an indecisive wallflower. However, Helen breaks up with Gerry, moves to her friend Anna, cuts her hair, develops into a strong, independent woman and falls in love with James. She is pregnant from James. Due to a misunderstanding she thinks James is in love with another woman. James is able to resolve the misunderstanding. Accidentally Helen is hit by a truck and dies in hospital.

The second plot revolves around the Helen who did not catch the train. She is assaulted and arrives late. She is for a long time oblivious to Gerry's affair with Lydia. She accepts lesser jobs with bad payment to sustain herself and Gerry. Helen is also pregnant from Gerry. When she finally finds out about Lydia, Helen falls down the stairs in an argument and loses her child. She survives and meets James who is also at the hospital to visit his ill mother. They both meet in an elevator again and also both do not seem to remember each other the initial scene is repeated: Helen drops her earring and James tries to cheer her up:

James: "You know what the Monty Python boys say"

Helen: "Nobody expects the Spanish Inquisition" (*Sliding Doors*, 01:31:40)

Both look at each other and the elevator door closes. All this is accompanied by a very American country-style love song, which seems to contradict the 'Britishness' of the movie.

In contrast to the films that were previously discussed, *Sliding Doors* is mainstream cinema; it has a romantic comedy plot. The story follows Thompson's plot arch from exposition to resolution. Although *Sliding Doors* is told in contrasting ways, like a photographic positive and negative, there is a definite resolution. The happy ending is the preferred choice of the film. Not just because it is at the very end but also because it loops back to the beginning of the narrative.

The narrative architecture of this film is very similar to the previous case studies.

Blind Chance, *Lola Rennt* and *Smoking/No Smoking* all feature the same FN architecture: a forking-path plot with an arborescent (tree) architecture; one node at the beginning and multiple continuations from there on. Although *Lola* and *Blind Chance* feature their three continuations in strict seriatim and *Smoking/No Smoking* presents its continuations with many more switch points that break up the sequentiality into a true multi-linear viewing experience, those continuations are visually presented one after the other. Narrative closure is achieved for each story strand before the next one begins. Howitt's *Sliding Doors* is less complex:

one nodal situation at the beginning and two continuations. These alternate story lines are not presented in seriatim but by mutually switching from one story line to the other. Both continuations are narrated in a parallel way so it is possible to directly compare both paths. Bordwell's first, third and fifth principle can be fully applied here (cf. Bordwell, "Film Futures"). The mode of presentation is unusual for filmic storytelling, since it interrupts the plot development. But it can frequently be found in interactive media. Richard Wages, Benno Grützmacher and Stefan Grünvogel explain various modes of 'non-linear storytelling' in their introduction to interactive storytelling. Their concept of 'parallel streaming' resembles the viewing experience of *Sliding Doors*.

Diese Struktur erlaubt beispielsweise die Kreation einer einzigen linearen Geschichte, innerhalb dieser haben Benutzer die Möglichkeit, zwischen *verschiedenen Perspektiven, Verläufen und Zuständen* hin- und herzuwechseln. [emphasis added] (47)

Sliding Doors clearly features more than one story strand (there is a nodal situation with two continuations after all), the viewer has the possibility to switch between the two paths and is able to compare directly the 'perspectives, processes and conditions' of the parallel universes. Nevertheless, it is not a new FN architecture but a new mode of visual presentation. Bordwell points out the advantages for this mode, especially with regard to parallel developments in both continuations.

Sliding Doors brings out parallels even more sharply by intercutting its alternative futures rather than presenting them seriatim: in one scene Helen is tended to by her friend Anna before she showers; in the following one, Jerry [the subtitles on the DVD spell his name *Gerry*; annotation added] ministers to the cut on her forehead before she takes a shower. The cleverest moments in this organization come when the two futures converge on [sic!] the same locale, so that in one scene, the bereft Helen drinks woozily at a bar while at a nearby table the happily ignorant Helen dines with the boyfriend who's cheating on her. ("Film Futures"97)

When the mutually exclusive paths are presented in seriatim the narrative has to switch back to a (chronological) earlier point in the narrative. This has lead Hank and others to interpret *Lola*, *Blind Chance* and *Smoking/No Smoking* as time-loop films instead of forking-path narratives. Especially *Lola*'s ability to 'learn' from her other runs seems to indicate a time-loop. This would lead to the assumption that these films do not only have uni-directional graphs (the last one taken) but also bi-directional graphs which lead back to a formerly visited situation. The graphs might lead back to a formerly visited situation but they are not 'bidirectional' in the way that it would be possible to switch from the nodal point back

into an already visited path. This is only possible in true database narratives as in Korsakow films for example.

The question whether it is a time-loop or a forking-path plot can be eradicated by employing the visual presentation of parallel streaming. This also reveals the misunderstanding of Hank and others. Just because the futures are presented in *seriatim* does not make them a new kind of narrative architecture different from Bordwell's forking path films. It is merely a different way of visual presentation but does not change the narrative architecture in itself. Accordingly *Sliding Doors* is one of Bordwell's case studies among *Lola Rennt* and *Blind Chance* (cf. "Film Futures"). However, there is one difference with regard to contamination of the mutually exclusive paths. *Lola* seems to be able to learn from her former paths which can be indeed interpreted as a time-loop phenomenon. If *Lola* had not been in path one why would she be able to know what to do with the gun in path two?

Makers of forking-paths plots seem unable to resist contaminating one by another. At one moment in *Sliding Doors*, the heroine has an inkling of what is happening in the parallel story. Walking along the river with her friend, Anna, Helen seems to anticipate what's happening at the same moment in the other story, wherein her counterpart cheers on a team: 'Fairly weird. I knew there'd be a boat race going on in purple and white shirts.' Shortly I'll show how the film's resolution depends on this kind of crosstalk between futures. (Bordwell, "Film Futures" 98–99)

And indeed there is no time-travel involved in *Sliding Doors*. The contamination does not endanger the narrative architecture. It is not possible to interpret *Sliding Doors* as a time-loop film. Helen A is not learning from a former life as Helen B. The film indicates some divine afflatus similar to the third run of *Lola* (if we assume that *Lola* is not learning). A disambiguation with regard to a film's narrative structure is possible by employing parallel streaming. The contamination does not open an interpretative space for a possible switch in the narrative architecture but it merely stresses the proximity of the paths, *parallel* streaming. And indeed Bordwell's forking-path principles work extremely well because of this proximity. The parallel mode though reduces the number of paths to a minimum of two, but it is still a FN. The contamination does not indicate some sort of sequentiality and therefore both continuations are just as likely as each other. The reduction of paths and the parallel presentation bind the narrative a lot closer to conventional storytelling in Hollywood cinema. Helen A and B are not so different from each other and invite the viewer to identify with the frail and not so frail heroine. It is essentially an initiation story from wallflower to independent woman who meets her true love (James) and a happy ending is also provided. It is a conventional

romantic comedy plot-wise. However, Bordwell is rightfully confused about the ending of each path:

Both futures climax in Helen's being taken to the hospital near death (through a fall down-stairs/ through being hit by a truck). In one plotline she dies, in the other she lives. Remarkably, however, she dies in the romantic-comedy plot, and she lives in the melodrama plot. So the problem is: How to end the film? If we conclude Helen's death, this would arbitrarily chop off the romance and punish someone who has not wronged anybody. As in *Lola*, there is a presumption in favor of a happy ending, preferably one in which she is united with James. But in the plotline in which Helen survives, she doesn't even know who James is! How to arrange a consummatory ending? ("Film Futures"101)

Sliding Doors repeatedly gives the answer to Bordwell's question during the course of the film: 'No one expects the Spanish Inquisition'. The tragic ending of the romantic comedy plot is exactly that, unexpected. Bordwell concludes that Helen B is the more mature character. She already knows about Gerry's true nature and is able to embrace a relationship with James fully.

I would like to disagree with Bordwell here. As we have already seen, FNs explode the conventions of narrative cinema through the introduction of at least one nodal situation. The metaphor of film as game is also prevalent. In Howitt's movie the game is a game of chance. It does strongly resemble the structure of *Blind Chance*. Both alternative lives seem equally likely and it is by the moment of chance that Helen catches the train or not. However, just as all the other FNs broke the mould of Hollywood, so does *Sliding Doors*. Instead of a break away from the conventional story arch this film embraces the conventions of Hollywood, but breaks with them at the end. The fact that the romantic heroine (with a Meg Ryan inspired haircut who was the most iconic romantic actress in the 1990s) dies is a clear potshot at Hollywood. The end of the second path also shows Helen and James while a country love song is played. It is an unusual song choice for such a British film and, indeed, *Sliding Doors* is a movie game in terms of *genre*. Openness is introduced by the sudden shock of Helen A's death. It is a true FN not just because of its architecture, but also because it breaks with conventional Hollywood cinema. The Monty Python's sketch refers to what we expect and the endings of Howitt's film are not what we expected.

The original Monty Python's sketch results in the quintessence that the Spanish Inquisition would have been far more successful if they had asked 'cake or death?' Everyone would have chosen cake. *Sliding Doors* gives the viewer both. It is an ironic take on Hollywood and thereby the FN architecture enables a British film to distort an established genre into a Monty Python's sketch. This is only possible due to the narrative proximity of the story paths. It is not the most complex

FN, but the simplicity of it shows the effects even two alternate continuations can have on a conventional genre such as romantic comedy.

2.3.5 The Big Crunch: Van Dormael's *Mr. Nobody*

Smoking/No Smoking features the most complex FN architecture in conventional motion pictures with multiple nodes and branches. The first node results in the *Big Bang* of the narrative universe, an ever-branching architecture which literally *extends* the narrative *space* (cf. Fig. 6). *Sliding Doors*, on the other hand, offers one node at the beginning with two continuations. The parallel streaming of both paths binds them closely together and *limits* the *space* between them. Eventually one alternative is eradicated from the story development and the viewer is left with only one alternative, it is the *Big Crunch* of FNs in film.

What happens when parallel streaming is combined with an ever-branching architecture? How radical can FN architecture be in the medium of conventional film? This exact question is exemplified in Jaco van Dormael's *Mr Nobody* from 2009. A film that is both, *the Big Bang* and *the Big Crunch* of FNs at the same time. Either this movie is the ultimate filmic FN or it shows us the medial threshold, the impossible line that cannot be crossed. Since this Belgian science-fiction film is not very well known, a short synopsis will be given.¹⁴¹

The main character, Mr. Nobody (played by Jared Leto), tells the life story of Nemo Nobody (also played by Jared Leto). Mr. Nobody is 118 years old and about to die. He is the last mortal on Earth after the human race has achieved quasi-immortality. During the last days of his life, Mr. Nobody tells his story in incoherent segments to his psychiatrist and a young reporter. It remains unclear during the film which of his memories are 'real' and which are just potential developments that have not happened. He talks about his three loves and about his parent's divorce. The segments centre on the three main moments in his life: Nemo at age 9, 16 and 34. The storylines are interwoven with each other and the plot does not follow the conventional uni-linear development found in most films. The film features an arborescent structure with three main continuations. But the nodal situations and the exclusiveness of the continuations remain ambiguous. Although the movie is not told in chronological order, it tells Nemo's story, and all the possible continuations, from his birth until his death. In fact, the film even shows Nemo before he was born. It is explained in the film that children know everything that will happen in their lives before they

¹⁴¹ Unfortunately there is no secondary literature for this film.

are born. Nemo, somehow, was born with complete knowledge about his own life path. Before he is born, he has to choose his parents. At the age of 9 his parents’ divorce and Nemo has to decide with whom he wants to live. This is the original nodal situation of the film and takes place, just like in *Blind Chance*, at a railway station. His mother leaves on a train, while his father remains at the station. In one continuation, Nemo catches the train and stays with his mother, in the other continuation Nemo misses the train and stays from then on with his father. In the path that follows Nemo and his mother, he lives with her and her new partner, Harry. This continuation is presented as ‘edge A from node 1’ in fig. 7. Nemo falls in love with Harry’s daughter Anna. In one scene Nemo is sitting on a beach and Anna runs over to him and asks him whether he wants to go swimming with her and her friends. A new nodal situation is established here referred to as ‘nodal situation 2’ in fig. 7. In one continuation from there he refuses to go swimming. Nemo’s harsh answer is misinterpreted by Anna and they do not become a couple. Many years later, Nemo meets Anna at a train station with her two children. They recognize each other but part again. This is referred to as ‘edge A from node 2’ in the graphic. In the second continuation from node 2, Nemo tells Anna that he cannot swim and she stays with him at the beach. They become lovers. When their parents separate, however, Anna has to go to New York with her father and Nemo remains in Canada with his mother. They lose touch. Years later they meet again at a train station and immediately resume their relationship. Because of some unfortunate circumstances Nemo misses a date with Anna and she remains untraceable from there on. He continues to live a life in solitude. This is presented as ‘edge B from node 2’.

The other main storyline that develops from the original nodal situation shows Nemo’s life with his father. This is referred to as ‘edge B from node 1’ in the graphic. Nemo’s father becomes an invalid and his son takes care of him. Nemo becomes an introverted teenager who writes science-fiction stories. At a party he meets a young girl, Elise, and falls in love with her. In front of Elise’s house a third nodal situation is introduced (‘nodal situation 3’). In one continuation Nemo witnesses Elise and her boyfriend. He leaves frustrated on this motorcycle. He slips on a leaf, crashes and moved to a hospital where he remains in a state of paralysis. This is referred to as ‘edge A from node 3’. In the second continuation from node three (‘edge B from node 3’), Nemo talks to Elise at her house. Elise and Nemo get married later on, although Elise is still in love with her former boyfriend. A new nodal situation is established on the return from the wedding. In one continuation Elise dies in a car accident (‘nodal situation 4’). Nemo keeps her ashes since he had promised her to spread them on Mars. He does so later on. On the spaceship he meets Anna. Of course, this Anna does not know Nemo. The spaceship crashes and both die (‘edge A from node 4’). In the second continua-

tion from node four, Nemo does not fly to Mars. He meets Anna, nevertheless, at the funeral of his ex-boss ('edge B from node 4'). In a different continuation from node three, Nemo and Elise return safely from their wedding. They have three children but their marriage is unhappy. Elise leaves Nemo in the end ('edge C from node 3'). In a continuation from node three, Elise rejects Nemo and he marries the first girl that will dance with him at a party instead ('edge D from node 3'). He marries a girl called Jean. They have two children and Nemo becomes a very successful entrepreneur. However, their marriage is very unhappy and Nemo is bored of his comfortable life. Therefore he decides to make every future decision dependent on the flipping of a coin. This leads to his death since he gets mistaken for a different person and is killed by two hitmen and buried in the woods. In another storyline, that seems to be unconnected to the three main plots described so far, a 34 year old Nemo is in a strange world that is shaped by argyle patterns. Following instructions that he finds accidentally, he ends up in an abandoned house, where he comes across a video. In the video, a 118 year old Nemo explains to him that he (the 34 year old Nemo) does not exist. This continuation is referred to as 'meta edge' in fig.7.

The chronological ending of all paths taken is Nemo's death at age 118, which is set in the future. Before his death he tells the journalist that they both do not exist. They are just imaginations of a nine year old boy at a railway station who cannot decide whether he wants to stay with his mother or father. The film jumps back to young Nemo who chooses a third way. Instead of catching the train or remaining with his father, he follows a perpendicular road, away from both parents. This is presented as 'edge C from node 1'. He blows a leaf into the air. This leaf resembles the one his father slid on, when he met his mother, and the one that led to the motorcycle accident in edge A from node 3.

The narrative switches back to the 118 year old Nemo who is about to die. At the precise moment of his death the expansion of the universe starts. It reverts and time begins to reverse itself. The second law of thermodynamics, entropy, is inverted and time becomes bi-directional, reversible. Although this film questions concepts like reality and fiction, I would like to reduce an analysis of the film with regard to FNs by providing the following illustration:

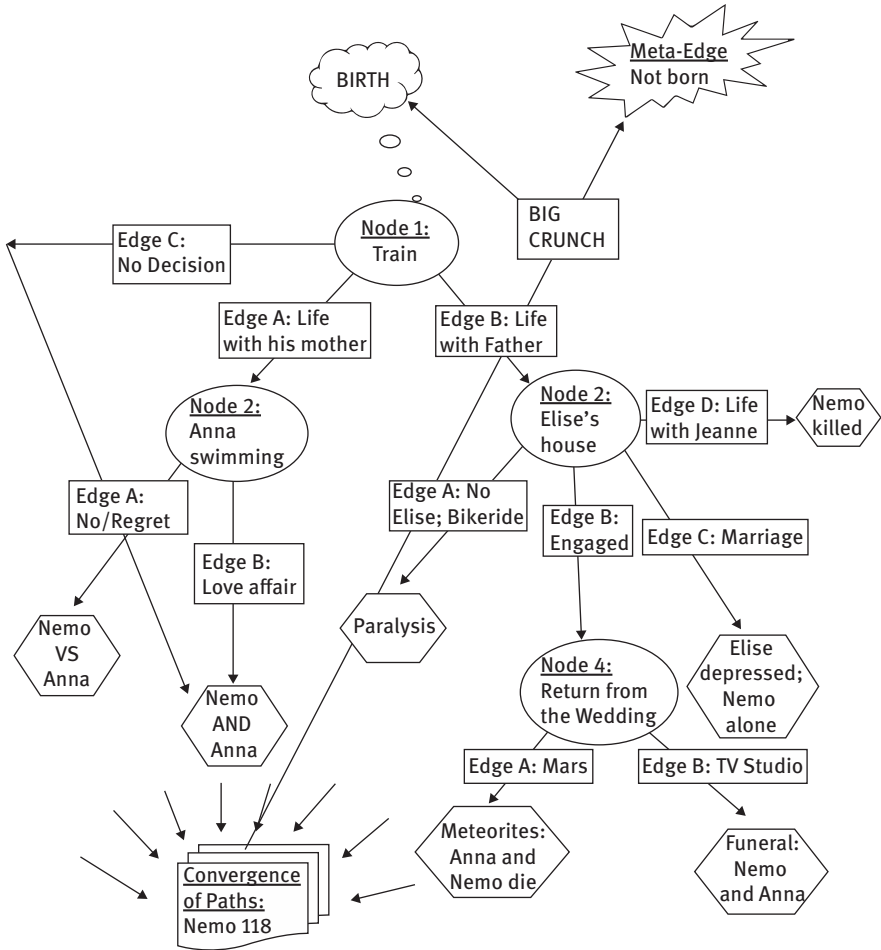


Fig. 7: FN Architecture of *Mr. Nobody*

The film features both parallel streaming technique and a broad forking path architecture. For the sake of orientation the two main nodal situations in Nemo's life shall be the focus of this analysis. The most important and recurring situation of the film is Nemo's decision whether he wants to stay with his mother or with his father ('node 1'). The nodal situation is a sequence of shots as in *Blind Chance*, *Lola Rennt* and *Sliding Doors*. Nemo manages to catch the train to be with his mother ('edge A'). In the second path his father yells his name, Nemo looks back and his shoe-lace rips. He loses the shoe and is unable to catch the hand of his mother. Nemo stays with his father in Britain ('edge B'). The first node employs

a mechanism that is typically built into the original nodal situation in FN films: little differences in timing have major influences of the development of each story path. Young Nemo does not make a conscious choice whether he wants to stay with his father or his mother. The difference in timing is caused by an external principle, here the rip of his shoe lace. This corresponds to a filmic staging of the butterfly effect. The reason for the delay in time is external (the film explains that the company that made Nemo's shoes bought cheaper shoelaces in edge B than A; this is made visible to the viewer by a flashback and is not known to Nemo). The result can be interpreted as divine intervention. Nemo's father met his mother when he slipped on a fallen leaf. This unlikely incident led him to the assumption that their meeting was meant to be. The prologue of the movie explains this phenomenon as "pigeon superstition":

A pigeon is placed in a box containing a button and a window, behind which some food is hidden. When the pigeon presses the button and the window goes up, the pigeon can take the food. Like most living creatures, the pigeon quickly associates the pressing of the lever and the reward. But when a timer releases the seed automatically every 20 seconds, every 20 seconds, the pigeon wonders: What did I do to deserve this? If it was flapping its wings at the time, it'll continue to flap, convinced that its actions have a decisive influence on what happens. We call this 'pigeon superstition'. (*Mr Nobody*, 00:02:35)

As was exemplified in all other FNs discussed so far, the prologue contains the rules of the game of the film. In this case all characters apart from Nemo do not have complete knowledge of their futures and therefore employ the principle of 'pigeon superstition'. This is essentially what a viewer experiences when watching a movie. The viewer only sees a chain of events. Retrospectively it seems as if this chain is a result of cause and effect. It could not have been any other ways since no alternative is shown in conventional films. This causality is deduced from the association of shots and sequences. The serial presentation of moving pictures leads the viewer to assume that there is a causal linkage. This is merely an illusion. The game of the film is to break with this concept of narrative, which immediately links Van Dormael's film to the concept of art cinema by the likes of Greenaway or Robbe-Grillet.

Let us go back to the architecture of this movie. The initial nodal situation leads to a second one. Nemo remembers a picture from his past. Three girls Anna (red dress), Elise (blue) and Jeanne (yellow) are sitting on a green bench and Nemo says hello to each one of them (*Mr Nobody*, 00:22:27). Each continuation will reunite him with one of the girls. Although this is not a nodal situation that is immediately played out (and therefore not a conventional node such as the train scene), it contains the potential of all of Nemo's possible futures. The image indicates that Nemo can make a choice. He will end up with one of the three girls

in each future. This choice, however, seems to be illusory, since each path that leads him to a future with one of the three girls is paved with events on which Nemo has no influence. However, Nemo seems to be aware of all of his possible futures and these are contained in this image of the three girls on the bench. Bordwell's second principle: 'the fork is signposted', is visually prominent through the bold use of colour for each of the girls. Anna is wearing a red dress and all scenes with her usually feature the colour red, Elise is wearing a blue dress and Jean a yellow one. This colour code remains during the film and helps the viewer to understand the connections of the incoherent narrative threads. They provide visual guidance.

Although Bordwell's second principle can be exemplified here, the narrative cannot be analyzed adequately with regard to his 'film futures' concepts. This is due to the fact that *Mr Nobody* explodes the boundaries between filmic conditional and filmic reality. This is especially relevant concerning the paths of Nemo and Jeanne and Nemo and Elise. For Nemo as a focalizer, both story strands blur into each other and he becomes extremely disoriented about his own situation. These paths emerge both from Nemo's decision to stay with his father in the first nodal situation. Both story strands run parallel and intersect each other. This is shown seriatim and with parallel streaming technique. The disorientation of Nemo is also becoming the disorientation of the viewer. This disorientation is a result of the combination of forking path structure, a contamination between logically exclusive story strands and the use of parallel streaming technique. Parallel streaming always suggests proximity of the paths and using it for more than two paths results in a logical entanglement that can hardly be comprehended by the viewer.

If *Sliding Doors* used parallel streaming to follow the conventional story arch of Hollywood pictures to strengthen the immersion in the film and the emotional effects on the viewer, *Mr Nobody* does the opposite. There is no reduction of story strands but an explosion. And parallel streaming is used to do away with the 'pigeon superstition' of the viewer to make room for staging 'openness'. It is a mind game in the Elsaessian sense. It is a film that tries to convey the simulation of counterfactual thinking into the most dominant medium of all. This opens a space for potentiality in the mind of the viewer and in the mind of the protagonist. Nemo's full knowledge about his futures and his ability to experience all of them at the same time contradicts Thompon's and Field's narrative architecture and exchanges it for a 'potential' architecture. As long as the story follows time's arrow from the initial node onwards, it is a *Big Bang* of the filmic narrative. Furthermore, the contradictory developments of the story strands make any identification with Nemo Nobody impossible. Again, the FN architecture challenges any narrative technique employed in conventional filmmaking.

The intertwining of narratives and the *Big Bang* narrative architecture is explained within the film through a popular science show by a 34 year old Nemo (this Nemo belongs to ‘node 4 edge B’):

What was there before the Big Bang? Well, you see, there was no before because before the Big Bang, time did not exist. Time is a result of the expansion of the universe itself, but what’ll happen when the universe has finished expanding and the movement is reversed? What’ll be the nature of time? If string theory is correct, the universe possesses nine spatial dimensions, and one temporal dimension. Now we can imagine that in the beginning, all the dimensions were twisted together and during the Big Bang, three spatial dimensions, the ones that we know as height, width and depth, and one temporal dimension, what we know as time, were deployed. The other six remained miniscule, wound up together. Now, if we live in a universe of wound dimensions, how do we distinguish between illusion and reality? Time, as we know it, is a dimension we experience only in one direction. But what if one of the additional dimensions wasn’t spatial, but temporal? (*Mr. Nobody*, 00:20:40)

This film is trying to do exactly that. It is trying to create a narrative in a temporal medium that does not succumb to our perception of time (and reality) as uni-linear, but wants to expand this idea by proposing a universe of wound dimensions. Generally speaking this would qualify *Mr. Nobody* as an extreme case of FNs in film since the continuations from the nodal situations are not logically separated in mutually exclusive story strands but twisted into each other. In filmic entropy¹⁴² the chaos established cannot be brought back to order. The film does converge into one single character and one set location in the future. *Mr Nobody* is 118 years old. He is the last mortal and supposed to retell the story of his life. His recollection is however a multitude of paths taken.

The interviewer therefore rightfully asks the 118 year old Nemo at the end of the film:

“Everything you say is contradictory. You can’t have been in one place and another at the same time”

Nemo: “You mean to say, we have to make choices”

142 Apart from string theory the second principle of thermodynamics known as entropy is also established as a meta-commentary in the film: “Why does cigarette smoke never go back into the cigarette? Why do molecules spread away from each other? Why does a spilled drop of ink never reform? Because the universe moves towards a state of dissipation. That is the principle of entropy. The tendency of the universe to evolve toward a state of increasing disorder. The principle of entropy is related to the arrow of time. A result of the expansion of the universe. But what will happen when gravitational forces counter-balance the forces of expansion? Or if the energy of the quantum void proves too weak? At that moment, the universe might enter its phase of contraction. The Big Crunch. So what’ll become of time? Will it reverse? No one knows the answer” (*Mr Nobody*, 01:48:59)

Interviewer: "All those lives, which one is the right one?"

Nemo: "Each of these lives is the right one. Every path is the right path. Everything could have been anything else and will have just as much meaning. Tennessee Williams. But you are too young for that" (*Mr Nobody*, 02:00:20)

This film is playing with the conventions of forking-path narrative films as the old Nemo is basically supposed to give a retrospective summary of a complex FN. Yet, but to retell the story in a causally linked, uni-linear way is impossible. Bordwell's folk psychology does not work anymore. The radicality of this FN does not just challenge the mediality of film, but it challenges the concept of narrative itself. *Mr Nobody* shows that radical FNs can be experienced but they cannot be made sense of in terms of a unified retrospective story. All paths chosen are equally true.

Interviewer: "You cannot be dead and still alive. You can't not exist. Is there are life after death?"

Nemo: "After death? How can you be so sure, you even exist. Neither do I. We only live in the imagination of a nine year old child. We are imagined by a nine year old child. Faced with an impossible choice" (*Mr Nobody*, 02:00:27)

Although it is possible to link *Mr Nobody* to other mind-game films in the Elsaesian term (or the Jahrausian 'Bewusstseinsfilme'), which means that the entire story is in the filmic conditional stemming from the mind of one character – it would be hard to prove that a nine year old Nemo (from 'node 1 edge C') is capable of give a lecture on 'pigeon superstition, entropy, the Big Crunch or even string theory' as his 34 year old alter ego (from 'node 4 edge B') does. With regard to the film this can be only explained by assuming that, indeed, Nemo Nobody did come to earth with the entire knowledge about all his possible futures as suggested in the heavenly sequence which is supposed to have happened before his birth:

I remember a time, a long time before my birth when I was with them who were not yet born. When we are not born yet we know everything. Everything that will happen. When it's your time the angels of oblivion place a finger on your mouth. It leaves a mark on the upper lip. It means that you have forgotten everything but the angels missed me. (*Mr Nobody*, 00:12:44)

This knowledge enables Nemo to foresee all of his possible futures at once. But because he does have complete knowledge of the degree of consequence of his choice, it is impossible for him to choose.

[Nemo 118 years]: "In chess it is called Zugzwang when the only viable move is not to move" (*Mr Nobody* 02:01:37)

Like all FNs *Mr Nobody* has allusions to games, too (for example, *alea*: the flipping of the coin determines the death of Nemo ('node 3 edge D')). But just like *Mr Nobody* challenges the concept of uni-linear storytelling, since time is unhinged, the film also explodes the notion of game. This film is like playing a game in which the player, the protagonist, already knows all the outcomes. A choice under complete information is no choice at all if all the outcomes are equally bad. Then there is only *Zugzwang*.

Just like in *Smoking/No Smoking* all possible paths stem from one nodal situation (the train scene) and converge in the future (his death). The paths (or roads) in the middle open a Bakhtinian chronotope.

The chronotope of the road is both a point of new departures and a place for events to find their denouement. Time, as it were, fuses together with space and flows in it (forming the road); this is the source of the rich metaphorical expansion on the image of the road as a course: 'the course of a life' 'to set out on a new course,' 'the course of history' and so on; varied and multileveled are the ways in which road is turned into a metaphor, but its fundamental pivot is the flow of time. (Bakhtin 17)

Many trajectories are possible through this, but it is all confined within the limits of Nemo's birth and death. Birth *and* death are nodal situations for Mr Nobody, since they both consist of all the possible futures and pasts. When Mr. Nobody dies at the age of 118, time reverses due to the *Big Crunch* and he is therefore able to relive all his former lives.

"The Big Crunch is only one possible scenario of the end of time. Others are the Big Whimper, the Big Rip, The Big Freeze, the Big Brake and the Big Lurch" (Musser 58)

The Big Crunch is described by George Musser as follows:

The Big Crunch: Das große Zermalmern

Die Gravitation verlangsamt die Expansion des Weltalls, bis sie ganz zum Stillstand kommt und sich dann sogar umkehrt. Das Universum zieht sich zusammen und endet schließlich in einer Singularität, in der auch die Zeit endet. Diese frühere Lieblingsprognose der Kosmologen hat an Plausibilität verloren: Die Materie ist zu dünn verteilt, um als ausreichende Expansionsbremse zu wirken; und eine unbekannte Energieform, die Dunkle Energie, scheint die Expansion sogar noch zu beschleunigen. (58)

Although scientifically not plausible, *Mr Nobody* uses this idea to equalize birth and death, existence and non-existence. Birth and death as nodal situations are also linked through the use of colour. The unborn Nemo is shown in a white environment and the dying Nemo also lives in a white surrounding. Since white contains all colours of the visible spectrum, this is also the function of the first and the last nodal situation. Everything is possible in these nodal situations.

They contain the not yet actualized potentiality for all the continuations that are shown in the film. Mr Nobody is the embodiment of the nodal situation, the colour white that still holds all possible colours. *Mr. Nobody* is a filmic metaphor of Schrödinger's cat, he is always both at the same time: alive and dead.

To better understand the far-reaching implications of such a revelation, it helps to examine an experiment proposed by physicist Erwin Schrödinger. In this experiment, a cat is placed in a locked room with a sealed vial of poison and some kind of mechanism from breaking the vial. Triggering the apparatus is a particle detector that measures the velocity of an electron. If the speed is above a certain value, the apparatus is activated and the cat dies. If it is below that value, the apparatus is not triggered and the cat survives. A single electron is sent into the detector, but, since no observation has taken place, no specific value is established. It merely inhabits an indeterminate range of possible velocities and, as a result, the cat inhabits an indeterminate range between 'aliveness' and 'deadness'. It is only when someone enters the room to determine the reading that the cat could be said to be properly dead or alive. The cat's wave function collapses into a 'live' or 'dead' state upon the moment of observation.

In 1957, Hugh Everett proposed a theory of wave function collapse that had far-reaching implications for classical notions of time and space. His theory, known as the 'Many Worlds Interpretation of Quantum Mechanics', proposes the idea that, rather than collapsing upon observation, the wave function splits. [...] Applying this theory to Schrödinger's experiment: once a person enters the room to discern the result of the experiment, the wave function splits in two, and he finds himself in either of two distinct realities, [...].

Time has forked, with the observer setting out on one of the paths. Note that there are now two copies of the observer. The replica experiences the alternative outcome of the experiment. To him, this alternative result is the one reality [...]. Each is unaware that the split has taken place.

[...] On this theory, formerly linear time becomes a labyrinth of forked paths, in which each choice, each interaction with the physical world leads to a different possible reality. (Broad)

Unlike the observer in the experiment, Nemo is aware of all possible choices; he is the cat not the observer. By being able to choose all paths at the same time, he refuses to make a definite choice. By being able to relive life again and by making all possible choices, the individual decision becomes void. An *infinite* potential in a node with full information equals *infinite* nodal power. However, a Future *Narrative* is still a human way to simulate openness in a human mind set. All choices are never possible for a human. This is why the protagonist is *Mr Nobody*. He is impossible.

The initial nodal situation is performed following time's arrow. This is a unidirectional edge. That is the reason why the decisions in real life are important. It is not possible to reverse time's arrows. In the case of *Mr Nobody*, time's arrow

gets reversed. A uni-directional edge becomes bi-directional. In conventional films the death of the protagonist nullifies all possible alternatives. Death is the opposite of a nodal situation. There is no continuation from then onwards. By making time's arrow a bi-directional edge, the protagonist in *Mr Nobody* is locked in a gigantic time-loop with infinite potentiality. Therefore no decision has any meaning with regard to its importance for future consequences. If all choices can be made and time is infinitely looped then this nullifies the consequences of each decision. Consequently, this film does not even have a real protagonist. When he can be everybody he is nobody. He is Mr Nobody. This film symbolizes the ultimate threshold of FNs in film. It is both the *Big Bang* and the *Big Crunch* of FNs.

However, there is still hope for the viewer's cling to pigeon superstition, since the film ends with the dying Nemo speaking the words 'Anna, Anna'. He did make a choice or he is about to make a choice and it has to be the girl, of course, whose name can be read forth and backwards. A bi-directional name, so to speak. A temporal medium relies on the temporality of its content. A FN in film can stage openness, but it can never go beyond the uni-linearity of the medium itself. If a film displays such an impossible array of futures, as *Mr Nobody*, it surpasses the human's perception of time. It is what Jamie Bianco termed 'techno-cinema'. A cinema for a post-human experience this will be discussed in the last chapter of this book. *Mr. Nobody* exemplifies where the boundaries are in terms of radicality of the FN concept for films.

2.3.6 Game Over? – Jones' *Source Code*

Mr. Nobody showed us the power of bi-directional edges. In this film, these edges are situated on the very outskirts of the narrative and create an infinite time-loop between the beginning and the end of space-time. Jones' recent film *Source Code* from 2011 employs this structure on a more basic level. The main character, Colter Stevens, is able to access a world simulator of a past event¹⁴³ by the use of a quantum simulator. The architecture of the film is that of a time-loop structure, not unlike *Groundhog Day*, the most famous time-loop film of all. Those movies usually fall in to the genre of time-travel films. The features of this genre are summed up by Elisa Pezzotta as follows.

¹⁴³ Aarseth interpreted this part of the film as a generating device of a chronotope in which different run throughs or paths are possible until Stevens finds the bomb on the train.

There are films in which time becomes the film's very theme and subject matter, and which challenge our everyday conception of time. This happens mostly in narratives that present alternative or counterfactual history and in time-travel films. Counterfactual history occurs when a story is dominated by different versions of the same protagonist and these alter egos occupy another, parallel reality which, however, occurs in the same time-space. If the alter egos occupy a different time, but the same space, we have a time-travel narrative. (ibid.)

This has effects for what is perceived as 'time' for the characters in the story-world, but also for how time is to be interpreted by the viewer. Pezzotta explains the different time-layers and I will use her concept for the analysis of *Source Code*.

Three principles link the fabula and the syuzhet: time; space; and narrative logic, which mostly refers to causality. The arrangement of the events in the plot, in terms of order, duration and frequency, can aid or prevent the construction of the narrative logic and the story time. The plot time is the time that a film takes to present a story, and the story time is the time of what is represented by a film. Sometimes, the story time is insufficient to understand the story and to solve its logical paradoxes. For example, in counterfactual history it is usually possible to reconstruct the story time from the plot, but there are films, such as *Groundhog Day* (Harold Ramis, 1993), in which another time variable, personal time, needs to be introduced and analysed, [...]. In order to analyse such films, I argue that personal time needs to be studied together with plot and story time. (ibid.)

Indeed, Pezzotta's analysis of 'personal time' for *Groundhog Day* emphasizes the idea why multi-linear narratives in film are not necessarily time-loop films. There are forking-path narratives that feature no sign of contamination between the parallel universes. Unlike Phil in *Groundhog Day*, the main character in, for example, *Blind Chance* is unaware of the switch of the narrative back to a former nodal situation. In time-loop films, on the other hand, the protagonist serves as unifying consciousness of the plot development. This, of course, has consequences for the different layers of time of the film. Time's arrow might be looped and transforms into a bi-directional edge but only with regard to story time. The personal time, however, of the protagonist is perceived as a sequence.

Indeed, there are cases in which a character is aware of the existence of his or her alter egos and of other parallel realities, as in *Groundhog Day* and *Butterfly Effect*. In these films, the story time is insufficient to comprehend the story. The personal time of the character who knows that there are other parallel realities is different from the story time of the other characters. Therefore, for the protagonist, each parallel reality does not develop in the same story time: it is as if the parallel realities were not parallel, but almost 'consecutive' or 'superimposed', because they influence each other. (ibid.)

In Phil's mind the continuations are sequentially organized. Continuation one is followed by continuation two and so on. However, this does not affect the

integrity of the nodal situation. All continuations are already contained in the original nodal situation. Time-loop films add a new qualitative element to FNs in films, but the architecture of them is essentially the same. The nodal situation in *Groundhog Day* already contains all the continuations, although just as potential. Phil might not be able from the start to access the full potential of the nodal situation but that has nothing to do with the nodal power of the situation. The nodal power is always set at its maximum. The film just shows how it unfolds by making Phil the unifying consciousness.

I would like to emphasize the difference between the formerly discussed films and time-loop movies again, since it must be clear why *both* genres feature FNs. In forking-path films, like Resnais' *Smoking/No Smoking*, the protagonists are unaware of the parallel developments of the story. In *Groundhog Day* Phil is conscious of the repetition. He is therefore able to 'learn' from his past. This is, of course, only possible since he has identified the different continuations as *mutually exclusive*. Otherwise he would (falsely) believe that he would live through day $x+1$, $x+2$ and so on, and not *re-live* the *same* day.

This results in Phil being more skilled, experienced and knowledgeable in each repetition with a difference. Although in his case this does not necessarily result in success. Thompson counts 42 repeats of the same day (136). Thompson also uses Ramis' movie to exemplify the four partite story arch of Hollywood films: the setup ('what if there is no tomorrow? '), complicating actions ('no consequences, no hangovers'), development ('Rita's ideal man') and climax ('the best day of my life') (cf. 131–54). The uni-linear development of the story arch follows the logic of conventional movies, which denies the idea of FN in film as breaking the chains of conventional story telling. Even *Sliding Doors* had an ironic take on the inevitable happy end. With regard to *Groundhog Day* there is only one possible ending, which is happy. The time-loop cannot fork but it can lead back to former nodes. The ending, however, is definite.

Source Code is also features a time-loop on a hypodiegetic level, but with a second nodal situation at the end of the film on the diegetic level of filmic reality.

When decorated soldier Captain Colter Stevens (Jake Gyllenhaal) wakes up in the body of an unknown man, he discovers he's part of a mission to find the bomber of a Chicago commuter train. In an assignment unlike any he's ever known, he learns he's part of a government experiment called the Source Code, a program that enables him to cross over into another man's identity in the last 8 minutes of his life. With a second, much larger target threatening to kill millions in downtown Chicago, Colter re-lives the incident over and over again, gathering clues each time, until he can solve the mystery of who is behind the bombs and prevent the next attack. (Summit)

The film plays on the first half of the story with Perlmutter's concept of the *Owl Creek Syndrome*, which is mainly used, in what Perlmutter calls *Trance Films*, to reflect the traumatic consequences of a dying mind. One of the most famous examples in that context is Lyne's *Jacob's Ladder*.

Trance films also called trauma memory films [sic!] make use of dreams and memories to express the tension between remembering and repressing an unacceptable past. The repression often takes a neuro-pathological form, in that the films tend to be driven by characters with either hysterical transference (such as a exchange of personalities) or a psychological ailment – amnesia, muteness, paralysis. They hide behind these psychic maladies in an effort to seek a new identity or escape into alternate selves (a desire that often gets expressed by serialization – successive what-if scenarios, parallel worlds, multiple outcome narratives). (Perlmutter 125)

Trance films feature the presented alternate realities as true mind-games of the protagonist. Therefore they are not real but fantasies of an unreliable narrator told in the filmic conditional. Perlmutter calls this kind of narrative technique, in which the main character imagines in the last moments of his/her life, the 'Owl Creek syndrome'. This is referring to the famous story by Ambrose Bierce 'An Occurrence at Owl Creek Bridge', in which a soldier, Peyton Farquhar, is sentenced to death by hanging from Owl Creek Bridge. He miraculously escapes and experiences odd events on his journey back to his wife. However, at the end of the story it turns out that Farquhar never escaped. The mysterious journey home was just an illusion of his dying mind (cf. 127).

The chronotope 'train' in *Source Code* has a double Owl Creek effect: The train is just an illusion of the dying mind of one of his passengers, Sean Fentress, into which Colter Stevens gets transported via quantum computing and software called "Source Code". But the real Colter also 'died' during an army mission and only his brain is kept alive. Therefore his mind can be transported via "Source Code" software into the past, into the body of Sean Fentress. On the train he has only eight minutes to find the bomb and to identify the terrorist who planned the attack. This recurring rerun of the same situation is a time-loop and Colter behaves like a player/character in a video game of the *agôn* kind. His personal time is moving forward although he is caught in a time-loop.

However, unlike most trance films, *Source Code* is a utopia since the film has two happy endings. Colter's 'winning' of the game enables the 'Source Code' to establish itself (and thereby Colter's consciousness) permanently in the mind of his alter ego Sean Fentress. When Colter returns to the nodal situation for a last time, he manages to find the bomb and arrest the terrorist. In this continuation the train does not explode after eight minutes have passed and, in an alternate reality, Sean/Colter lives on. This introduces a bifurcation that leads to continua-

tions that are on different diegetic levels. There is now Sean/Colter in the ‘Source Code storyworld’ and a Colter in the ‘real’ storyworld, in which he is clinically dead and only his brain is kept alive.

Diese nicht-katastrophale Wendung ist kein konventionelles *Happy ending*. Es wird subtil eingeleitet nach dem Ende der normalerweise tödlichen Achtminutensequenz. Sean hat mit einem größeren Geldbetrag den anfangs noch fälschlicherweise verdächtigten Comedian dazu gebracht, das Zugabteil zu unterhalten. Er und Christina küssen sich. Dann werden der Kuss des Paares und das Lachen des Publikums als Bild eingefroren. Jetzt könnte der Film zu Ende sein, Goodwin mit ihrem glücklichen Namen hat die Lebensfunktionen des Captains abgeschaltet, der Patient als Held findet sein glückliches Ende. Dann aber läuft der Film weiter. Sean und Christina haben eine Zukunft. Sie spielt in einer Parallelwelt. Der Regisseur Duncan Jones hat diese Option des Helden am ‚Scheideweg‘ (Bordwell) als wichtige Lösung für seinen Gedankenspielilm bezeichnet: ‘Obviously in that final passage, that final source code where Colter has gone off to that parallel reality and has stopped the train from going off, we now exist in a new reality where because the train was never blown up, he was never sent on the mission in the first place, so he must still exist in the facility where [his military handler] Goodwin is. That is the same Goodwin in this parallel reality who receives the email he sends from the train. I love the paradox of that ending, which was why I was so keen that was part of the film’ (Braun 6–7)

Michael Braun also analyzes *Source Code* with regard to Bordwell’s seven principles and proves that they can be applied (cf. *ibid.*). The film does not introduce anything new to FN in terms of forking-path structures or time-loops. By combining both of them, however, this film does indeed become a FN that is qualitatively different from the former case studies, not only because of the time-loop on the hypodiegetic level but because of the bifurcation into mutually exclusive continuations after the last run.

The FN architecture is not the only similarity between *Source Code* and the formerly discussed case studies. The train as a symbol for the medium film is also used. In this case, however, this symbol has a different quality. Since the train was created digitally by using CGI¹⁴⁴ technique this has a consequence for its symbolic value. It is no longer the movie that propels the human forward into the direction the train or the medium chooses (in this case with catastrophic consequences, it is a very short film and at the end everybody dies) – it is a *video game*. And video games enable a choice for the player. Depending on his performance the game does not end – when it is played perfectly. And Colter plays it perfectly, so he can enter the next level: a parallel reality. The introduction of a nodal situation in this particular case not only challenges the mediality of film, but transforms it into something new. The virtual becomes actual.

144 Short for ‘computer-generated imagery’.

With regard to the concept of authority this film also manages to critically discuss it by crossing the threshold of the Lacanian imaginary into the symbolic. Colter is caught in a patriarchal society: the rigidly organized army structure. His death disrupts his position in that hierarchy. He is falling out of the order, which is also mirrored in the fact that Colter and his father had an argument just before he died. He is dislocated from the hierarchy of father and son, army and soldier. Logically the film starts with Colter being in some kind of capsule and a woman's face talking to him. Of course, this immediately associates with the dependency of fetus and mother (note as well that Colter's real body seems to be protected from the world in some sort of mechanical womb). Without his mother, Goodwin, Colter is unable to communicate with the world. His life literally depends on her. Goodwin, however, has to obey to orders of her superior, a man, of course, who initiated the project and who wrote the Source Code software for it. He wrote the language of the program, he is the representation of the law-of-the-father. Colter can live in this symbolic realm, but when he decides to disobey the rules and to return to the train sequence, even after his mission is done (this also only works because Goodwin's motherly feelings gain the upper hand), he transforms the Source Code and it becomes part of himself. Thereby he escapes the law of Goodwin's superior. He creates a new world for himself in which he sets his own rules. This, of course, is only possible by the opening of the narrative structure. This happens because of the nodal situation that concludes in two mutually exclusive paths: the world of Sean and the world of Colter. The promise of this FN narrative is that all authority can be subverted and transformed into something new when access is given to a nodal situation. *Source Code* thereby exemplifies the promise of video games and other interactive narratives – there is no 'game over', you can always choose another continuation. The authority that is challenged here is again a medial one, but also with a sideswipe to patriarchal structures that do not allow for individual choice. It is in some way thematically linked to *Blind Chance*, which problematizes the father position in the same way.

Source Code can be seen as the final result of all the work mechanics of FNs in film, since the highlighted artificiality of the film's aesthetics and the hero, a US army pilot, visually relate *Source Code* to recent video games such as *Modern Warfare 2*. The train chronotope easily compares to the reality of a platform game in which a player can re-enter the same situation until he manages to complete the level and moves on. And this is exactly what happens in Jones' film. Colter levels up – the next level is a parallel reality in which he lives on. It is the reversal of the 'Owl Creek syndrome' because Colter's dying mind actually creates a new reality. In Jones' film contamination between these two is employed to disambiguate the fact that both story strands are equally 'real' with regard to the diegetic reality of the film. Introducing a FN structure enables the protagonist of a trance

film to achieve a happy ending. Again the introduction of a nodal situation breaks the mould even of this subgenre of mind-game films.

The rules of the 'train chronotope'¹⁴⁵ (find the bomb in 8 minutes, get the girl and arrest the terrorist) do not just equal the architecture of a conventional video game but also its visual aesthetics. Set between the reality of an army base and the perfect alternate reality of Sean and Christina, the film is eerily perfect. Even the weather forecast on the train's information screen is always good (and as we know from *Groundhog Day* and *Mr Nobody*, never trusts the weatherman because a complex dynamic system such as the weather is unpredictable). Colter is set in a virtual world. It is a mind game initiated through the transversal of human mind into the binary code of computer language just to be transferred back into Colter's mind. Such digital sequencing has to be perfect. There is no room for ambiguity between 0 and 1. Either everybody dies or no one does. And the film seems to indicate exactly that. The virtual reality of the train chronotope when performed perfectly actualizes into reality. *Source Code* thereby plays with the idea of the actualized virtual in which the player (Colter) becomes the resident (Fentress) in the new world. The digitalized images conclude that the best source code could be realized in the form of a video game. In the film it is a double game of a dying mind. It is, again, a post-human game.

Furthermore, the question of identity and the uniqueness of the human are problematized through the transfer of Colter Steven's mind into a computer, his brain being the source code for the reality. A concept exploited already by *The Matrix* but the consequences of such transhumanity in terms of the abolishment of ultimate death and the possibilities for multiple happy endings through simulation make *Source Code* a good example for the transgression of the concept of FNs in conventional motion pictures and the step into the world of new media. *Source Code* and *Mr. Nobody* execute the impossibility of the 'game over situation' through the promise of ultimate openness in FN. This is thereby challenging the concept of humanity.

¹⁴⁵ Aarseth argued in a meeting with the *Narrating Futures* team (28/11/2011) that games are not chronotopes but meta-chronotopes. Everytime a game of chess is played a new chronotope would be produced – a space of potentiality. In the case of *Source Code*, the train sequence could then be seen as the filmic mediated version of a meta-chronotope. The train sequence also leads to two (or at least two) possible worlds. The world of Colter Stevens and the world of Colter as Sean Fentress. This transfers the virtual possible space of potentiality into the actual space of filmic reality by introducing parallel universes. *Source Code* thereby shows the potential of the meta-chronotope, as in games, and the radical consequences, if that potentiality was no longer virtual but actual.

2.4 'Running': The Recipient as Viewer

As Tykwer has rightfully mentioned, films are of dual nature. They combine motion with emotion. Motion refers to the defining property of the medium itself: the persistence of vision that makes us see *motion* pictures. It is an optical illusion, a trick of the mind. The twenty-four frames per second magically animate the (still) images and bring them to life (lat. *animare*). The other side of cinema is emotion. In narratological terms, it is possible to say that filmic narratives provide enhanced 'experientiality' for the viewer.

Experientiality [...] reflects a cognitive schema of embodiedness that relates to human existence and human concerns. [...] In my model there can therefore be narratives without a plot, but there cannot be any narratives without a human (anthropomorphic) experiencer of some sort at some narrative level. (Fludernik 13)

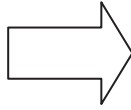
With regard to FNs the "anthropomorphic experiencer" is in the centre of the nodal situation. The nodal situation and its continuations are experienced from that centre of consciousness, which was already explained with regard to *Groundhog Day* and other time-loop films. The performance of a nodal situation, and its transfer into actualization, can only be done by the protagonist in filmic narratives. In real life it is not possible to revisit a former situation or to experience several possible futures at the same time. FNs enable the viewer to experience that openness not just in its potentiality, but "as mediated human experientiality" (Fludernik 36). If in real life the choice of one alternative eliminates the others, FNs in film provide the post-human experience to immerse in parallel storylines.

Since film and photography have traditionally been discussed as "reproductive media" (cf. Monaco 24) that imitate reality, FNs in film 'reproduce' an impossible reality. They break away from conventional narrative cinema and open a new kind of cinema that is more closely linked to simulation than to reproduction. The introduction of a nodal situation does not just explode the narrative from uni- into multi-linearity, but also disrupts the traditional narrative story arch of traditional cinema as described by Thompson and Field (cf. Thompson; cf. Bordwell, *Poetics of Cinema*). The consequences of this break from filmic conventions turns FN films into a 'sinful' experience as described by James Walters. He introduces the concept of seven cardinal sins and virtues of the Hollywood film with regard to Peter Wollen's analysis of Jean-Luc Godard's oeuvre:

According to Wollen, his second set would themselves be cardinal sins for Hollywood cinema. [...]

Virtues

Narrative transitivity
 Identification
 Transparency
 Single Diegesis
 Closure
 Pleasure
 Fiction



Cardinal Sins

Narrative intransitivity
 Estrangement
 Foregrounding
 Multiple Diegesis
 Aperture
 Unpleasure
 Reality

[graphic element added] (Walters 29)

Referring to Wollen's catalogue of virtues the introduction of a nodal situation to the narrative scheme makes a FN movie a very 'wicked' experience. Indeed the staging of openness ('aperture') is at the heart of FNs. This openness leads to an array of continuations from a nodal situation ('multiple diegesis'). As Bordwell has shown, this device has to be foregrounded to enable the viewer to acknowledge the situation as the same situation. This signposting is usually done by employing a sequence of shots that are repeated later on in the plot duration in the exact same sequence to indicate the nodal situation. In the case of Resnais' *Smoking/No Smoking* even the essence of cinema, motion, is withdrawn from that situation to foreground its *function* as a node. This adds to the artificiality of these movies and reduces possibilities for identification. The viewer is not immediately immersed in a film that is disguising its mediality, but she is taking part in a new kind of cinematic experience.

This is due to the fact that FN films have more in common with games than with the conventions of Hollywood. The different continuations that lead away from a nodal situation are more similar to 'replaying' a level in a video game than to episodic storytelling in filmic narratives like Tarantino's *Pulp Fiction*. The protagonists similar to player/characters in a video game exercise different runs through the story world(s). The re-run is usually an experience that is strongly connected to physical action that is taken by the protagonist, for example Lola's run through Berlin or Witek's attempt to catch the train to Warsaw. FN films are strongly emphasizing the cinematic principle of motion with regard to a protagonist who is continually re-running the same situation. This motion, however, is no longer primarily the motion of the picture, which is the defining principle of cinema or motion pictures. 'Running' in FNs is done by the protagonist who therefore metaphorically embodies the nature of FN films. *The protagonist becomes the medium through which we are able to experience the FN*. This is what is to be understood as 'running' in FNs. A protagonist who becomes an anthropomorphic experiencer so the staging of openness in a FN sense becomes possible and can be experienced by the viewer, just like a game character or avatar enables a player to replay a game situation.

Nevertheless, there is a major difference between games and FN films. In both media the main character (or avatar) is thrown into a nodal situation and everything follows from there. The degree of consequence for time, space and character development is dependent on the original performance in the nodal situation. However, in FN films the viewer has no other option but to stay passive. She cannot actively choose which continuation to pursue. The active involvement on the development of the storyline by the viewer or player can only be achieved in a different, a new medium. This kind of medium sensitivity is important for all FNs and I would like to emphasize this particularity of FNs in a few more sentences. In FN films the multi-linearity of the narrative architecture is counterplotted by the uni-linearity of the medium itself. The uni-linear sequentiality of a film's screen duration (it will start at 00:00:00 and end around 02:00:00 in the exact same sequence each time) cannot be tempered with. This is also why the train metaphor is frequently employed in FN films. Just like the medium film, a train is a medium (in this case of transport) that follows a certain path and the passenger (just like the viewer) cannot intervene or choose which way to go. However, what is possible is that a train arrives at the same railway switch and the train follows a different path each time. The passenger may not have the possibility to set the course but she can experience different continuations from that switch point, if she stays on onboard. The viewer can also not choose which way the narrative goes, as long as she remains a 'filmic' passenger. There is only one way to change this, by choosing a medium that allows for active involvement by the viewer. Metaphorically speaking, the viewer or passenger has to get behind the steering wheel. In other words, the authority of the medium film can be challenged if the analogue medium is exchanged for a new one. The digitalization of a narrative into binary digits even opens the train metaphor as a possible way out, as exemplified in *Source Code*. The promise of the nodal situation can only be fully redeemed, if the mediality of film is exchanged for the realm of new media. Consequently the full potential of FNs can only be experienced if the centre of the nodal point origo is no longer the protagonist but the 'viewer' ('clicking'). FN architectures that make this possible will be analysed in the next main chapter of this book. This medium switch has major consequences for the 'viewer' and it will be necessary to shed a look on filmic material that belongs to different sphere than cinema, namely television and certain web-based phenomena. Since this will be discussed in broad detail in the next part of this study I would like to loop back to a former point in this chapter.

To finish the main part of this study that is concerned with conventional films I will give a concluding overview of the structures and characteristics of FNs in the realm of the filmic imaginary in the next paragraphs. The prerequisite of all FNs is a nodal situation with more than one continuation. The importance of the

mutual exclusiveness of these continuations with regard to the 'personal time' of the protagonist as unifying consciousness has already been discussed. Therefore FN architectures mainly feature one nodal situation at the start of the narrative and a branching of alternative paths from there on. The paths taken follow Bordwell's first principle 'forking paths are linear'. Retrospectively the paths seem to abide to the causality principle. This is evident since a FN does only carry its potential in the nodal situation and not in its edges.

The edges, when performed, resemble PNs that feature chains of causally linked events. This, of course, is paradoxically counterplotted by the idea that the protagonist can return to the exact same nodal situation. Therefore FNs in film are Janus-faced gestalts. Their narrative architectures are open and multi-linear, but the medium denies their performances to the viewer. The FN side of these films is their arborescent narrative structure. They resemble hierarchically organized trees with points of con- and divergence. Tree structures are less complex than, for example, networks that are rhizomatically organized, but it is also possible to stage openness on a complex level in FN films, for example in Resnais' *Smoking/ No Smoking*. However, the narrative has to provide signposts and visual markers, such as the use of colour and music score, to help the viewer through the narrative. Of course, the complex and sometimes confusing mental layering of the alternate continuations is part of the appeal of FN films. This is aided by a reduction of settings and characters that enable the viewer to identify the similarities and differences between the continuations. This can be even strengthened if the plot strands are not told seriatim but via parallel viewing technique, which is especially prominent in *Sliding Doors*.

Bordwell argues that instead of the infinitive, radically diverse set of alternatives evoked by the parallel-universes conception and by Borges' "The Garden of Forking Paths", 'film futures' work within a set narrow both in number and in core conditions. According to Bordwell, this is due to his hypothesis that narratives are built not upon philosophy or physics but on folk psychology (the ordinary processes we use to make sense of the world) ("Film Futures" 90). In this way the seven principles set out by Bordwell, the rigid organization of plot development and the reduction of existents link those films to the allusion of movie games. Most films also come with a prologue that sets the rules of the game. However, games can be better actively played than passively experienced. This is also why the full potential of FN can only be realized in interactive media.

What FNs in the realm of the filmic imaginary can do is the subversion of the authority of the medium by foregrounding its *medial* nature. The staging of openness also breaks with Hollywood cinema and by making openness tangible the 'pigeon superstition' of conventional storytelling is unveiled as what it is. A nodal situation offers more than one continuation. And every moment in time is a

nodal situation. The story arch of Hollywood films makes the viewer believe that it could have only happened that way and causality is the ever ruling principle. However, FNs make us see that there is always more than one possible continuation. There is always a choice. And this is also the political impact of FNs in film, FNs question authority by simulating openness.

The threshold of that openness is always the human mind. Narratives are designed for a human mind to make meaning of her existence in time. To go beyond the very essence of time is the threshold for FN as exemplified on *Mr Nobody*. A choice only matters in time. The next chapter will be on a very time-bound medium: television broadcasting. The real time aspect both limits and broadens the concept of FNs, and this will be exemplified in the following.

3 'Running' and 'Clicking'

3.1 Beyond the Film Reel

Both Innis and McLuhan agree that historically 'the things on which words were written down count more than the words themselves'; that is, the medium is the message. (Carey 9)

The first part of this study shows that FN films separate themselves from traditional cinema by breaking the mould of its established conventions (cf. Walters 29; cf. Bordwell, "Film Futures" 88–104; cf. Thompson, *Storytelling in the New Hollywood* 21–49; 131–55). This breaking away from cinema has consequences not just for the filmic content, but also challenges the medium itself in terms of its monopoly position on spatio-temporal storytelling in popular culture. The following chapter asks if there are other media that are also 'telling in (space and) time' (cf. Sternberg, "Telling in Time" 901–48) but operate on a different level, so 'open' structures in a FN sense can be realized more efficiently. Before we can explore these different modes of storytelling, it has to be clear what is usually meant by 'film' as a medium and, as a consequence, which media are of interest for the second part of this study. Film is usually described as a 'reproductive' medium, since its aim is the creation of an aesthetic closeness to reality (cf. Monaco 24). The effect on the medium itself is that it 'disappears'.¹⁴⁶ In other words, because the content is foregrounded the mediation itself becomes 'transparent'.¹⁴⁷ Any traditional movie aims at the concealment of its materiality and technology, or other (re-)productive aspects, so the viewer can immerse herself in the plot of film.

As a sidenote I want to mention that this is no contradiction to McLuhan's famous statement that "the medium is the message" (cf. 564) in so far as for McLuhan 'the message' is only exceptionally used referring to 'content'. It is usually used "in the sense of change in scale, pace or pattern of human action and interaction created by new media, thus the (new) medium is the message (of any innovation)" (564). In other words, 'the message' sent by a new technology is 'the medium' for Marshall McLuhan. And this is exactly 'the message' of FN films; they announce the arrival of a new technology by breaking with the conventions

146 It is constitutive of all media that their materiality is not foregrounded. No medium is able to mediate its own materiality (cf. Mersch 78–79). "Denn Medien – wie ebefalls Zeichen – funktionieren desto effektiver, je unauffälliger sie als Medien sind" (*ibid.* 80) This observation leads Mersch to develop his 'negative mediatheory' (cf. *ibid.*).

147 Marshall McLuhan states that "a medium is a side-effect of a technology, generally invisible". (564).

of the medium itself. FNs undermine this immersive engagement of the viewer by employing narrative architectures that break with Hollywood's cinematic style. Quite contrarily, FN films *foreground* their artificiality, as for example in the still frame shots in *Smoking/No Smoking*. But not just their aesthetics move FN films away from being merely 'reproductive' media. Also a peculiar 'playfulness', which is inscribed into those narratives, adds to a deviation from immersive cinema and points towards a different kind of engagement with the narrative. FN films are not just playing with the viewer like a 'mind-game' film (cf. Elsaesser), but they *are* metaphorical games: movie games. The 'rules' of these narratives relate FNs to other media that make it possible to (inter-)actively experience such playfulness.

The next chapter will analyze FNs in other visual media that may not be written out as 'games', but which feature certain properties and operating principles as described by Perron (cf. 237–39). Because of the proximity to cinema with regard to spatio-temporal storytelling, the focus will be on hybrid media,¹⁴⁸ transmedia and television. Hence, the peculiarities of FNs on DVD and television will be discussed and in a next step the focus will be on a transmedia projects that are located on the peripheries of television and internet. Extending the corpus to media that are usually not in the focus of film studies shows how it is possible to 'activate' the operating principles of FNs, so to speak.

An active involvement with the narrative is possible because of the elementary units that FN architectures are made of. The question is just of what kind this influence is. As the precluding chapter on conventional films has already proved, the introduction of a nodal situation into a narrative always tries to fight against the temporality of the medium. Nodes (and their multiple continuations) are always challenging the conventions of a temporal medium such as film. The defining principle of FNs, that there is always more than one continuation from a nodal situation, makes us automatically assume that a node involves an element of choice. As it was already discussed, choice is omitted from the definition of FN, but it is its ally, nonetheless. So far, choice was limited to the diegetic level of the story-world. The protagonist of a FN is able to act differently when he or she re-enters the same situation. It is only of qualitative concern whether this is a conscious decision, as in *Source Code*, or whether the character just acts differently and this behaviour remains unexplained, as in *Smoking/No Smoking*. It does not change the FN architecture.

148 'Hybrid media' are media that enable a limited amount of interaction with the filmic content without the content being interactive itself. A prototypical example is the interactive menu of a DVD which enables the viewer to 'interact' with the 'film'. But also other media which enable an 'extension' of the viewing experience without permitting a manipulation with the 'filmic' content itself are hybrids in that way. This will be exemplified in the next chapters of this study.

The question is whether different screen media are also able to produce different FN architectures. The films discussed so far featured only arborescent structures and different modes of presentation. If other architectures can be found in other media than cinema, it has to be shown what the difference is between those FNs and what enables FNs to manifest themselves in these new forms. When we take a look at other screen narratives than film, it becomes clear that for NAUFU asking ‘how’ a FN is mediated is just as important as describing its architecture, since both questions are inseparably intertwined. This means that FNs show a high degree of *sensitivity* with regard to their form of mediation.¹⁴⁹ The metaphorical play with movies as games has already pointed to the fact that FNs are more ‘naturally’ realized in new media than in old. In other words, a game situation is more easily realized in an interactive medium than in a non-interactive medium, since an active participation is one of the core conditions of any game. This focus on participation and interactivity is also the main reason for stretching the term of motion pictures to its limits. This cross examination of narratives on different platforms can only be sufficiently accomplished with a sure footing in media studies. Therefore the (trans-)media approach of Ryan will be discussed to establish a basis for the analyses in the next chapters.

Ryan’s work is of main interest for this study because she focuses on *narratives in different media*. Her narratological perspective on the subject matter made her realize that most works in the field of media studies succumb to their own “media blindness”, which is “the indiscriminating transfer of concepts designed for the study of the narratives of a particular medium [...] to narratives of another medium” (cf. *Narrative Across Media* 34). Among “radical relativism”, which refers to the observation that distinct media *do* share certain properties, and the temptation to “regard the idiosyncrasies of individual texts as features of the medium” (cf. *Narrative Across Media* 33–34), ‘media blindness’ is one of the three dangers that has to be avoided when analyzing narratives ‘across media’, or in the case of this study, screen narratives on different platforms. Beforehand it has to be clarified what is actually understood as a ‘medium’ by Ryan and what it means for this study.

149 Of course, the mediality of every narrative is an important factor when analyzing it. “Even when they seek to make themselves visible, media are not hollow conduits for the transmission of messages but material supports of information whose materiality, precisely, ‘matters’ for the type of meanings that can be encoded. [...] media differ widely in their efficiency and expressive power” (Ryan, *Narrative Across Media* 1–2).

We think of media usually as means of communication. Media of this kind are, for example, radio and television (cf. McLuhan, *Understanding Media* xiv).¹⁵⁰ For Ryan media are first and foremost defined by their materiality.

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In the course of the introduction to this book Ryan tries to set apart the term medium from genre, arguing that genre is defined by conventions and that "medium imposes its possibilities and limitations to the user" (cf. 19). With regard to narrative, Ryan concludes that a definition of medium is not always possible. "'Mediality' (or mediumhood) is thus a relational rather than an absolute property" (cf. 18). Therefore, Ryan delivers a taxonomy that should enable the individual to find its unique approach to its object of study (cf. 19–22). She sets two main parameters for that taxonomy. At first, "it must make a difference about what kind of narrative messages can be transmitted, how these are presented, or how they are experienced" (19) and secondly, "it must present a unique combination of features" (19) drawn from five possible areas: the senses addressed, the "priority among sensory tracks", the "spatio-temporal extension", the "technological support" with regard to "the materiality of signs" and the "cultural role and methods of production/distribution" (cf. 19).

To give an example, cinema and television are spatio-temporal media that communicate with us via "linguistic-acoustic-visual" channels, whereas "computer games" and "web pages" communicate with us via "interactive computer-mediated forms of expression" (cf. 21). Ryan's taxonomy is rather confusing because in the example stated, which refers to the corpus that is of interest for this study, the "linguistic-acoustic-visual" channel is set apart from "interactive computer-mediated forms of expression". It seems that Ryan tries to compare the incomparable here, since it is not *the channel* of communication that marks the difference between both phenomena (since both express their content via "multiple channels" that are "linguistic-acoustic-visual" (cf. 21)) but *the interface* of the medium, that either allows for direct response by the user/viewer or not.

Although her taxonomy is questionable, her general approach to the subject matter is helpful, since she points towards the various fields of media studies that

¹⁵⁰ McLuhan's understanding of the term 'medium' is, of course, "not limited to the stereotypical medium of mass communication such as radio" (563). For McLuhan "a medium is any extension of the human body (wheel as extension of foot, computer as extension of central nervous system) or form of social organization and interaction (language, roads, money)" (564).

either stress the “channel of communication” or the “material means of expression” when they refer to ‘medium’ (cf. 20).

To visualize this, Ryan gave at the “Storyworlds Across Media” conference an introduction to her concept of media that featured the following graphic that encompasses those two main aspects of media, communication and materiality (here ‘delivery systems’ and ‘technologies’). The graphic illustrates which areas encompass the term medium, as well as how and where these overlap.

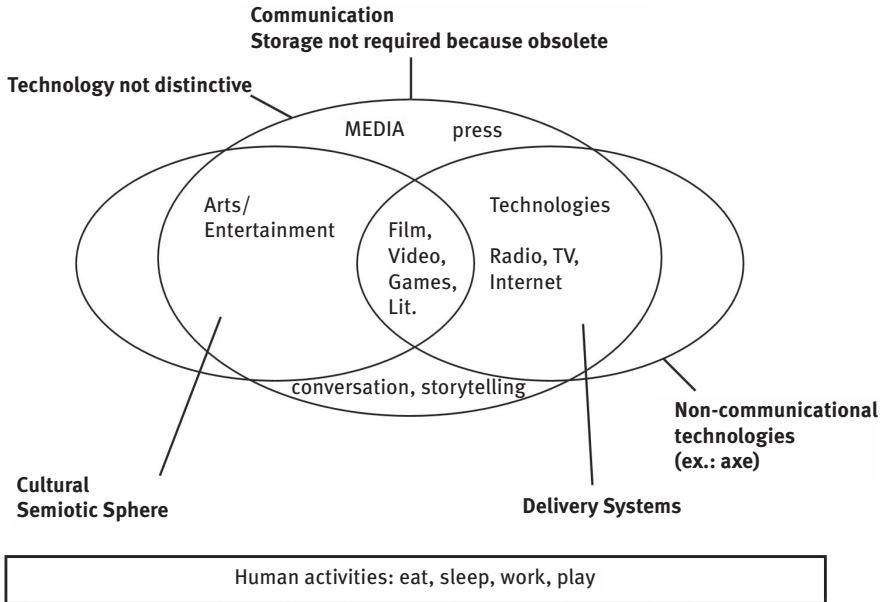


Fig.8: Media, Arts, Technologies (Ryan, “Storyworlds Across Media”)

For Ryan ‘media’ are made up of three main constituents: *communication* (or channels of man communication), *technology* (or technologies that enable communication) and *culture* (or semiotic forms of expression) (cf. Ryan, “Storyworlds Across Media”). These three components are inseparably intertwined, and a media-conscious narratology must always approach its subject by taking all of these areas into consideration (cf. *ibid.*). The above model shows that film, video games and also television are technologies or channels of communication that are at the centre of the illustration, because they are commonly understood as media. In other words, these types of technologically supported channels of com-

munication are media in a narrow sense.¹⁵¹ They have to be analyzed with regard to their specifics in terms of medial communication and technological characteristics and, for this study, with regard to their ability to stage openness in a FN sense, in other words their narrative *design*.

Because media are not hollow conduits (in Ryan's words, "not every medium is a tube" [cf. *ibid.*]) each medium must be discussed with regard to its properties. More often than not either the technological side or their communicational aspects are foregrounded. This volume is trying to do both and more, since the narrative properties of each case study are also analyzed at the same time.

Although Ryan has given us an insight into the peripheries of what has to be brought into consideration when we talk about a medium, she has not supplied us with a definition. This is due to the fact that it is hard to define something that can encompass almost everything in human life, as in the broad definition of McLuhan for example (cf. 7), or only certain specifics which mostly deal with the technological aspects of media. Nonetheless, what is to be understood as medium and what its properties are has to be addressed here before it is possible to sufficiently describe 'other media' than conventional film.

For NAFU, what is meant by different media are mainly different media *platforms* (or the *materiality* of the medium). The question has to be answered if interactive communication is possible between user and interface and if FN architectures can be realized better or worse on different platforms. Although this volume is mainly dealing with narratives that are commonly described as 'fiction', this quality of the content has nothing to do with our understanding of the term medium itself. FNs can just as well be realized in 'factual' narratives and a light will be shed on this in the next few chapters. The toolbox of nodes and edges and their combination into different FN architectures, can be applied to all kinds of different media. This is why it is useful to approach FNs from two angles. There has to be *medium sensitivity* on the one side, but on the other side the elementary narrative units of FNs are *universals*, which means that they exist medium independently.

151 In a wider sense, everything can be understood as a medium. McLuhan, for example, stated this in *Understanding Media: The Extensions of Man*, when he described that a medium can be everything that is "an extension of ourselves" (cf. 7). McLuhan argues that we have "to understand media as extensions of the human body" or the mind (xiv). "Clothing extends skin, housing extends the body's heat-regulating mechanism", they are media in McLuhan's sense, just like the bicycle, and the car, since they "are all extensions of the human foot" (cf. xiv). Any extension of the human being can be a medium or a technology in his understanding (cf. xiv). McLuhan's definition of medium is too broad for this study. NAFU understands the term 'medium' in a much narrower sense which is explained on the following pages.

To sum it up, a medium for NAFU is a technologically specified system that serves as a carrier platform for the narrative. It has to be analyzed with regard to its communicational aspects and how its properties enable or disable FN architectures. Of course, this is not a definition either, but it clarifies what is meant by different media for NAFU.

3.1.1 DVD: Recipient as ‘Viewer’

Cinema is a shared social experience. A movie that is received in the company of others and in the sheltered darkness of a theatre has a strong immersive effect on its audience. Although FNs are clearly not conventional cinema, it does make a difference whether a FN film is received in a public space, such as a movie theatre, or in a private sphere. Although NAFU is not interested in the peculiarities of the individual reception of a movie, the medium switch from film reel to DVD has certain consequences that will be discussed in the following.

First of all, the technological specifics of the DVD allow for a certain degree of interactivity. This was elaborated on in the introductory subchapter 1.1.3. of this study. As already mentioned, film critics like Rafferty prefer the cinematic viewing mode to watching the same movie on DVD, since the authorial control of the content by the director remains unaffected (cf. 44–49). The DVD is primarily a reproductive medium¹⁵² in Monaco’s sense, just like the film-reel (cf. 24), because it is mainly a carrier for filmic content.¹⁵³ However, it also shares certain features with interactive or computer-mediated forms of expression (cf. Ryan, *Narrative Across Media* 21), because it enables the viewer to manipulate the content itself on a limited level, for example by changing the playback speed or by switching to different points in the narrative. Thereby the channel of communication

¹⁵² Of course, films do not need to be reproductive. Especially films like Cameron’s *Avatar* do not reproduce as Carroll points out. “But photographic film is not the only delivery system for what we call films (a.k.a. motion-pictures) in the broader sense. And since some of these delivery systems need not employ photographic film in any way, it is false that a dramatic film is a photograph of a dramatic representation. It could be a computer-generated representation in its own right. Moreover, it should be clear that computer-generated imagery faces none of the challenges previously leveled at photography. Such imagery does not mirror anything nor can it be said to be transparent because it creates its own object. What appears on screen is as under the control of the CGI specialist as what appears on the canvas is under the control of the painter” (Carroll and Choi 15) However, both film and photography are visual media which are received by a viewer. There is only one-way communication possible. The similarities in reception and aesthetics link those two visual media to Monaco’s ‘reproductivity’ (cf. 24).

¹⁵³ David Rodowick refers to both, film and photography, as “time-based spatial media” (1).

is changed from being only one-way, which has always been one of the defining properties of the medium cinema (cf. Bordwell, *Poetics of Cinema* 27–31; cf. Korte 17–23),¹⁵⁴ to a (limited) two way communication between the viewer and the digital content of the DVD (cf. Rafferty 44–49).

Furthermore, the digital versatile disc is a hybrid medium not only because it functions as both, filmic carrier medium and interaction enabling technology, but also because it can carry all different kinds of data. It is the shift in materiality from analogue photography to digital image that causes Rafferty's uneasiness (cf. 44–49).

As already discussed with regard to *Source Code*, the transfer of an ambiguous artwork into a binary code that only responds to 1s and 0s 'disambiguates the image'.¹⁵⁵ What is meant by this is that it remains unclear or ambiguous why the protagonist is thrown into a nodal situation in 'conventional' FN films, or cinematic FNs. More often than not, the main character is even unaware of the different continuations from that node. In *Source Code*, however, the reason is explicitly given how, why and with what purpose Colter Stevens is able to visit the same situation again and again. Since the 'Source Code' is a software program and Colter acts as a player/character that has his avatar in the form of Sean Fentress, the usually neglected or ambiguous reasons for a nodal situation in a film are explained and by this disambiguated, which is due to a medium switch on the diegetic level of the story world. The nodal architecture is found within the computer-mediated environment of the 'Source Code'.

NAFU, of course, is not interested in the reasons for a nodal situation, since its existence alone is enough to make a FN. However, a nodal situation in a time-based spatial medium such as film (cf. Rodowick 1) clashes with the uni-directionality of the screen duration. A node always opens a range of continuations. This multi-linearity, however, cannot be technologically supported by a medium like film. Therefore a node remains somewhat 'unmotivated' because it cannot be fully activated due to the peculiarities of the medium itself. In new media, on the other hand, the node is built into the structure of the narrative design itself. The node is thereby 'naturally' integrated into the reception of the narrative. It does not need to be explained because the nodal structure is perceived as a technologically supported property of the computer-mediated design itself. As a side note, it is interesting to discuss this difference in mediation with regard to what McLuhan terms 'hot' and 'cool' media.

¹⁵⁴ Accordingly, Bordwell refers to the recipient as the "spectator" of films (cf. *ibid.* 149). This implies a one-way communication channel.

¹⁵⁵ *Source Code* is staging this merely on the content level.

A hot medium is one that feeds a single sense with a message full of facts, and because it is said to be of 'high definition'. A cool medium is one which gives facts parsimoniously, thus being classified as of 'low definition', and may give it to several senses. Because a hot medium gives a lot of information the recipient does not need to consult others to work it out and does not have to fill in the message in order to complete it, but can go on burrowing into the problem. A cool medium gives few facts and the recipient has to look round to get others to complete the message. Hot media are therefore low in participation, and cool media are high in participation. Hot media therefore result in passionate and egoistic emotions of a narrow sort; one draws closer to one's kind, and that benevolently, by using a cold medium. (West 179)

Although McLuhan refers to cinema as a "hot medium" or a medium in "high definition", "meaning well-defined, sharp, solid, detailed, etc., in reference to [its] visual form" (cf. McLuhan xvi), it is also a medium that "provides little information, making the user work to fill in what is missing" (xvi). FN films provide little information and the user is asked to fill in this gap herself, but on a different level, the level of the narrative itself. A nodal situation in conventional films remains ambiguous and open to interpretation to a certain extent because the reasons for its existence are either unexplained, as in *Smoking/No Smoking*, *Lola Rennt* and *Blind Chance*, or the reason is given but only enigmatically as in *Mr Nobody*. This ambiguity is not necessarily due to the reasons that are given to explain a nodal situation, but due to the inability of a temporal medium such as film to stage 'true' or radical multi-linearity because of its technological properties. Thereby a node remains an 'alien element' in a FN film. Such a narrative cannot be 'well-defined, sharp and solid'.¹⁵⁶ Although *Source Code* is still a conventional film in terms of its carrier medium, the channel of communication used and the technology that is employed, it also demonstrates why FNs can be easier and more naturally applied in 'new media'. In other words, the nodal situation *crystallizes* in a computer-mediated environment. It is possible to argue that FNs in cinematic narratives tend more towards the 'cool' or 'low definition' side of McLuhan's media topology, whereas FNs in new media are 'hotter'¹⁵⁷ with regard to the nodal situa-

¹⁵⁶ Of course, McLuhan works on a completely different level that has nothing to do with the content of a medium, let alone any form of narrative. I am not trying to reinterpret McLuhan here, but I think that his concept is helpful to make apparent why FNs are better realized in new media than in cinema.

¹⁵⁷ This if, of course, in stark contrast to McLuhan's definition of a 'hot medium' since such a medium "inhibits the user's involvement" (cf. 562). New media are therefore 'cool media' in McLuhan's sense, whereas cinema is a 'hot medium'. A hot medium comes with almost complete visual or aural information and thereby tends to 'extend' one sense over the others. Therefore they require less involvement by the user (cf. McLean 5). Cool media, such as DVD games, demand the user's participation (cf. McLuhan 560). Nevertheless, with regard to the nodal situation

tion itself. McLuhan states that a “high definition medium gives a lot of information and requires little of the user, whereas a low-definition medium provides little information, making the user work to fill in what is missing” (xvi). When we perform a switch from the level of medium (as described by McLuhan) to the level of the narrative design itself, we can say that conventional films are staging ‘cool’ FNs because they remain ambiguous and resemble more Elsaesser’s mind-game films, since there is little information given on the reasons for a nodal situation, whereas new media are able to stage ‘hot’ FNs because the computer-mediated environment ‘naturally’ integrates multi-linearity as a medium specific property.¹⁵⁸ In new media the temporality of a narrative can be unhinged when entering a nodal situation because the medium is not restricted to a certain screen duration or a determined uni-linear progression of events.¹⁵⁹

With regard to FNs in general it is possible to say that the switch from analogue to computerized media disambiguates the node itself. Whether a situation is the same situation in an analogue filmic narrative has to be signposted by employing a variety of devices from sequencing to music score to colour choice. Transferring the narrative onto DVD makes it clear whether or not we encounter a nodal situation. A good example for this is the transfer of *Lola Rennt* from film reel to DVD, since the interactive menu of the DVD enables the viewer to choose the three continuations from the original nodal situation independently of one another. This indicates that the continuations are hierarchically based on the same level. They are alternatives of each other (this was already discussed in subchapter 2.3.1.).

I want to elaborate this example a bit further because it illustrates the medium sensitivity of FNs. When *Lola* is watched in the regular cinematic mode,

itself, FNs in new media are well-defined because they are flagged out as such. The recipient is not required to interpret why the node is there, but simply has to activate it by, for example choosing a continuation in a CYOA. In cinematic FNs the node is signposted, but it takes the viewer’s attention and interpretative engagement to understand the situation as the same situation and to compare the different continuations with each other. FNs in conventional films demand in that respect more of the viewer because of the ‘ambiguity’ of the nodal situation.

158 Of course, there are also new media in which the node is not flagged out. For example certain hypertexts work with ‘covert nodes’. The user is unaware that she is encountering a node when the node is not highlighted. Transmedia projects or alternate reality games sometimes also work along the same lines. Therefore, not all new media show ‘hot’ or ‘overt’ nodal situations. However, it is *possible* to stage them in such a way, which is impossible in cinematic narratives. Therefore new media are more likely to evoke FN structures than movies.

159 Obviously, new media can also progress in uni-linear fashion. Just because it is possible to stage openness, it does not imply that is also necessary. Most platform or adventure games follow a restricted uni-linear progression of events, for example the popular *Uncharted* series for *Playstation* consoles. This is elaborated on by Domsch in *Volume 4* of this series.

it remains debateable if the heroine is stuck in a time-loop and able to learn from former runs and whether there is a contamination between the storyworlds. This can be disambiguated when the narrative is watched on DVD. This carrier medium enables the viewer to consider *Lola* a DVD game, because the interactive menu makes it possible to choose in which sequence she wants to watch the three continuations. The viewer gets to choose between “Version 1, Version 2, Version 3” (cf. *Lola*) (this was previously elaborated on in chapter 2.3.1). Although the nodal situation is still performed by the character, the choice is transferred to the viewer.

This, of course, is a hybrid nodal situation since although the main character of the story world, in this case Lola, performs the runs,¹⁶⁰ the viewer¹⁶¹ is able to choose the sequence. As Rafferty stated, the viewer turns into the pseudo-editor of the film (cf. 44–49), whether she wants *Lola* to have a happy ending or a tragic one becomes her choice.

Lola runs, but the viewer clicks. It is a hybrid in terms of mediality, because the filmic content remains but the carrier allows for interaction, and it is a hybrid with regard to the performance in the nodal situation, because the choice of sequence lies now outside of the storyworld and in the hands of the viewer.

The hybridity of the medium, digital *versatile* disc, is reflected in the hybridity of the role of the recipient, as well. She is neither purely viewer nor user but a ‘viewser’.

Similarly, I argue, contemporary cinema mimics the everyday shocks of our emerging society. Thus the globalized, networked, digitized society demands a new cinema form based on interactivity, play, search, database and non-obvious relationships. The viewer becomes a ‘viewser’. (Daly 81)

FNs in conventional motion pictures indeed structure the film more like a game with a set of rules and the invitation to solve the filmic puzzle. However, a database narrative can only be realized in a database: a list of alternatives that the viewer can choose from. This also hints at the aforementioned nature of the nodal situation. The node is a potential that is situated somewhat outside the uni-linear plot development of each path. Time’s arrow does not affect the node, at least not in static interactive systems. Domsch therefore uses a matrix to introduce a possible classification scheme for media with the polarities passive – active; static – dynamic.

160 The viewer does not have any influence on the performance itself.

161 Who is not part of the storyworld.

The first differentiation that one needs to make is related to the ways in which a user is *allowed* to use an artifact. Different media have different sets of rules for how to properly use them. [...] In this sense, the rules of passive media do *not* allow or enable action by the user to change their perceptible form *in more than one way*. That is to say: two different kinds of input cannot lead to two different forms of presentation. In this sense, passive media usually have only a single option for right usage. [...] In an actively nodal book, such as a Choose-Your-Own Adventure novel, the player is offered alternative options for correct usage [...] and, depending on the user's choice, the presentation will differ. [...]

I would [...] like to suggest a further distinction between what one could call *static* and *dynamic* media. Static media are marked by the fact that their reception does not have a temporal dimension in itself. This means that *temporality and movement can only enter through the activity of the user*. [...] A film will take the same time to watch independently of who watches it. [...] Dynamic media are perceived as movement in time, a movement that is not initiated by the user as part of the reception process (the activity, for example, of starting the movie is to be considered as outside of the reception process proper). Dynamic media therefore also include the medium's ability to actively generate processes. The important point to note is that the aspects passive, dynamic, actively nodal and static can be freely combined, leading to four different medial forms. Thus, not every static medium is necessarily passive, just as not every dynamic medium is necessarily actively nodal. (cf. Domsch, *Narrating Futures Vol. 4*)

This passage is taken from the fourth volume of this series that explicitly deals with actively-nodal and dynamic media such as video games. For now it is only important to understand that DVD is a passive-dynamic medium. (cf. *ibid.*) The interactive DVD menu does not 'act' by itself. The viewer has to turn to her new function as viewer to actively choose a story path.

The possibility to interact with a film in such a way may look like the conversion of Daly's concept into 'reality', but the hybrid technology of DVD is only medial mutton dressed as lamb. To clarify this point, I would like to address a film again that has already been discussed. Although there is an interactive menu on the DVD version of Tykwer's *Lola Rennt*, the narrative itself is still conceived as a film, which is a temporal medium that cannot be tempered with. The impression that there is a choice is just an illusion. The DVD enables the viewer to break with a prescribed succession of the continuations, but this does not make *Lola* an interactive film. It is merely an 'extension' of the viewing experience, but the viewer cannot actually influence or change anything about the narrative itself. The narrative architecture of *Lola* is the same, whether the film is watched in the cinema or at home on DVD. The conversion from reel to disc just enhances or foregrounds what is already set in the FN architecture, that there is a nodal situation with three continuations. Therefore the transfer of *Lola* onto a digital carrier medium does not change its status, it is still a film and not a game, at least with regard to the narrative itself.

This is also the reason why Rafferty (cf. 44–49) does not need to worry. The anxiety of film critics that a new medium might replace an established one like film is refuted by what Henry Jenkins' termed 'convergence culture' (cf. *Convergence Culture* 2–93). Jenkins believes that any new technology builds upon the benefits of an old one (cf. *ibid.*). In other words, new and old media are not fighting over the hegemony in the realm of today's technology, but they keep on existing alongside each other (this is also discussed in further detail in chapter 3.2.3.).

Jenkins' most popular example for this is the director's cut version of Ridley Scott's *Blade Runner* from 1992.¹⁶² Unlike the original ending, the director's cut of this science-fiction classic features the 'origami unicorn incident'¹⁶³ at the end of the film. In the original version from 1982 it remains ambiguous whether the main character, Deckard, whose occupation is to find and destroy androids called 'replicants', is a human being or also a replicant. But in the director's cut, and in the final cut from 2007, Deckard has recurring dreams of unicorns and his partner Gaff, who is also a replicant hunter, leaves an origami unicorn in his apartment, which indicates that he knows about his dreams and the reason for this can only be that Deckard is a replicant himself.¹⁶⁴ For Jenkins the origami unicorn serves as an entry point into the storyworld of *Blade Runner*. It could be argued that the alternate versions of *Blade Runner* are also mutually exclusive continuations from a nodal situation that is metaphorically embodied by the 'origami unicorn' in the director's cut, especially since the original version, the director's cut and the final cut were released as a multi-disc box set in 2007. However, these alternate versions do not make *Blade Runner* into a FN. Unlike a nodal situation that is clearly signposted and established on the same diegetic level as the mutually exclusive continuations that follow from there, as for example in *Lola Rennt*, the alternate versions of *Blade Runner* are similar to different editions of a book. Just like the first and the last edition of Goethe's *Faust* from 1790 and 1808 differ from each other, or the signatures A, B and C of the medieval epic *Nibelungenlied*, these editions are not mutually exclusive continuations from a nodal situation that is located somewhere *outside* the narrative. A nodal situation is always inscribed *into* the narrative architecture.

162 For Jenkins entire explanation of entry and exit points into a narrative, which is the basis for 'transmedia storytelling' cf. *Convergence Culture* 95–134.

163 Jenkins explains this as follows. "Origami unicorn: coined by Neil Young after the addition of a minor detail to the director's cut of *Blade Runner*, which encouraged speculation that the protagonist Deckard might be a replicant; the term refers to any element added to a text that potentially invites reconsideration of other works in the same franchise" (330).

164 For those who do not know *Blade Runner* I suggest the multi-disc set first released in 2007. It features the different versions and enables direct comparison. Watching both versions should explain why Deckard's unicorn dream leads to the interpretation of him being a replicant.

In the case of the hybrid medium DVD, it has become a common feature that alternate endings can be accessed via the interactive menu of a disc. One example is the DVD release of Boyle's science-fiction drama *Sunshine* from 2007. This version comes with an alternative ending and two short films *Dad's Dead* and *Mole Hills*. Just like in the example of *Blade Runner*, *Faust* and the *Nibelungenlied*, the alternative ending does not change anything about the narrative architecture of the film itself. It is merely a completely different version of the film. The alternative ending is just an option for the viewer to extend her viewing experience. It is absolutely clear that the ending that is incorporated into the feature film itself is the preferred one.

An extended viewing experience is especially appreciated by narratives that are widely received such as the British TV series *Misfits* from 2009. The DVD release of the first season features small 'webisodes'. Those are little episodes that were not shown on television like the series itself, but are accessible online via the *Misfits* website. Again, there is no nodal situation that marks them as alternatives of the main storyline; they simply enhance the viewing experience. As Jenkins' has rightfully linked his idea of media convergence to fandom, or what Jason Mittell calls 'forensic storytelling' (cf. "Strategies of Storytelling on Transmedia Television"), which is the gathering of as much information about the story world as possible by accessing different media platforms, it does not transform the narrative per se. The course of *Misfits* still goes the same way, whether or not the viewer decides to watch a webisode.

Nonetheless, it should be pointed out that this does not exclude DVDs or transmedia projects from being able to convey FN architectures in general, but when they do, those FNs are of a different kind. Those FN architectures are discussed in chapter 3.2.3. The main focus of this chapter is to show that FNs are conveyed in all kinds of media, but not all media that convey a sense of openness in some way or other to the viewer are necessarily FNs. It should also be clear that interactivity is not an indicator for a FN. Whether a text is a FN or not depends on the narrative architecture itself. This will be picked up again in the following chapters.

3.1.2 Television and Transmedia

3.1.2.1 FNs in TV Serials

Films are not restricted to just one carrier medium. As discussed in the preceding chapter, the transfer from reel to disc enables the foregrounding of nodal situations due to the properties of digital technology. Furthermore it is not just the technology that marks the difference between both media, but also the channel

of communication. A cinematic experience is characterised by the confinement of the audience in a darkened theatre. The film is shown on the screen and this message is transported to the audience by a one-way channel of communication. The recipient is restricted to her role as (passive) viewer. A DVD, on the other hand, enables a limited interaction with the content by the viewer, which makes her a viewer. This is partly due to the technological design and partly because the DVD is intended to be received in a private sphere. The individual reception does not need to succumb to a pre-set screen duration as much as the shared experience of watching a movie at the same time as others in a cinema.

This shared temporality can be found in another medium, which also enables a community experience but of a different kind. Television technology enables the broadcasting of films, among other texts, to many households at the same 'airtime'. However, the public sphere of the cinema is traded for the private reception at home. Therefore the difference between cinema and TV films is not necessarily the content but the channel of medial communication or the transmission. Thompson points out the similarities of both media:

Popular films and television series tell stories in an entertaining, easily comprehensible fashion. They seem simple, yet often the audience must keep track of several characters, multiple plot lines, motifs, and thematic meanings. Television viewers often face the additional challenge of frequent interruptions – for commercials, for week-long gaps between episodes, and even for stretches of time between seasons. Yet they manage, remarkably, to keep track of not only single long-running narrative, but often several simultaneously. (*Storytelling in Film and Television* 1)

Therefore it is not just the channel of communication that is different but also that television can extend the time frame of the narrative. The screen duration, especially with regard to TV serials, can be longer than the ninety minute duration of conventional movies. Ryan points out the differences between both medial forms.

Film and television share the camera as their principal source of narrative material, but, technologically as well as culturally, they are quite distinct media. Spectators go to the movie theatre; television comes to them in the time. Film plays to a captive audience; television shows must compete with countless distractions: eating dinner; doing homework in front of the tube; talking on the phone; surfing [I prefer the word 'zapping'] to other channels. Films are carefully constructed works long in the making; television runs on a short production schedule and offers the possibility, unknown to film, of broadcasting 'in real time'. All these differences explain why film and television narrative have taken diverging paths: film toward fantasy, television toward reality. (*Narrative Across Media* 199)

Although television might lean more towards ‘reality’ or ‘fact’ based genres such as documentaries, the news, or the broadcasting of football matches, for example, it does not mean that ‘fantasy’ or ‘fictive’ content is not televised. Especially TV serials such as J.J. Abrams’ *LOST* or Howard Overman’s *Misfits* are openly ‘fantasy’ in Ryan’s sense¹⁶⁵ and these are exactly the kinds of narratives that are interesting for this study.¹⁶⁶¹⁶⁷ These types of texts can be found in both cinema and television. Thompson even argues that both media might become ‘one’ in the not too distant future.

Yet technological developments are currently bringing them closer together, what with digital video rapidly improving and satellite-based projection systems already being tried out in a few cinemas. Perhaps someday film and television will be largely indistinguishable, converging into a single ‘moving-image’ medium. In the meantime, however, they certainly share the ability to tell stories with moving images, using photography, editing, staging, and so on. These common technical means offer some of the same possibilities and limitations to both media. (*Storytelling in Film and Television* 1)

Thompson points out that both media are similar with regard to their technological production side. Nevertheless, they differ greatly when it comes to *how* stories are told.

Film and television are, however, two different (if overlapping) media. I am concerned here not with the technical and stylistic contrasts between them but rather with the ways in which they have been used to tell stories. Historically, they have developed largely distinctive formats. Most particularly, feature films tend to be longer than most television programs; they are typically watched individually as self-contained stories. Television programs, however, may cluster into a temporal unit for viewers, with interruptions at intervals; many series tell stories serially. Thus the artistic possibilities for storytelling that the two formats offer also differ significantly. [...] These [differences] arise from the constraints that exist in television, to do partly with restricted time spans for individual episodes. I argue that teleplay writers have developed a set of particular narrative tactics to deal with these restraints. (*ibid.* 11)

165 I prefer the word ‘fictive’, since ‘fantasy’ is a genre marker that is applied to a smaller subgroup of fictional texts or films such as *The Lord of the Rings*. Ryan, however, is pointing out a qualitative difference between fact and fiction based narratives with regard to ‘closeness of reality’ as described by Monaco (cf. 24).

166 The next chapter will focus on ‘reality TV’, but here I will start with serials that are set in fictive storyworlds and therefore show a thematic proximity to the previously analyzed case studies.

167 It should be self-explanatory that for the purposes of this study only those TV ‘films’ are focused on that transport some kind of ‘openness’ in a FN sense.

These differences in the mode of storytelling are medium dependent. Therefore the question is not if it makes a difference whether FN films are shown on the silver or a TV screen, but if television can stage ‘openness’ in a way that is distinctive for this medium and thereby sets it apart from the previously discussed case studies. A specific kind of ‘openness’ in the realm of television comes to mind when we think about open-ended narratives, or TV serials.¹⁶⁸

Television and cinema are one-way channels of communication. The recipient has no influence on the content itself or over the transmission time of it. She is reduced to the role of the ‘passive’ viewer. Therefore there is no qualitative difference in the staging of openness when a film like *Lola Rennt* is televised to its screening in a movie theatre.

Nevertheless, TV serials add a different notion to the term ‘openness’ when it comes to the recipient’s strive for closure. Ongoing, episodic daytime serials, so-called ‘soap-operas’,¹⁶⁹ like BBC’s *Eastenders* or *Coronation Street*, have been on air for decades. These serials typically keep eight to ten storylines going at once (cf. Thompson, *Storytelling in Film and Television* 56) and the promise of a resolution in the next episode usually comes in the form of the (in)famous ‘cliffhanger’, a plot device to ensure that the audience will return to watching the series again the next day.¹⁷⁰ Of course, the final resolution is always postponed and even if one story arch is eventually resolved, a new story arch is likely to take shape to maintain the audience’s attention (cf. 56–57). Especially for a series like *Coronation Street* that was first broadcast in 1960 and is still on air every day in the UK, it is not realistic to assume that it is the viewer’s aim to watch every single episode. Indeed, long term TV series are to some extent *open-ended narratives*, since a final resolution is never given.¹⁷¹ TV series thereby stage two basic characteristics of the future – its openness and its infinity.¹⁷²

168 Whether this open-endedness is in any way similar to staging FN openness is discussed on the following pages.

169 “Die ‘Soap Opera’ ist als fiktionale Familienserie in ein weitreichendes Bezugssystem eingebunden: In ihr spiegelt sich nicht nur unterschiedliche Wertehaltungen einzelner Gesellschaften – auch Charakteristika populärer Film- und Fernsehgenres werden miteinander kombiniert” (Hummel). Soap operas employ continuity editing, cliffhangers and seriality as their main distinguishing features in terms of storytelling in TV (cf. Hummel).

170 This is also referred to as a ‘dangling cause’ by Thompson, which is a piece of information or an action that leads to no effect or resolution until the next episode (cf. 20–21).

171 Unless a long-term TV series such as the American ‘sitcom’, short for situation comedy, *Friends* was discontinued after ten consecutive years. Dramatic serials such as *Eastenders* seem to have a prolonged TV life span.

172 Unless we assume a ‘Big Crunch’ of the universe with the consequences that were shown in *Mr Nobody*.

However, in contrast to narratives containing multiple continuations, open-ended narratives must feature *definite outcomes*; in other words: they do *not* feature a nodal situation and therefore disqualify as FNs. Although these kinds of soap operas are 'open' with regard to the fact that there is no end to the stream of consecutive episodes, it is impossible to revisit the same situation that is followed by a different continuation. Even when narratives like *Eastenders* follow eight to ten story arches simultaneously, these strands are not mutually exclusive. The story arches happen in the same diegetic universe. In Bordwell's terms there is no 'contamination' between the continuations that would lead to logical improbabilities (cf. "Film Futures" 92), because the different developments take part in the same storyworld. In other words, that genre specific 'openness' of these serials has nothing in common with the 'openness' of FNs.

Open-ended narratives simulate two basic attributes of the future, namely, that it is infinite and indefinite. The future is always subject to speculation and interpretation. While not FNs per se, these texts belong to a group of texts that harbour central ideas relevant for FNs. There are, however, a few examples of serial narratives that feature both, an ongoing transmission of the narrative and FN architectures. The question will be whether or not these episodic narratives can stage openness with a qualitative difference to FNs in singular filmic narratives. This will be discussed with reference to the acclaimed British TV series *Misfits* from 2009 and the American sitcom *Being Erica* from 2011.

Misfits will be discussed here at first, since it incorporates FN elements in a familiar way that is similar to the previously analyzed film *Source Code* in chapter 2.3.6. The British series follows the life of five young delinquents on community service in London. Due to an immense thunderstorm all main characters acquire supernatural powers. Of interest for this study are the episodes that centre on Curtis, played by Nathan-Stewart Jarrett, because he is able to rewind time, and Simon, played by Iwan Rheon, who can become invisible and is also able to rewind time. With regard to its genre, *Misfits* is an ironic take on the established class of superhero films that has recently gained heightened popularity due to movies like Nolan's *Batman* trilogy or the American TV series *Heroes*. *Misfits* raises the question what would happen if superpowers were not given to 'heroes' but to 'anti-heroes'. Most of the time the plot of this series unfolds in uni-linear fashion with exception to episodes that revolve around one of the main characters, Curtis, who can go back in time. Similar to the main character, Evan Treborn, in Bress' movie *The Butterfly Effect*, Curtis reverses time when he experiences an immense sense of regret.

This feature is also brought up in the second example for this chapter, the American series *Being Erica*,¹⁷³ in which the main character, Erica Strange, is able to go back in time to points in her life, in which she has made a decision that she regrets. Her therapist Dr. Tom, played by Michael Riley, has the ability to send her back to these events so Erica is able to change them. Both serials work like time-loop films such as *Groundhog Day* and *Source Code*. One character serves as a unifying consciousness and although the story time loops, the personal time of that character moves on in uni-linear fashion. Therefore both serials feature the same architecture that was already discussed in chapter 2.3.6. There is a nodal situation and the main character is aware of the fact that he or she is in the same situation again. In both series the return enables the characters to choose different continuations from that situation and the last path taken ends in a positive outcome.¹⁷⁴ It should also be mentioned that the mutually exclusive continuations are embedded into a frame narrative that follows a uni-linear development.

This embedding of the time-loops into the frame narrative has interesting consequences for another character in *Misfits* who is able to return to the past. Simon acquires the power to travel back in time to save his girlfriend, Alisha. This, however, leads to a contamination of ‘worlds’. Simon from the past and Simon from the future both exist at the same time and even encounter each other in Simon’s ‘past’. In this story line the illusion of causality is kept upright, since Simon returns from the future just to be killed in again ‘his’ past. This past, of course, is the present of all the other characters. Although Simon and Alisha know that he will be killed, they cannot change anything about it. Therefore this storyline is far from staging ‘openness’, quite contrarily, it stresses a notion of determinism. Even though time-travel is employed, this is still a PN as discussed with regard to Wells’ *The Time Machine* in chapter 1.1.3. The ‘foreshadowing’ of Simon’s death does not change anything about his behaviour. Although he is able to go back to a formerly visited situation he accepts his fate and does not choose a different continuation to save himself. Therefore the story strand that is focusing on the relationship of Simon and Alisha is not a FN, since there is only one continuation. This kind of PN is aptly described by Bode when he states that “his kind of PN is aptly descriptive is nothing but the narration of a future which has already happened a different continuation toly as well as narratologically the narrative of a(n) (imagined) past. They present the future as past space:

173 Mittel would probably refer to the genre of *Being Erica* as ‘dramedy’ (cf. “A Cultural Approach to Television Genre Theory” 3).

174 In Bress’ movie the last path taken ends in the suicide of the main character. However, the film stages this as the most positive outcome of all of Treborn’s attempts to change his fate and that of his friends.

closed, determined, with uni-linear action” (*Future Narratives. Theory, Poetics, and Media-Historical Moment Part 1*)

The opposite of a FN is staged here, since the narrative suggests that there is always only one possible path. In this sense it resembles the plot development in Terry Gilliam’s *12 Monkeys* from 1995. In this iconic science-fiction film, which is based on Chris Marker’s *La Jetée*, the main character returns to the past just to realize that he is unable to change the future. Although these narratives enable time-travel and time-loops, they are not FNs. The openness can only be staged if there is *more than one* continuation. The initial question that was raised at the beginning of this chapter was, whether the longer time span of TV serials has an advantage over the limited screen duration in singular narratives, when it comes to staging openness. It may seem as if this is the case in *Misfits* and *Being Erica*, since both are able to incorporate time-loops into the narrative more frequently than films like *Source Code*. However, this does not mean that serials are better suited for staging openness than singular narratives. Although it is possible to employ time loops in larger quantities, the duration of a serial narrative and the complexity of the story counterplot the staging of FN architectures. Complex FNs such as *Smoking/No Smoking* with well-branched architectures and a high number of nodal situations reduce all other aspects such as time, space and the number of characters. This reduction makes it easier for the viewer to understand the otherwise utterly confusing alternative plotlines. Of course, this reduction has also aesthetic consequences that mark radical FNs as very ‘un-reality’-like in Ryan’s sense (cf. *Narrative Across Media* 199).

The medium TV, however, relies on such closeness to reality because the viewer has to be able to understand the images immediately. Since most viewers do not watch a program from the very start, they might even zap from one channel to the next, it is necessary that the transmitted content is easy to access. This is even more important for serial storytelling, since the main storyline must be understandable and emotionally appealing for viewers who have missed an episode or two. Although it is possible to catch up on missed episodes online, serials like *Misfits* are still designed to be watched regularly on television.

It is the goal of televised serials to engage its viewers emotionally. This kind of storytelling makes radical FN architectures impossible. A complex, ongoing, ever-branching narrative with mutually exclusive continuations, which is confined to the temporality and limited transmission time of TV, would be too fractured to be understood. And it should be kept in mind that FNs are still designed for human minds and their cognitive abilities to make sense of a narrative (this will be discussed in further detail in chapter 4).

It is possible to stage complex FN architectures in singular narratives by foregrounding the artificiality of the medium.¹⁷⁵ This, however, counterplots emotional engagement, which is required of TV serials so the viewers return to the program. Therefore FN structures are, even in television, only possible in a singular episode. This limitation makes it possible to have a FN *and* an emotionally compelling story.

A good example for this can be found in NBC's *Scrubs*. The TV series features in its sixteenth episode, called "My Butterfly", a typical FN. Unlike *Misfits* or *Being Erica*, *Scrubs* does not feature time-travel or time-loops on a regular basis. Quite contrarily, *Scrubs* has more in common with sitcoms such as *Friends*. The episodes of the comedy-drama TV series are 'unified narratives' as described by Thompson with reference to classical storytelling (cf. *Storytelling in Film and Television* 20–21).¹⁷⁶ *Scrubs* is classical television as described by Thompson in the following.

Originally most sitcoms and dramatic series were made up of self-contained episodes. The outcome of any one episode had no effect on the later ones, and it made little difference in what order they were run. [...] In general, however, sitcom protagonists were considered characters who made some sort of mistake each week, learned a lesson, and promptly forgot it and got into trouble again. Similarly, detectives in dramas solved a case each week, doctors cured a patient, and so on. (59)

The self-contained episodes in *Scrubs* centre on the main character Dr. John 'J.D.' Dorian, played by Zach Braff, and his daily routine at the Sacred Heart teaching hospital. Although classical television it features a FN episode.

A butterfly landing on a woman's chest sets off a chain of events. This results in Elliot not finding a girl's lost stuffed animal, Carla forgetting Turk's lucky do-rag, and a patient's aortic dissection not being discovered until the last minute. After the patient's death, J.D. thinks about how things may have turned out if the butterfly had landed on a nearby man instead of the woman. In this parallel situation, things seem to be better, as the do-rag

175 A switch to a different medium that allows for two-way communication between content and recipient through the use of a responsive technology allows, of course, for extremely complex architectures. However, these media will be discussed in chapter 4. This chapter is focusing on the medium film or closely related technologies.

176 This kind of television is described by Jenkins as 'television of attractions', with reference to Sergei Eisenstein's 'cinema of attractions', as "short, highly emotionally charged units, applied in this book to talk about segments of a television program that can be watched in or out of sequence" (*Convergence Culture* 320). Contrarily to *Misfits*, dramedies such as *Scrubs* contain unified narratives. The singular episodes can be watched without any knowledge about the storyworld because there is no over-arching plot.

and the stuffed animal are found. Also, Dr. Cox and J.D. catch the aortic dissection early. However, the patient still dies in surgery. (Wikipedia, *Scrubs*)

Just like in the other case studies, little differences in timing have a major impact on the story paths. In the first continuation the butterfly lands on the chest of a girl in the waiting room, in the second continuation on the chest of a man. This incident changes the entire course of events. The main character, J.D., finishes the episode with the statement: "In the end it's the 'what ifs' that hurt the most. Like 'what if things had gone a little differently'"

This episode is similar to *Blind Chance* and *Lola Rennt*. It is a FN featured in a TV series, but it is limited to a singular episode. Ultimately it shows the inability of the medium television to serialize mutually exclusive story paths. Again, introducing a nodal situation into a screen narrative challenges the concept of its mediality. In the case of TV serials, the node does not explode the narrative, but implodes the series into a singular episode. Television is therefore linked back to its roots, as Thompson points out when she states that self-contained episodes as in *Scrubs* resemble the classical way of storytelling in Hollywood cinema (cf. *Storytelling in Film and Television* 20–21; 59).

The potential of FNs to unmask the medium is at work once again; it reveals the operating principles of TV serials and their inability to stage complex FNs that stretch over several episodes. As long as television is limited to a one-way channel of communication the medium itself has a lot in common with cinema since both can stage FNs only in singular narratives or self-contained episodes. The enhanced temporal frame of TV serials adds a complexity that cannot be adequately integrated into a FN, since it would cause a too extreme fragmentation of the televised content. Therefore FNs can only be staged in singular episodes.

In the next chapter, the switch to a TV genre will be discussed that allows for a certain degree of direct response by the viewer.

3.1.2.2 'Reality TV'

The preceding chapter on TV serials shows that complex FN architectures are limited to singular episodes. Even when dramedies like *Being Erica* work with time-travel narratives, the return to a nodal situation and alternate continuation from that node onwards is not part of the over-arching storyline of the entire series. Quite contrarily, the continuation is shown in a subplot that is usually played out within one episode. This has to do with the conventions of TV serials. A series has to remain understandable even if the viewer misses an episode or two.

Generally speaking it is evident that FN architectures are essentially the same in TV serials and movies. Whether it is a singular or a serial narrative does

not change anything about the architecture that is displayed. In both, films and series, only one node is shown at the beginning of a narrative and a very limited number of continuations develop from there (usually two, sometimes more, but never a two digit number apart from Resnais' *Smoking/No Smoking*). The reason for this is not located within the diegetic framework but outside of the narrative. The narratives that have been analyzed so far all succumbed to the technological limitations of traditional screen media. Because film and TV only offer one-way channels of communication, the recipient is limited to her role as viewer. With regard to FNs it means that it can only be the character in a narrative that performs the nodal situation. The viewer is limited to watching the individual runs but has no influence on the outcome.

The following chapter, on the other hand, focuses on those kinds of nodal situations that are of a double nature with regard to their performance. Although the protagonist is performing the individual runs, the choice as to where the journey goes is in the hands of the viewer. Therefore the question will be raised, whether this shift from passive viewer to active viewer makes complex FN architectures possible and what kind of narratives can provide a complex structure that allows for a limited form of 'interactivity' (since this volume is still dealing with 'films' in the widest sense).

Lola Rennt (1998) conquered the screen just around the same time as an entirely new kind of serial narrative conquered television: *Big Brother*. The reality TV show of the competition format was first aired in the Netherlands in 2000. There was an initial outcry about the voyeuristic nature of the show, but the nation was hooked to the screen nonetheless. However, it was not necessarily that provocative side which mesmerized its viewers, but the opportunity to influence the development of the story by voting per telephone for certain members of the *Big Brother* house to be eliminated. The show seemed to predict the development of mobile internet and online platforms, such as *Youtube* and social network sites. It seems that the virtual reality of the internet is not so different from the virtual reality of the *Big Brother* house.¹⁷⁷ Although the genre of reality television is still young it has already seen a differentiation into various subgenres from competitive to 'unscripted reality' dramas. The common denominator of these subcategories is the embedding of non-fictional content, such as 'real' locations or 'real' characters instead of actors. For example, "in *Big Brother*, the construction of an isolated environment works under the logic that it can force 'true' selves in the

¹⁷⁷ Daniel Biltereyst argues with reference to *Big Brother* that "the old moral-panic model – what can be seen as spiral effect produced by the interaction of the media, public opinion, interest groups, moral guardians and the authorities – needs to be adapted to a postmodern (media) environment" in his essay "Media Audiences and the Game of Controversy" (7).

'pure' environment of the house. It also aims to protect the claim to display 'real' and 'ordinary' people who have not been touched by the media world – even while they are immediately the subject of insatiable media attention in the public sphere" (Holmes 19)

According to Annette Hill, reality TV is an umbrella term or catch-all genre which includes a wide range of programs about 'real' people or 'lay' actors. It is located on the border between documentary and drama. Originally, reality TV was used as a category for law and order programs and turned in the 1990s and 2000s into a success story of television (cf. A. Hill 5). This genre of television that features unscripted drama or 'real life' situations portrays a highly manipulated form of 'reality' mainly by staging scandalous or in other ways 'sensational' content to attract viewers. Therefore participants or 'lay' actors are often placed in exotic locations or abnormal situations to enhance the appeal of the show (cf. Wikipedia, *Reality Television*). More often than not the displayed events are manipulated by editing and post-production techniques to achieve a sensational effect. It is clear that not 'reality' is the content of reality TV, but a viewer friendly illusion of reality that is enriched with emotionally appealing or scandalous content. However, the main appeal of this kind of television is not the enhanced 'closeness to reality' in Monaco's sense (cf. 24) or the thematic shift from 'fantasy' to 'reality' in Ryan's sense (cf. *Narrative Across Media* 199), but the fact that the actions taken by the characters in these shows are actually influencing reality of the viewer to some degree.¹⁷⁸ The last person to remain the *Big Brother* house wins actual money, the winner will become a favourite of the yellow press and the viewer can thereby follow the life of the former contestant even after the game show is finished. Reality TV "circles around the relationship between onscreen participants and audience" (Holmes 13).

Although there are many subcategories of reality TV shows only those are of interest, which enable some form of participation by the viewer. These types of reality TV have 'viewer participation' inscribed into the concept of their shows, as Su Holmes points out.

Regular viewing of reality TV programmes may not involve participating in the interactive opportunities on offer, but this does not change the fact that such programmes self-consciously dramatize a set of relations between text and viewer as central to their textual form. In fact, while participation has been conceived as engendering 'the disappearance of the audience' in so far as it blurs the boundaries between production/ consumption or user/

178 Carla Meskill points out, referring to the social effects of TV shows such as *Big Brother*, that people "in a series of experiments were not aware that they equated media with real life, real people and real places; their responses [...] mirrored the social responses we have to others in real situations" (96).

viewer, it also seems that just the opposite has also occurred. In reality TV, the ‘audience’ seems to be everywhere, more visible than ever. We are hailed directly to have our say by voting, imagined as an excitable and boisterous crowd onscreen, constantly discussed by participants when they speculate about how they are being represented and received, solicited to call/text/email our opinions on the shows, and beckoned to step into the television space – to traverse the boundaries between room and screen. (14)

Shows like *Big Brother* and competitive casting shows such as *American Idol* enable the viewers to vote for their favourite or least favourite contestants. In the case of *Big Brother* the viewers can vote for their least favourite housemate to be ‘evicted’ from the show and in the case of *American Idol* they can vote for their favourite act to remain in the contest. In both cases the public’s least favourite contestant is expelled from the show. Since the voting is dependent on phone calls from the viewers, the outcome of every show is unpredictable. Before it is possible to talk about nodal situations and architectures, it has to be clarified what kind of viewer, or viewers, participation these kinds of shows allow for.

In broad terms, interactivity is generally seen to imply some form of transformative relationship between viewer/ user and media form, a process in which content is modified upon reception. The articulation of interactivity in reality TV – ranging across *Big Brother*, *Pop Idol*, [...], *The X-Factor* [...] – can be broadly linked to this concept. The core media channels through which interactive opportunities are offered are the conventional telephone, mobile phone, text messaging, digital TV and the internet. (Holmes 15)

Holmes’ understanding of the term ‘interactivity’ is not congruent with NAFU’s definition of the term.¹⁷⁹ However, Holmes clarifies that the peculiarities of reality TV shows enable a degree of viewer/ viewerser participation by switching to another medium, which allows for two-way communication. In the case of *Big Brother*, for example, the viewer is invited by the presenter to vote via telephone for her favourite contestant to stay on the show. Those ‘eviction nights’ are broadcast live on TV and are also accessible via live streaming on digital TV and the internet (cf. Holmes 16). Thereby the spectator is given the chance to influence the narrative by being able to influence the character constellation. Of course,

179 “The relationship between a user and a medium can be called interactive, if the interface of communication allows series of mutually dependent action-response exchanges. [...] Evidently, the degree of interactivity significantly relies on the nature of the medium. It is non-existent in a book, but patently obvious in a touch screen” (Bode, *Future Narratives. Theory, Poetics, and Media-Historical Moment* Part 1). Holmes definition related interactivity to ‘media form’ whereas Bode makes it quite clear that the interface of a medium has to allow for such action-response exchanges. TV is not designed as such. It is a non-interactive medium. Therefore, reality TV is not interactive TV, but TV that allows for viewer/ viewerser participation.

this is still 'edited reality' since the TV producers choose carefully which scenes are to be shown on TV and how the characters are portrayed. It is therefore far from 'reality',¹⁸⁰ this is out of the question. But this qualitative aspect is of no relevance for NAFU. More importantly, there is a *collective moment* which influences the narrative and thereby the narrative itself is being created as it unfolds on the screen. There is no (pre)scripted plot. The narrative is emerging as the episodes are broadcast and the viewer has (limited) influence on it. 'Reality TV' provides two new elements: *emergent narratives* (with regard to plot development) and (limited) *viewer participation*.¹⁸¹

Reality TV is a hybrid in forms of viewer participation. The narrative will go on even if the viewer is not 'playing the game' (cf. Holmes 14). Mass participation limits the degree of consequence for the individual viewer in the nodal situation. She does not know whether her vote will actually influence the outcome in any ways at all. Of course, the illusion that this is always the case is frequently emphasized during these shows, but that does not mean that the nodal situation bears a lot of nodal power with regard to degree of consequence (cf. Holmes 14).

In reality TV the user is clearly outside of the narrative and, if we believe the producers, she can influence the world of the television show. Reality TV is therefore linked to simulation games such as *The Sims* or *Simcity* (cf. Ryan, *Avatars of Story* 114). Although the viewer is not part of the storyworld as a character, she can influence the shape of it, in this case, who stays in the show and who does not. This blurs the distinction between reality and virtuality, another common feature of FNs as exemplified in *Source Code*. How 'real' reality TV is shall not be discussed here, but it is noteworthy that *Lola Rennt* and *Big Brother* both play with the notion of 'reality' as game. In the case of *Lola* the reality of the storyworld resembles a video game, and in the case of *Big Brother* the game resembles a world simulator. Both employ the concept of strict rules with a clear set goal (*agôn*) to win the game. However, it must not be forgotten that reality TV and simulation games occur in different media. Direct and individual participation

180 Documentaries or the live-broadcasting of sports is closer to such a 'reality' in Ryan's sense (cf. *Narrative Across Media* 199).

181 Holmes addresses this kind of collective participation as a 'feedback circuit' between viewers who become 'textual actors' and the show itself: "[...] what seems to distinguish reality TV is [...] its solicitation of viewers as 'textual actors' [this] pivots more self-consciously on the desire to dramatize our power relations with television, something which involves the more urgent (if not entirely new) desire to image a 'feedback' circuit between viewer and screen. In this sense, it is relevant that Nick Couldry has described interactivity as a form of 'showing, in performance, the otherwise merely assumed connection between medium and representative social group'. [...] it suggests a promotion of a kind of pseudo-power which exaggerates the scope for audience intervention on offer" (15).

by the ‘viewer’ is impossible in a live television show. The viewer is not ‘God’. She cannot shape the story world so the plot develops into a certain direction. The viewer is just invited to enter a narrative such as *Big Brother*, but she cannot change the narrative development in profound ways. The main story-archs of *Big Brother* and *American Idol* are pre-scripted in such a way that they resemble traditional initiation stories. Holmes states that reality TV offers a “ritual reinforcement” of such popular narrative schemes (cf. 28).

Simulation games, on the other hand, such as *Sim City* are responsive to the individual actions of the user. And in massively multiplayer online role-playing games (short: MMORPGs),¹⁸² such as *EVE Online* or *World of Warcraft*, the game world can directly be manipulated by the users (this can indeed lead to a butterfly effect since every user adds another variable into the game). The interaction with the narrative in reality TV, however, remains mass *participation*.¹⁸³ Although reality TV disperses the possibilities to for viewer response over different media channels, such as telephone and internet, this kind of TV show does not permit ‘interactivity’ as defined for NAFU. Not every kind of participation is also some form of medium supported ‘interactivity’. The only kind that broadcasting allows for is nothing more than a means to create an illusion of interactivity. And since the viewer does not really know whether or not her vote will move the narrative into the desired direction, it becomes clear that medium sensitivity is of paramount importance when analyzing FNs.

As stated before, the idea of a nodal situation with interactivity implies a clear choice: choose path A or path B (or C), as in a CYOA game. Also Ryan’s concept of interactivity works in oppositions. TV though is not responding in that way. It is not clear whether or not the viewer has real impact on the narrative. If she did not vote the game would still go on. The fact that it remains ambiguous whether the choice makes a difference or not indicates once more that the full potential of nodes (as being unambiguous) can only be realized in a new medium that works in terms of clear opposites such as 0 and 1, which indeed resembles the narrative structure of a CYOA as *The Abominable Snowman* since the choice given is also always a clear A or B.

182 “Massively multiplayer online role-playing games, an emerging genre that brings together thousands of people interacting through avatars in a graphically rich fantasy environment” (Jenkins, *Convergence Culture* 329).

183 Participation is mainly a ‘prop’ or a dramatic device in reality TV to enhance the emotional engagement of the viewer. Each viewer should believe that her single vote can make a difference. In the German equivalent to *American Idol*, namely *Deutschland sucht den Superstar (DSDS)*, about twenty-five million people vote in each season for their favourite contestant. Calculating with 49 Eurocent per call the company earns 12.25 billion Euros each season – hence the real winner is the production company behind the show (cf. Kaiser).

However, the introduction of (pseudo-)choice into a medium such as television does not automatically transfer this into a FN. Although each node bears the potential for more than one continuation, there is always only one actualized continuation. Since time's arrow cannot be reversed the revisiting of the same situation in a present narrative such as reality TV is impossible. There is a node, but since the definition states that a nodal situation leads to more than one continuation, we have to acknowledge that reality TV is just a proto FN.¹⁸⁴¹⁸⁵ In that way, reality TV is close to 'reality' since every moment in times creates a nodal situation (as displayed in fig. 1). Life can always go one way or the other. However, the advantage of FNs over life is that it is possible to revisit the same situation. Even if that means that the user has to play, for example, a CYOA again and to choose differently. Reality TV disables that function of FNs. The nodal situation that is placed at the end of an episode in which the viewers are asked to vote for their favourite contestant by phone call opens a horizon of options (as long as there is more than one contestant). However, once the audience's decision is announced there is no possible re-entering of that situation. The edge from that node is uni-directional. And when one transfers the story of a reality TV show into a graph it will be a uni-linear 'timeline'. There is no multi-linearity and therefore there is no 'true' nodal situation (although there is choice). Furthermore, the pre-scripted overarching story of initiation, competing, winning and losing does not

184 Although just a proto FN, the political power of the imaginary can be experienced here as well since the mere idea of an agency by the viewer led to the cancellation of a similar show as *American Idol* in China. "Reality television's global success has been, in the eyes of some analysts, an important political phenomenon. In some authoritarian countries, reality television voting represents the first time many citizens have voted in any free and fair wide-scale elections. In addition, the frankness of the settings on some reality shows present situations that are often taboo in certain orthodox cultures, like *Star Academy Arab World*, which shows male and female contestants living together. In 2004, journalist Matt Labash, noting both of these issues, wrote that 'the best hope of little Americas developing in the Middle East could be Arab-produced reality TV.' In China, after the finale of the 2005 season of *Super Girl* (the local version of *Pop Idol*) drew an audience of around 400 million people, and 8 million text message votes, the state-run English-language newspaper *Beijing Today* ran the front-page headline 'Is *Super Girl* a Force for Democracy?' The Chinese government criticized the show, citing both its democratic nature and its excessive vulgarity, or 'worldliness', and in 2006 banned it outright. Other attempts at introducing reality television have proved to be similarly controversial. A Pan-Arab version of *Big Brother* was cancelled in 2004 after less than two weeks on the air after a public outcry and street protests" (Wikipedia, *Reality Television*).

185 The recent development of what was referred to as the 'Arabic Spring' or the 'Youtube Revolution' in Egypt and other countries in the Middle East was also partly caused by talent shows on national TV, in which the audience was able to vote for their favourite contestant. Kraidy describes this experience of participation through voting as a "harbinger of democracy in the Arab world" (cf. 7).

challenge the conventions of storytelling in TV. FNs always challenge the conventions of the medium itself, reality TV does the opposite. It does not “fundamentally challenge [...] the media / ordinary hierarchy [...], indeed, it offers a ritual reinforcement” (Holmes 28) Therefore, (current) reality TV shows are unable to stage true openness in a FN sense. The full potential can only be experienced from the switch to digital media.

3.1.2.3 Is the Future *LOST*, *Dina Foxx*?

Before we look at FNs in solely computer-generated environments, such as video games, we have to discuss the interim stage of narratives that are located somewhere between new and old media. With reference to the precluding chapter it has to be noted that reality TV is such a hybrid. This genre is not just relying on the ‘old’ technologies of television and telecommunication, but newer formats are also employing digital media to engage their viewers even more in the narrative experience (even when the specific show is not ‘on air’). Reality TV is “hybridised between television [, telephone] and the internet” (Meskill 105). The homepage of the German ‘casting show’ DSDS, for example, offers background information about the show, the jury and the individual contestants. It is also a platform for fans to communicate with each other in forums. Sometimes they even get the chance to chat online with the remaining contestants. The hybridity of the genre and the potential for cross-advertising on different media platforms is pointed out by Carolyn Michelle.

Increasingly, questions are being raised about the viability of traditional approaches to audiences given the growing predominance of hybrid interactive genres and their convergence with new media forms such as online streaming video, discussion forums, and MSN messaging. A case in point is reality TV, where innovations associated with the hugely successful Big Brother franchise are being widely adopted. As Livingstone (76) notes, ‘The activity of viewing [...] is converging with reading, shopping, voting, playing, researching, writing, chatting. Media are now used anyhow, anyplace, anytime’. For some, this implies that the nature of audience engagement is being altered irrevocably. The increasing ubiquity of media and our capacity to be both consumers and producers of it raises the question of whether theoretical and analytical concepts derived from ‘traditional’ television and film studies are still relevant in a rapidly evolving mediascape.

But has the nature of audience engagement really been dramatically altered by these new genres, formats, and opportunities for interactivity, such that entirely new theoretical and methodological tools are required? Must we reinvent the wheel, or can existing analytical paradigms be applied and, where necessary, extended to glean insight into how different segments of the audience make sense of hybrid genres and their growing convergence with new media forms? (137–38)

This dispersion over different media platforms leads to the 'convergence of media forms' as described by Michelle. It refers to the concept of 'convergence culture', which was originally proposed by Jenkins (cf. *Convergence Culture* 322).¹⁸⁶ He defines 'convergence' as follows:

A word that describes technological, industrial, cultural, and social changes in the ways media circulates within our culture. Some common ideas referenced by the term include the flow of content across multiple media platforms, the cooperation between multiple media industries, the search for new structures of media financing that fall at the interstices between old and new media, and the migratory behavior of media audiences who would go almost anywhere in the search of the kind of entertainment experiences they want. Perhaps most broadly, media convergence refers to a situation in which multiple media systems coexist and where media content flows fluidly across them. Convergence is understood here as an ongoing process or series of intersections between different media systems, not a fixed relationship. (322)

In his groundbreaking work on convergence culture and 'transmedia'¹⁸⁷ storytelling' Jenkins also focuses on *Survivor* and *American Idol*, two reality TV shows of the competition type. He exemplifies how these shows invite the viewer to become more 'deeply involved'¹⁸⁸ in the storyworld. This involvement can also lead to what Jenkins calls the 'spoiling' of the experience. Some internet users take the 'first-time experience' away from the viewers of these shows by distributing certain pieces of information online, which were kept secret by the production companies to maintain the attention of the viewers (cf. Jenkins 25–39).¹⁸⁹

186 This has already been discussed in chapter 3.1.1. However, since convergence culture is one of the key concepts of transmedia storytelling it needs to be addressed again.

187 Transmedia storytelling happens when "stories [...] unfold across multiple media platforms, with each medium making distinctive contributions to the understanding of the world" (*Convergence Culture* 334).

188 This is also the reason why storyworlds or narratives that provoke such user involvement are frequently referred to as 'deep media' (cf. Rose).

189 The term 'spoiling' emerged from a mismatch of different media and their geographical distribution. Due to the different time-zones that are spread over the USA, viewers of the East Coast are able to watch series three hours before viewers of the West Coast. The East Coast viewers post their gained knowledge on the internet and 'spoil' the first time experience for the rest of the nation. This asymmetry of information leads to posts that are marked as 'spoilers' by the online community (Jenkins, *Convergence Culture* 25–39). In "Spoiling Survivor" Jenkins notes a few classic examples of the destruction of the reality show by its viewers. To give a quick example, some fans have found out the secret location of the *Survivor* show and shared this online even before she show went on air. Sabotaging the show by retrieving secret information on locations, plot development and the contestants has become a popular activity in online forums around the globe (cf. *ibid.*).

However, it is debatable whether the use of different media platforms is to be preferred to the staging of FNs in one medium. Therefore this chapter will pursue this question by discussing the distribution of narrative content in the form of ‘transmedia storytelling’ with reference to NAFU.

One of the main spokespersons who hail this type of narrative dispersal is Ryan. She edited one of the major works in this field, aptly named *Narrative Across Media*, which was published in 2004. She also held the chair at the “Storyworlds Across Media” conference, which took place at the Gutenberg University in Mainz, Germany. This conference elaborated on recent projects in the field of transmedia storytelling with guest speakers such as Mittell, who has done remarkable work in the field of television on this subject¹⁹⁰ (cf. *Complex Television: The Poetics of Contemporary Television Narrative*) and Juul who is heralded for his work on storytelling in computer and video games (cf. *Half-Real: Video Games between Rules and Fictional Worlds*). Ryan sums up the idea of transmedia storytelling and its importance for contemporary narratology on the conference’s homepage.

Even though narratology was conceived as a transmedial endeavour from its very beginnings in Russian formalism and French structuralism, most of its more influential models have been – and continue to be – developed in the context of literary criticism and film studies. In contemporary media culture, however, the creation of storyworlds is not limited to literature and traditional feature films. Rather, emerging forms of multimodal and interactive narration, experiments with the distinction between fictional and nonfictional narrative, various forms of intermedial adaptation, and attempts at ‘transmedia storytelling’ create new ways of presenting narrative content, thereby calling attention to the affordances and limitations of different narrative media as well as to their potential for cooperation. The increased interest in the relation between media and narrative sparked by the development of digital technology and the recent proliferation of delivery techniques in the context of media convergence has reinforced the need for an interdisciplinary and transmedial narratology that studies storyworlds across media. (*Storyworlds Across Media*)

190 Mittell’s concept of complex television transfers transmedia storytelling into the academic field of television studies. He claims that new ways of storytelling have emerged due to the ‘convergence’ of the old medium ‘television’ and newer media forms such as websites and video games: “Both home video recording and packaging have altered the viewer’s temporal relationship to television narratives, giving more control to audiences in ways that resist the restrictions of the regimented television schedule. These shifts in temporal technologies have impacted the narrative strategies of television, as creators now tell stories that can be experienced in a range of more flexible and collectable formats, encouraging a more invested and engaged form of spectatorship than typically assumed for earlier television. New media forms like videogames and websites also allow viewers to enter into the narrative world of television programs, encouraging a degree of fan engagement and transmedia immersion greater than with any other pre-digital medium. These technological developments have all encouraged narrative complexity as a highly pleasurable and marketable technique in contemporary media” (*ibid.*).

Transmedia is an interesting by-product of the interweaving of old and new media and is described by Jenkins in *Convergence Culture* (cf. 2–18) and by Mahne in *Transmediale Erzähltheorie* (cf. *ibid.*).¹⁹¹

Transmedia storytelling: Stories that unfold across multiple media platforms, with each medium making distinctive contributions to our understanding of the world, a more integrated approach to franchise development than models based on urtexts and ancillary products (*Convergence Culture* 334)

For Jenkins, transmedia storytelling is a result of convergence culture. Certain narratives seem better suited to unfold across different media platforms due to their ability of ‘worldmaking’, among six other principles such as ‘extractability’ and ‘immersion’, which enable transmedia storytelling (cf. *The Revenge of the Origami Unicorn: Seven Principles of Transmedia Storytelling*).

In *Convergence Culture*, I quoted an unnamed screenwriter who discussed how Hollywood’s priorities had shifted in the course of his career: ‘When I first started you would pitch a story because without a good story, you didn’t really have a film. Later, once sequels started to take off, you pitched a character because a good character could support multiple stories, and now, you pitch a world because a world can support multiple characters and multiple stories across multiple media.’ This focus on world building has a long history in science fiction, where writers such as Cordwainer Smith constructed interconnecting worlds which link together stories scattered across publications. [...]

The concept of world building seems closely linked to the [...] principles of immersion and extractability since they both represent ways for consumers to engage more directly with the worlds represented in the narratives, treating them as real spaces which intersect in some way with our own lived realities. Witness the production of travel posters for fictional locations, for example. Many transmedia extensions can be understood as doing something similar to Baum’s travel lectures as offering us a guided tour of the fictional setting, literally in the case of a real estate site created around Melrose Place, or simply flesh out our understanding of the institutions and practices. (*ibid.*)

Jenkins claims that narratives which focus on ‘world building’ tend to ‘expand’ over different media platforms. In the case of filmic narratives, such as movies

¹⁹¹ Mahne explains her own approach to transmedia storytelling as follows: “Der transmediale Erzählungsansatz dieser Untersuchung beruht nicht auf dem medialen Leistungspotential einer einzelnen Erzählgattung. Das Narrative als formales Verstehens- und Kommunikationsprinzip wird im Gegenteil allen medialen Erscheinungsformen übergeordnet. Transmedialität bezeichnet in Anlehnung an Irina O. Rajewsky ‘[m]edienspezifische Phänomene, die in verschiedensten Medien mit dem jeweiligen Medium eigenen Mitteln ausgetragen werden können, ohne daß hierbei die Annahme eines kontaktgebenden Ursprungsmediums wichtig oder möglich ist.’” (*ibid.* 9).

and TV serials,¹⁹² those formats which are able to portray fantastical but believable worlds, for example *The Lord of the Rings* and *Star Trek*, are most likely to trigger such an expansion. However, this expansion is not a monopoly of the respective franchise, but mainly done by ‘fans’ who want to extend their ‘story-world’ experience. This active involvement is described by Jenkins in his seventh principle ‘performance’ (cf. *ibid.*). The shift from authorial control from the producers to its fans is similar to Rafferty’s critique of the DVD format, since it makes the viewer a ‘pseudo-editor’ and endangers the filmmaker’s control over the narrative (cf. 44–49). Contrary to Rafferty though, Jenkins does not devalue viewer participation as a negative development. Quite the opposite, he sees the active involvement of ‘fans’ as a chance for the medium cinema to remain attractive for viewers in our current medial environment (cf. *Convergence Culture* 325).

This may all be true, but for this study the question remains whether those dispersed narratives are able to stage openness in a FN way. An example for this kind of storytelling comes once again from Jenkins by the name of “text poaching” in his 1992 book *Textual Poachers: Television Fans & Participatory Culture*. Jenkins focuses on “media fandom” a “grouping of enthusiasts of film and television” (*ibid.* 1) who take on a popular movies or TV serials and make, for example, their own video clips that show developments of the original text that are unauthorised by the production company itself.¹⁹³ A large amount of such films can be found on the online video portal *Youtube.com*. Especially films or serials which have a large fan base, such as *The Lord of the Rings*, *Star Trek* and *Star Wars*, trigger fan fiction. One of the most popular fan films for example, *The Hunt for Gollum*, went online in 2008 and has had close to one million views. The feature film *The Lord of the Rings: The Fellowship of the Ring* from 2001 does not provide any nodes as such, which would lead to alternative continuations. The film does not feature ‘covert’ nodes either, since ‘covert’ nodes are not flagged out, but they are part of the narrative architecture nonetheless. A hypertext, for example, can feature links that are not highlighted by the use of a different colour, but they can be still ‘clicked’ on. Those covert nodes lead to different continuations that are inscribed *into* the hypertext’s structure. Fans of popular movies, on the other hand, produce alternate story strands without nodal triggers in the narrative architecture of those films. These fan fictions are merely by-products of popular

¹⁹² ‘Seriality’ is also one of Jenkins’ seven principles of transmedia storytelling (cf. *ibid.*).

¹⁹³ This kind of text poaching is relatively new and is not described in Jenkins 1992 book but in his later works on convergence culture. Since this study is mainly focusing on the peculiarities of filmic storytelling, a reference to *Youtube* is used instead of ‘classic’ fanfiction such as written short-stories.

games or films. They are not intended, but the viewers just take on their right to 'poach' the story.

Jenkins points out that this symbiosis of audience and producers has recently been used to pitch movies such as *The Matrix*. To fully understand the plot of the film, it is essential for the fans to participate in online communities. If the viewers want to get a full picture of the fictional world, so they can understand an otherwise incoherent story, they have to access other media platforms to gather pieces of information about this world and then they share those among the fan community (cf. *Convergence Culture* 2–18).

On a more abstract level it is possible to say that transmedia storytelling uses the *story* as the centre of that narrative dispersal. The story world can be expanded by accessing various media platforms that feature additional information or experiences that are somehow connected to the main story.¹⁹⁴ A film like *The Matrix* is just the entry point to a whole world. The DVD *Animatrix*, for example, features short animated movies which give background information about the storyworld. It includes a story about a minor character called 'the Kid'. His backstory is not explained in the feature film itself and the viewer has to step outside the narrative of the main film and search for other sources of information, like the DVD, to fully understand the movie. However, the movie itself gives no indication that there is such a backstory on a different media platform. This leads to, what Jenkins has called 'collective intelligence' (cf. *Convergence Culture* 18) and Mittell 'forensic fandom' (cf. *Strategies of Storytelling on Transmedia Television*), the gathering and processing of information by the fans. The participation in the storyworld comes through 'investigating'. The similarities of movies like *The Matrix* and enigmatic TV series like *LOST*, with regard to the response by their fans, can be witnessed by accessing their 'wiki websites', *Matrix Wiki* and *Lostpedia*,¹⁹⁵ which were collectively created by their fans.

This focus on the storyworld(s), however, implies that the narrative *content* is at the heart of the matter. NAFU, on the other hand, looks at the abstract *structure*

194 This, of course, is in contrast to Mahne's idea of transmedia storytelling (cf. 9), but it is the current practice when it comes to popular movies such as *The Matrix*. A narrative dispersal without a 'medium of origin' (cf. 9) or a 'main story core' is possible but such a rhizomatic distribution of narrative content cannot be found in the realm of television, cinema and TV serials. However, since this volume is dealing with films, other transmedia projects such as complex alternate reality games (short: ARGs) with no connection to film or television are disregarded. ARGs are discussed in volume two of this series by Meifert-Menhard.

195 Mittell examines in one of his essays how the award-winning fan site *Lostpedia* enables fan involvement by using the wiki platform. *Lostpedia* "enables fan engagement, structures participation, and distinguishes between various forms of content, including canon, fanon, and parody" (cf. *Sites of Participation: Wiki Fandom and the Case of Lostpedia*).

of the narrative itself. Therefore it has to be asked whether transmedia projects are actually FNs. Although ‘poached’ texts feature alternative continuations, it does not necessarily imply that the narrative architectures of films like *The Matrix* are FNs. This shall be illustrated on a recent and less complex example which aired on German national television in 2011. The transmedia ‘film’ *Wer rettet Dina Foxx?* is a cross-media project realised by ZDF (German broadcaster). It is a combination of an alternate reality game (short: ARG),¹⁹⁶ a feature film (directed by Max Zeitler) and an online project (produced by Kristian Costa-Zahn and Leif Alexis) (cf. ‘*Wer rettet Dina Foxx?: Internetkrimi*’). The plot develops around the main character, Dina Foxx, who works as a data protection specialist and is the face of the company AVADATA (cf. *ibid.*). Being the face of AVADATA, Dina becomes engulfed in a mystery concerning the illegal practices of the company. When Dina’s boyfriend Vasco finds out that AVADATA gathers and misuses private information instead of protecting private data, he is killed. From then on the plot of the film turns into a thriller. While Dina is trying to find the killer she discovers AVADATA’s involvement in criminal activities.

The television film breaks off at a crucial point in the narrative and it is now up to the viewers to save Dina by playing the ARG. Mittell who works in the field of television studies describes the peculiarities of these online/ real life games as follows:

ARGs are an interesting cult phenomenon taking advantage of the ubiquitous role media play in our daily lives. Typically ARGs are launched subtly with a few well-placed clues (or ‘rabbit holes’), leading players into a trail of websites, phone numbers, newspaper ads, and physical events that posit an alternate immersive reality with embedded mysteries and puzzles. An ARG by its definition must operate in secret, as the goal is to obscure the boundaries between an emerging storyline and real life in a paranoid mist—only after the game’s completion are its ‘puppet masters’ and underlying structure made public. To chart their way through the maze, players typically collaborate in a collective effort to solve puzzles and build a trail, using online forums, listservers, and Wikis to join forces. While some ARGs have emerged as fan-created grassroots efforts, the commercial applications for the form have been as ‘immersive entertainment-based marketing campaigns’ for other products, most notably the film *A.I.* with ‘The Beast’ and the game *Halo2* with ‘I Love Bees’. (*Lost in an Alternate Reality*)

The concept of this game can also be described by Mittell’s term of ‘forensic fandom’ (cf. *Strategies of Storytelling on Transmedia Television*), since the views-

196 An ARG is an “interactive drama played out online and in the real world, that takes place over several weeks, in which hundreds or thousands of players come together online, form collaborative social networks, and work together to solve a mystery or problem that would be absolutely impossible to solve alone.” (Jenkins, *Convergence Culture* 320)

ers are invited to gather information from fourteen different websites such as *freidaten.org* (a website set up by the ZDF for the purpose of this game) and twenty social media profiles¹⁹⁷ to help Dina and to solve the mystery of Vasco’s death. The websites feature clues and puzzles that the viewers have to solve by ‘clicking’ to help Dina. There are fifty-five short videos online with additional information featuring minor characters such as Dina’s best friend, Jason, and there are twenty-five audio pieces to be discovered. Furthermore the viewers are able to access CCTV material, text message protocols and other important documents online. It is impossible by a single person to gather all the information necessary to help Dina. The viewers have to exchange their theories and findings online to win this ARG. The online community therefore created mind-maps, excel charts, blogs, forum and fan websites to cooperatively solve the mystery together.

Once all the riddles are solved the ARG calls for real life interaction. The viewers/players have to look for hidden USB sticks in the real world. These are to be retrieved by ‘geo-cashing’, in which people follow certain coordinates via GPS to hidden objects. The USB sticks are located in major German cities such as Berlin and Frankfurt. The viewers, or players, have to cooperate and share the content of those data carriers to solve the ARG. The data of the different USB sticks can be put together online and the video snippets reveal Vasco’s murder and prove Dina’s innocence. The solution is shown on ZDF television again as a sequel to *Wer rettet Dina Foxx?*, namely *Dina Foxx ist gerettet*. The sequel does not just show the solution to the mystery plot but also documents the online hunt by the viewers/ players. *Dina Foxx* is a transmedia project since the story unfolds over multiple media platforms, “with each medium making distinctive contributions to the understanding of the world” (Jenkins, *Convergence Culture* 334). This medial distribution of the content is inscribed into the construction of the narrative. Many websites that were connected to the feature film went online before the film was shown on ZDF. Some internet users therefore got to know the characters even before the TV premier. In a second step the mystery thriller was shown on national television to an audience that was for the most part unaware of the transmedial nature of the content. When the story breaks off, the viewers are invited to play the ARG on different media platforms. In many ways, a mystery thriller is the ideal genre for the evoking of such participation by the viewers, since detective and mystery plots are always playing a ‘mind-game’ with their audience. The viewers are trying to guess what ‘really happened’ or who the ‘murderer’ is (cf. Panek, “The Poet and the Detective: Defining the Psychological Puzzle Film” 62). Therefore Mittell’s term ‘forensic fandom’ fits perfectly for this ARG. The

¹⁹⁷ The characters have accounts on popular social media websites such as *facebook*, *twitter*, *xing* and *myspace*.

viewer takes on a hybrid role between internet user, ARG player and TV viewer. “The viewer becomes a viewer” (Daly 81). This experience features all of Jenkins’ ‘three key terms’ of transmedia storytelling as described in *Convergence Culture* (cf. 22): collective intelligence / knowledge¹⁹⁸, convergence¹⁹⁹ and participation as “audience engagement” (cf. *Convergence Culture* 313). This participation of the viewer is of a different kind than in the previously discussed genre of ‘reality TV’. The interface of the computer screen makes it possible to virtually interact with the narrative itself. Bode has defined interactivity for NAFU as follows:

The relationship between a user and a medium can be called interactive, if the interface of communication allows series of mutually dependent action-response exchanges. [...] Evidently, the degree of interactivity significantly relies on the nature of the medium. It is non-existent in a book, but patently obvious in a touch screen. (*Future Narratives. Theory, Poetics, and Media-Historical Moment Part 1*)

The shift from old to new media allows for interactivity in a NAFU sense, since the websites of the ARG allow for ‘mutually dependent action-response exchanges’ that are technologically supported by the medium itself, whether this is the user interface of a computer, a smart phone or the touch screen of a tablet computer. However, as already mentioned in part one of this study, interactivity is not a defining property of FNs. The defining moment is the nodal situation. In *Dina Foxx* the sudden interruption of the film marks the original nodal situation of the narrative. It indicates two possible continuations: Dina can be saved or not. Whether *Dina Foxx* has a happy ending is left to the viewer.

However, the outcome is already (pre)scripted. The final resolution to the TV drama, in which the killer of Vasco is revealed, was aired just a few weeks after the feature film was shown. This happy ending would have been televised, whether or not the ARG had been a success. The openness promised by the show’s concept is an illusion of the ARG. In the main storyline of the film, however, there is only one outcome. The ARG simply worked as an extended viewing experience, but it cannot change the course of the plot development. The ‘puppet masters’, who constantly delivered new online material to keep the viewers in the game, were only trying to steer this interaction into the direction of the pre-scripted ending. *Dina Foxx* is a hybrid in its medial nature and narrative architecture. The viewer can merely roam in the world of *Dina Foxx*, but she cannot change it. This example

198 “refers to the ability of virtual communities to leverage the knowledge and expertise of their members through collaboration and deliberation/ the sum of total information held by every individual of a knowledge community” (*Convergence Culture* 321).

199 “describes technological, industrial, cultural, and social changes in the ways media circulates within our culture” (*Convergence Culture* 322).

illustrates that interactivity does not immediately transform a narrative into a FN. There are transmedia experiences such as Abrams' mystery TV series *LOST* which works on a narrative level with the idea of parallel universes²⁰⁰ (cf. Mittell, *Lost in a Great Story*) and on a different media platform with an ARG called "The Lost Experience"²⁰¹ (cf. Mittell, *Lost in Alternate Reality*).²⁰² Just like in *Dina Foxx* "The Lost Experience" does not influence the outcome of the main narrative as shown on television. Transmedia works more as an offer to extend the viewer's narrative experience. With regard to Roland Barthes' concepts of 'kernels' and 'satellites', ARGs are the satellites of the experience:

Narrative events have not only a logic of connection, but a logic of hierarchy. Some are more important than others. In the classical narrative, only major events are part of the chain or armature of contingency. Minor events have a different structure. According to Barthes, each such major event – which I call kernel, translating his *noyau* – is part of the hermeneutic code; it advances the plot by raising and satisfying questions. Kernels are narrative moments that give rise to *cruxes* in the direction taken by events. They are nodes or hinges in the structure, branching points which force a movement into one of two (or more) possible paths. [...] Kernels cannot be deleted without destroying the narrative logic. [...] A minor plot event – a satellite – is not crucial in this sense. It can be deleted without disturbing the logic of the plot, though this omission will, of course, impoverish the narrative aesthetically. Satellites entail no choices, but are solely the workings out of the choices made at the kernels. They necessarily imply the existence of kernels, but not vice versa. Their function is that of filling in, elaborating, completing the kernel; [...] (Chatman 53–54)

200 *LOST* is cleverly structured. The first season featured the well-known narrative technique of flashbacks. The further the series progressed the more elaborated the 'flashes' became. In season three the viewers were faced with flashforwards into the future of the characters and in season six an alternate development of the storyline was shown, or 'flashsideways'. The mystery of *LOST*, however, is eventually resolved similarly to Perlmutter's 'Owl Creek syndrome', which she explains by discussing Lyne's *Jacob's Ladder* (cf. 127–28). *LOST* does not feature different outcomes but an alternate reality, which resembles an Elsaessian 'mind-game'.

201 "The Lost Experience" is an internet based ARG. It covers a five-phase parallel storyline and demands active participation of the audience. The hints, which are hidden in the game, help to understand the mysteries of the island. The worldwide players of the ARG had to cooperate since the hints varied on each continent. Those pieces of information were shared with other players of other continents via internet platforms.

202 "Given *LOST*'s dedicated fan base already congregating on numerous websites, the show's focus on puzzles and mysteries, and its narrative world highlighting paranoia and deception, it would seem like the perfect series to be extended into an ARG – certainly the buzz was strong among both ARG players and *Lost* fans this spring as producers announced the launch of 'The Lost Experience' for May 3rd to run throughout the summer during the hiatus of the television season. Now over a month old, it seems that the game has not lived up to expectations, for reasons attributable to the competing industrial and narrative norms of television and ARGs" (*ibid.*).

Unlike temporal narratives alone, the integration of the transmedial ARG enables the viewer to choose whether she wants to extend her experience. It will impoverish the experience of *LOST* if she does not take part in the “Lost Experience”, but the main, televised narrative itself remains untouched. Barthes’ concept can therefore be implied very well with regard to transmedia since the nodal situations seem somehow unhooked of the narrative body. Like satellites the different media platforms buzz around the TV series but the outcome remains unchanged. Since the characters are performing the nodal situation and not the viewer herself, there is no consequence for the narrative development. It does not matter whether the viewer takes part in the ARG ‘kernel’ or not.

Transmedia storytelling might not apply to FN architectures that have been established in this study so far, but they enable a different kind of architecture that also features nodal situations. The continuations, however, are not set in mutually exclusive story worlds as in *Lola Rennt*, they are bi-directional and lead back to the node itself. Thereby there are always two possible continuations. The viewer can either follow the main story line or continue on a side quest. A similar phenomenon is described by Felicitas Meifert-Menhard with regard to the genre of the ‘multimodal novel’ in *Narrating Futures Vol. 2*.

The multimodal novel, like the aleatoric novel, invites play, but the reader must engage in a very different type of game in this text form than in the literary games presented above. Multimodal texts integrate different semiotic modes, so that text is often accompanied by non-verbal elements such as images, photographs, charts, diagrams, or maps; alternatively, different portions of text may be contrasted with each other on one and the same page by using different typographies. (*ibid.*)

The multimodal novel engages different semiotic modes to enhance the narrative experience. Similarly, transmedia storytelling is also ‘multimodal’ since the narrative experience is also expanded via a dispersal of the narrative content over different media forms. In volume two of this series, Meifert-Menhard discusses Mark Danielewski’s *House of Leaves*,²⁰³ in which the text is arranged in different segments that are not just set apart spatially on the page, but also differ in font type and other visual markings (cf. *ibid.*). These segments show no visible hierarchy and the reader must decide for herself, which narrative strand to follow and in which sequence the different continuations are to be read.

203 For an introduction to Danielewski’s text see Pressman (*ibid.* 107–28). Jessica Pressman argues that *House of Leaves* teaches us new ways of reading by reading ‘around and across a network’ (cf. *ibid.*).

Though there are usually no marked nodes in multimodal narratives (in the sense of 'make a decision here'), and no instructions on how to play, multimodal novels offer the reader nodal situations by presenting different materials which can be encountered and received in different orders. That is, every page on which different semiotic modes interact is an invitation to read the text 'as' a FN, to explore it along different pathways, creating different reading experiences or run-throughs from a fixed architecture. [...] Reading, in multimodal texts, becomes a 'multiliterate act' (*ibid.*); readers must negotiate the different visual modes and cannot evade choosing an individual route through the textual whole, as it is physically impossible to take in all elements at once. The decision mechanism generated by multimodality is thus one of tracking paths through a text which offers a *surplus* of input by integrating multiple modes of meaning into one page. In radical contrast to other printed future narratives, multimodal texts do not function on the principle of visually withholding information until a decision has been made – in Choose-Your-Own-Adventure books, for example, the reader will only encounter the result of her choice *after* she has turned the page – but present all possibilities, all potential consequences at once. A yearning for what is still to come, found in most bifurcating printed and electronic texts within the future narrative genre, is here substituted by the co-presence of possibilities; these possibilities for continuation coexist graphically instead of being spread through the narrative at various points. (*ibid.*)

Although transmedia projects like *Dina Foxx* do not feature a *visual* surplus of input, the viewer is nevertheless confronted with a variety of multiple continuations by being able to engage in the ARG element of the narrative.

Unlike a rhizomatic narrative, however, the ARG element in both *Dina Foxx* and *LOST* always leads back to the main storyline, which is televised. Their narrative architecture resembles thereby an 'axial structure'. In an axial structure, diverging branches are arranged along an axis. This is another form of multilinearity which differs from the arborescent architecture of the formerly discussed case studies such as *Lola Rennt*. Axial structures always allow, even require, the return to the main (plot) strand for the continuation of the narrative. The difference of axial structures in transmedia to axial structures in print media, for example Roubaud's *The Great Fire of London*,²⁰⁴ is the diversification of narrative content on different platforms. There is only one restriction of this concept in the realm of transmedia storytelling. All the websites for *Dina Foxx* and "The Lost Experience" were created by the production company. The content on those web spaces always leads back to the main storyline. Those ARGs enable the viewer to interact with the narrative content to some extent, but she cannot simply add new continuations to the architecture herself. It has to be stressed once again that the edges on axial structures lead back to the axis itself. 'Text poaching', as described

²⁰⁴ Jacques Roubaud's book is one of the case studies in *Future Narratives* Vol. 2 by Meifert-Menhard.

by Jenkins, does thereby not qualify as a means to create FN architectures, since it encourages the opposite movement – an expansion of the storyworld. Those poached paths, however, do not necessarily lead back to the narrative ‘axis’.

The ‘rabbit holes’ of ARGs like *Dina Foxx* enable the viewer to take continuations that lead away from the main storyline. Those continuations, however, are neither crucial for the understanding of the narrative nor can they change the outcome. The bi-directional edges always lead back to the main plot strand, the narrative axis. Although the cross-traversing over different websites is possible in ARGs, due to the structure of the internet,²⁰⁵ the main story path leads to one ending only. The frame narratives of *LOST* and *Dina Foxx* are not per se FNs, but the embedded narrative in form of an ARG is axially structured combining nodes with bi-directional edges. Those embedded ARGs are FNs.

This chapter shows that neither the dispersal of narrative content over different media forms, nor interactivity alone are definite indicators for FNs. Nevertheless, the switch from one-way communication devices, such as cinema, to feedback enabling interfaces, such as computers, facilitates the emergence of different multi-linear architectures. What happens when the ‘viewer’ is becoming the ‘user’ by engaging in narratives that are truly interactive will be shown in the final part of this volume.

3.2 Hybrid FNs Between ‘Running’ and ‘Clicking’

When the first exhibition of motion pictures in the United States took place in 1896,²⁰⁶ it introduced an era which shaped the conventions of film viewing practices that lasted for almost a century. Screenings of films in movie theatres allowed the audience to enjoy high-resolution images, while restricting them to the role of passive viewers.²⁰⁷ The film-makers (and production companies) had absolute control over the movie. When in the 1980s home video recorders (VCRs) gained in popularity, cinema lost its monopoly as being the sole source for watching movies.

The advantages of the individual reception of filmic content has led to the emergence of new media forms that are currently reshaping popular viewing devices such as television. This development was foreshadowed by the appear-

205 This is another form of narrative organization, namely ‘network structures’. This will be discussed in the last part of this study.

206 Cf. Wikipedia, *Movie theatre*.

207 This “complete visual and aural information” which was transported to the viewer via film-reel and projector makes cinema a ‘hot medium’ for McLuhan (cf. McLean 5).

ance of the DVD as currently the most popular carrier technology for filmic content. It is not just the high quality of the resolution in which movies come to our home via DVD that makes this media form so attractive, but the ability of the viewer to shape the content to her own preferences. Whether a scene shall be repeated or additional information about the 'making-of', for example, is required, can be decided by the viewer. With regard to FNs, however, the DVD form does not enable new structures, which could not have been realized in the old medium of cinema.²⁰⁸

Whether a medium switch to television enables the emergence of different FN architectures with filmic content can only be affirmed if that switch is combined with the dispersal of the medial content. Before the digital age it was already possible to distribute narrative content over two different TV channels, for example. As early as 1991 the German broadcasters ARD and ZDF showed the thriller *Mörderische Entscheidung: Umschalten Unerwünscht* on two TV channels. Whether the development of the story was experienced from the point of view of the female or the male main character depended on the viewer's decision. Nevertheless, the TV thriller is not a FN. It was already discussed that watching different editions of the same movie on DVD, such as the three versions of *Blade Runner*, does not transform the movie into a FN. Along the same lines it can be said that although the viewer of *Mörderische Entscheidung* is able to choose between the two points of view, there is only one continuation, which is the main story line. Another example of this episodic style of narration is often aesthetically implemented by the use of split-screens as in, for example Darren Aronofsky's *Requiem for a Dream* (cf. Mondada 67–99). Nevertheless, the split-screen, or the use of two TV channels, is just an aesthetic option instead of showing the episodes in seriality as in, for example, Pete Travis' *Vantage Point*, in which the same event is told from eight different points of view. In reference to NAFU it has to be pointed out that these episodes are not mutually exclusive. They do not logically cancel with each other out, which is the case in FNs. In *Lola Rennt*, for example, only one continuation is logically possible at any one run. Otherwise Lola 1,2 and 3 would exist simultaneously in the same story world. Therefore, FN architectures in TV serials or DVDs are limited to singular episodes and are not structurally different from the case studies discussed in chapter two of this volume.

New forms of FNs can only be experienced when the nodal situation is transferred from the world of the film into the world of new media – from 'running' to 'clicking'. Hybrid forms are discussed in the precluding chapter including projects

208 This is solely referring to DVDs which contain 'conventional' movies or films, which could just as well be projected on a cinema screen. DVD games such as CYOAs enable, of course, complex FN architectures.

that make use of old media, such as television, and new media, such as the internet, by combining TV material with ARGs. This enables new strategies for storytelling such as axial FN architectures. The core of these transmedia narratives is still the main storyline as shown on TV, but the switch to a narrative chunk that is located on a website, for example, enables this axial design. The nodal situation, or a 'rabbit hole', that is integrated into the narrative design of the TV film or series enables the moving away from the main story path. However, the return to the main story is always already inscribed into the diverging continuations, since they are bi-directional edges. It is the realm of digital media with interfaces that allow for interactivity, which makes axial FN architectures possible. This mix of old and new media also reflects the hybridity of the new role of the recipient. The audience of transmedia projects, such as *Dina Foxx*, is partly viewer (with regard to the feature film), partly player (with regard to the ARG) and partly user (with regard to sharing the gained knowledge online), depending on which media platform is accessed. Daly's concept of the 'viewer' seems to be an appropriate name for this phenomenon (cf. 81). However, Daly herself connects this concept strictly to 'database narratives' (cf. 81–98). Although she gives these kinds of filmic narratives the promising name 'cinema 3.0', I argue that true database narratives can only be realized in a strictly computer-mediated environment, since (electronic) databases can only be realized by logarithmic operating devices. Nonetheless, Daly's 'viewer' is a useful concept to describe the hybrid role of the recipient in those FNs that are located on different medial platforms. The recipient can switch from passive viewer to active user without any difficulties. She is therefore oscillating between 'running', watching the protagonist in the story world, and 'clicking', actively participating. In the examples described so far this switch is only possible by switching the medial platform. Jenkins looked into the future of transmedia storytelling and termed it the 'blackbox fallacy' (cf. *Convergence Culture* 325).

The attempt to reduce convergence to a purely technological model for identifying which black box will be the nexus through which all future media content will flow. (325)

In *Convergence Culture* Jenkins refuted the idea of a black box and claimed that media convergence will always take place on different platforms, since no single medium is able to convey all the qualities that can be performed by specialized media. However, since the year 2006 a lot has happened in the development of communication technologies and with the inventions of the smart phone and the tablet PC, Jenkins' 'black box' is no longer a fallacy, but has become a reality. The transfer of narratives with possible entry and exit points into the realm of the digital finally enables a switch from user to viewer that is no longer dependent on

the carrier medium itself. Axial and arborescent structures can therefore be realized in the same carrier medium. This enables a higher degree of complexity with regard to FN structures. Those new architectures with regard to filmic storytelling will be discussed in the following chapters.

Welcome to the future of Narrating Futures!

4 ‘Clicking’ – FNs in New Media

4.1 ‘Movie Game’ vs ‘Interactive Film’

What is new media? ... The translation of all existing media into numerical data accessible through computers. (Manovich 19–20)

The future will always trump prediction, whenever prediction involves complex phenomena like narrative. (Abbott, “The Future of All Narrative Futures” 529)

It is a small leap from television to computers. Digital television, also known as ‘i-TV’, ‘TV-on-demand’ or ‘semantic TV’,²⁰⁹ enables the viewer to access, for example, social websites while watching a show. The viewer is able to express her opinion via *twitter*, for example, which is directly feeded back into the TV show itself. This development can be witnessed when watching casting shows such as *The X-Factor*, in which the *twitter* messages are shown on the TV screen during the show (cf. Russo).²¹⁰ Furthermore, additional information about the content which is broadcast can be directly accessed and shared online. The participatory culture of the web is transferred to our living room by the TV set. In other words, televised content is becoming accessible and usable by the viewer.

This affinity for interactive engagement of the TV audience developed as early as 1979–80 when the toy company *Mattel* advertised a home video game system, *Intellivision*, with the slogan: ‘This is Intelligent Television’ (cf. Murphy 197). Sheila Murphy notes that this slogan “encapsulates the bad object status of television and promotes the game system as an engaging and cultured alternative to watching reruns” (*ibid.*). The suggested close relationship between both media forms is also indicated when we acknowledge that transmedia pioneers such as Jenkins and Mittell stem from the academic field of television studies (*ibid.* 199–200).

Furthermore, there is a technological kinship between both media forms. The first ever video games of the arcade mode, which could be played at home such as Atari’s *PONG*, were accessible by connecting the television to the game console. “This shift towards seeing the television as a playable consumer device

209 There are many different names for this kind of enhanced television. The term used depends mainly on the various producers, television developers or production companies and the software they are using. Hari Om Srivastava gives an overview of the different names from ‘enhanced television’ to ‘extended media’ to ‘open TV’ (cf. *ibid.* 227–32). The most frequently used term is ‘interactive TV’, which is mainly referring to the possibilities of digital television devices that enable internet access.

210 Julie Russo calls this “affirmative fandom” (cf. *ibid.*).

is crucial” to understand today’s popularity of video game consoles (cf. Murphy 202). Television and video games are historically connected because they rely on the same technology, the TV set, to transport the content to the viewer or player. The divergence of both media into separate forms is counterplotted by the current tendency of the entertainment industry to use different platforms for the distribution of narrative content as described by Jenkins in *Convergence Culture*. Additionally, it is not just the TV technology²¹¹ that binds both media forms together but their *visual* way of ‘storytelling’.²¹² Coates claims a medial kinship between films and games, since both are spatio-temporal media.

Debates on the interrelationship of art and games sometimes pose the question of the degree of possible homology and conflict between those two time-based and visually oriented forms, the film and the video game. (Coates 113)

The switch from the one-way communication channel of television and film to computer-mediated games foregrounds the biggest differences between the two media: interactivity.

Interactivity and narrative seem to be incompatible with each other. At least, this is repeatedly proclaimed by most academics in the field of game studies that are sometimes referred to as ‘ludologists’²¹³ (cf. Frasca 222). Bernard Perron, for example, points this out in his essay on ‘interactive film’.

Like the interactive narrative in general, the interactive movie is seen as an oxymoron. It is not possible to tell a story by putting the storytelling in the hands of the spectator. And the linearity of a story is going against the nonlinear nature of game. (Perron 239)

This opinion is expressed in most works on storytelling in video games and is not limited to publications in the English language, either. In one of the first German

211 “From a strictly technological standpoint, television is closer to the computerized components of digital media culture than cinema. Television receiver screen size and orientation and computer monitor size and orientation are similar to one another, largely because they rely upon similar technologies – first the cathode ray tube and later the liquid crystal display” (Murphy 208).

212 Of course, there is a long debate on whether video or computer games are able to tell stories. The ludologist position claims that this is not possible. This is explained in the course of this chapter and in further detail by Sebastian Domsch in volume four of this series.

213 “Ludology can be defined as a discipline that studies games in general, and video games in particular. [...] Since then the term ‘ludologist’ grew in popularity among the game academic community to describe someone who is against the common assumption that video games should be viewed as extensions of narrative” (*ibid.*).

compilations which focuses on interactive storytelling, edited by Britta Neitzel and released in 2010, Richard Wages voices the same opinion as Perron.

Die Abgabe direkten Einflusses an einen Spieler bedeutet das Verlassen des sicheren Pfades der Linearität und führt zu dem bereits erwähnten Problem der schwindenden Kontrolle des Autors über den Plot. Bei dem Versuch, klassische Narrationsmethoden einfach auf digitale Spiele zu übertragen, müssen die beiden Begriffe Interaktivität und Plot wohl als Antagonisten betrachtet werden. (Wages 42–43)

This argument opened a divide between 'ludologists' and 'narratologists', both claiming that their path was the right one. As Aarseth points out, the main problem between the two extremes is that ludologists do not have a background in narratology and vice versa. Aarseth, coming from the field of narratology himself, introduced a new approach to the debate by working with the terms *scriptons*, *textons* and the transversal function:²¹⁴

It is useful to distinguish between strings as they appear to readers and strings as they exist in the text, since these may not always be the same. For want of better terms, I call the former *scriptons* and the latter *textons*. Their names are not important but the difference between them is. In a book such as Raymond Queneau's sonnet machine *Cent mille milliards de poemes* (Queneau 1961), where the user folds the lines in the book to 'compose' sonnets, there are only 140 *textons* but these combine into 100,000,000,000,000 possible *scriptons*. (Aarseth, *Cybertext* 62)

What the user sees on the screen in hypertext narratives, for example, is not the source code or editor files of the program but chunks of text: *scriptons*. *Textons*, on the other hand, are the raw material. In the case of Queneau's combinatorial literature the strip of paper on which the sonnet lines are written on is a *texton*. A *texton* does not have any rules implied whatsoever. It is mere material. The third operating principle, the transversal function, is a set of rules that can be applied to the *textons*. It works like a grammar that takes the materiality of the *textons* as elements.²¹⁵ Those operating principles can be found in all 'interactive' texts and must be identified as such.²¹⁶

214 Principally, Aarseth "revolutionized electronic text studies with the following observation: electronic texts can be better understood if they are analyzed as cybernetic systems. He created a typology of texts and showed that hypertext is just one possible dimension of these systemic texts, which he called 'cybertexts'" (Frasca 223).

215 This refers back to a conversation with Aarseth at the LMU on the 28 Nov 2011.

216 Meifert-Menhard also uses Aarseth's terminology when she discusses hypertext fiction in volume two of this series.

For NAFU his concept is helpful in so far as a FN is also analyzed with regard to its elementary units of nodes and edges, with regard to the overall composition of these elements into a narrative architecture and the 'narrative rules' that are inscribed into that architecture. In other words Aarseth's three elements are similar to the compositional units of a FN. It is possible to distinguish between the overall nodal architecture of a FN, the individual performance of a continuation from a specific nodal situation (a run)²¹⁷ and a set of rules that are given so the FN can actually be performed or 'played' as such.

Non-interactive filmic narratives can therefore only stage individual runs by the protagonists. However, by watching all three runs of *Lola* and the introductory prologue, it is possible to deduce the set of rules that underlie the narrative. In a pseudo-algorithm it is possible to trace the nodal architecture of the entire narrative by focusing on the potentiality of the nodal situation and by analyzing the temporality of the medium itself on a different layer. Therefore, and by definition, FNs do *not* have to be interactive to qualify as FNs.

In a similar manner Aarseth²¹⁸ states that a game has to be analysed with regard to its three components: the aesthetic *design*, the system or underlying *game mechanics* and the social aspect of the *game situation*. This is similar to Ryan's concept of medium that was discussed in chapter 3.1. She also states that the term 'medium' is made up of three constituents: the technology that is used, the channel of communication that transmits the content and the semiotic or cultural sphere of this process.

Media-sensitivity is of heightened importance for NAFU and both Aarseth's and Ryan's tripartite models are helpful to illustrate this. However, both approaches are only applicable to a limited degree, since Ryan and Aarseth have an understanding of the core terms 'interactivity' and 'narrative' which differs from NAFU's definitions of both concepts. For NAFU narrative is solely the linguistic linking of two events (cf. chapter 1 of this study). This has to be pointed out again, since Ryan has a different understanding of the term narrative. For her it is a qualitative concept.

[...] I propose to make a distinction between 'being a narrative' and 'possessing narrativity'. The property of 'being' a narrative can be predicated on any semiotic object produced with the intent of evoking a narrative script in the mind of the audience. 'Having narrativity', on the other hand, means being able to evoke such a script. On addition to life itself, pictures, music, or dance can have narrativity without being narratives in a literal sense. (*Narrative Across Media* 9)

217 Note that a run itself is always uni-linear, but the architecture of the FN is multi-linear.

218 This also refers to the conversation with Aarseth on 28 Nov 2011.

The problem is not so much Ryan's concept of narrative but her qualitative concept of narrativity, which determines whether a specific object can be regarded as evoking a narrative script or not (cf. "Beyond Myth and Metaphor" 582). This scalar aspect of narrative is linked to Ryan's cognitive approach to narratology. Since NAFU is strictly analyzing narrative architectures and their features while distancing itself from cognitive or reader oriented approaches, Ryan's concepts cannot be used.²¹⁹ Along the same lines Ryan has a different understanding of 'interactivity'.

The answer to this question is crucially dependent on what constitutes the most distinctive resource of digital media: namely the ability to respond to changing conditions. When the changes in conditions are determined by the user's input, we call this resource interactivity. For the purpose of my argument I would like to distinguish four strategic forms of interactivity on the basis of two binary pairs: internal/external and exploratory/ontological. These two pairs are adapted from Espen Aarseth's typology of user functions and perspectives in cybertexts (*Cybertext*, 62–65), which is itself part of a broader cybertext typology. But I use different labels that shift the emphasis toward the user's relation to the virtual world. The point of my discussion of these categories is not however to revise Aarseth's typology, but to show how different types of interactivity open different possibilities on the level of narrative themes and plot configuration. ("Beyond Myth and Metaphor" 586)

Ryan elaborates, similar to her concept of narrativity, a differentiation of interactivity into subclasses (cf. *ibid*; cf. *Narrative as Virtual Reality* 210–21). Especially the subcategories of "ontological interactivity" and "external ontological interactivity" (cf. "Beyond Myth and Metaphor" 588–90) are problematic. The term 'ontological' or 'ontology' is firmly rooted in philosophical studies with a different frame of reference. Therefore her subcategories are misleading and have to be neglected for NAFU (for further reading on this cf. Bode, *Future Narratives. Theory, Poetics, and Media-Historical Moment* and cf. Domsch, *Narrating Futures Vol. 4*).

Apart from her taxonomy, Ryan has also a different understanding of 'interactivity' in general. For her it is the technologically supported ability of a medium to respond to changing conditions (see quote above). For NAFU the "relationship between a user and a medium can be called interactive, if the interface of communication allows series of mutually dependent action-response exchanges" (Bode, *Future Narratives. Theory, Poetics, and Media-Historical Moment* Part 1). NAFU also has a technologically supported definition of the term 'interactivity',

²¹⁹ Bode rejects Ryan's parameters that define the degree of narrativity in a text. It would defy the purpose of this study to elaborate this debate. However, the point is that Ryan's narratological approach is built around her idea of 'narrativity'. Therefore it cannot be used for NAFU.

but it is not just the medium’s ability to respond to changing conditions, rather it is a quality of the *relationship* between user and medium, which depends on *mutual* exchanges of actions or responses. Unlike NAFU’s definition of the term ‘narrative’, ‘interactivity’ discusses the relationship between medium and (ideal) *user*. This is also reflected in the ongoing focus on media-sensitivity with regard to the analyzed case studies.

However, Ryan and Aarseth are still of importance for this study, since both point out that (dynamic) texts and media forms must always be analyzed with regard to their distinctive components. For NAFU this means that a FN has to be analyzed with regard to its narrative architecture, the medial form, which is used as a carrier for the narrative content, and with regard to the communication between the medium and the viewer. It has to be asked whether a medium allows for mutually dependent action-response exchanges.

Therefore this last chapter focuses on the shift from ‘viewer’ to ‘user’²²⁰ (or ‘player’)²²¹ by analyzing spatio-temporal narratives that allow for interactivity in a FN sense. In a first step a distinction between two media types shall be made, which share the same modality of spatio-temporal storytelling: movies and games. Perron introduces the classification of games by Callois and Huizinga to distinguish between interactive *movies* and movie *games* (cf. Perron 237–49).

It is clear that interactive movies, as opposed to movie games, lean toward the *paidia* pole. This pole is more playful activity develops itself freely. To Return to Callois’ definition, an undivisible principle, common to diversion, turbulence, free improvisation, and carefree gaiety is dominant. *Paidia* manifests a kind of uncontrolled fantasy. (Perron 247)

In other words interactive movies, in contrast to their name, do not foreground the element of interactivity.²²² *Interactive movies* are not so much games of the *agôn* type, but they tend more towards the playfulness as described by *paidia* (cf. 247). Perron gives a typical example, which was already discussed in chapter 1.2. of this study, Wheeler’s *Tender Loving Care* (short: *TLC*) (cf. Perron 247–51). This interactive movie uses DVD technology. The viewer or player is able to manoeuvre herself through the world of *TLC* by using the remote control of the DVD player. *TLC* cannot be won or lost. The appeal of this game is the mysterious atmosphere of the movie. The viewer or player can immerse in the storyworld, similar to the

²²⁰ Referring to the user’s engagement with online material.

²²¹ Referring to the player’s engagement in video games. Games are meant to be played, whereas websites, such as social network sites, are used for a specific purpose of the individual user.

²²² At least they are not games in an *agôn* sense. A movie game of this character would set as an objective for the player to get to the end of the narrative, the goal, as fast as possible, for example.

experience of watching a movie, by 'playing on'. This effect on the player is in contrast to what Perron describes as 'movie games'.

Movie games, on the other hand, tend towards the rule-based *ludus* pole of Caillois' taxonomy. In movie games the interactivity is foregrounded in a way that the game mechanics are more interesting than the aesthetics themselves. It is thereby not so much an emotional engagement with the narrative content that is the purpose of these narratives, but the objective is to 'win the game'. Unlike interactive movies, movie games can be lost or won. A typical example, which also employs DVD technology, is the formerly discussed CYOA *The Scourge of Worlds* (cf. chapter 1.1.2.). This movie game has a clear goal, to get to the end of the film by choosing the right continuation from the various decision points, or nodal situations. When the player picks the wrong continuation the characters of the movie game die and a still screen appears with the final words "your path ends here". It is possible to go back to a formerly visited nodal situation and to choose differently. Nonetheless, this 'game over' situation also indicates that movie games are actual games, while interactive movies are essentially filmic experiences.

This distinction makes it possible to structure the following chapter and to relate it to the main focus of this study, films. Movie games and interactive movies are an ideal base to establish FNs in interactive films, but they are not to be understood as exclusive of each other. Just like *Lola Rennt* employed various notions of *ludus* and *paidia*, interactive movies also do not have to limit themselves to one side alone. Movie games and interactive movies are opposites on a scale, but the individual narrative can always be located between the extremes. Narratives that lean towards the *ludus/agôn* pole in terms of interactivity are excellently discussed by Domsch in *Narrating Future Vol. 4*.

4.1.1 *Heavy Rain* as Movie Game

TV and video games are in many ways related to each other. They both depend on the same technology (cf. Murphy 202), they carry or transmit spatio-temporal content (cf. Coates 113) and they also share a medial kinship. For McLuhan television is a cool rather than a hot medium because cool media like television "supply less visual or aural information and thus require much greater sensory participation by the user" (Mc Lean 5). McLuhan concludes that this sensory overload dulls our perception (cf. *ibid.* 6), which leads directly to Jenkins' 'television of attractions' (cf. *Convergence Culture* 320). The participatory element in 'interactive' or 'enhanced' TV does not only supply more information for the viewer but also offers a surplus of sensory and cognitive information. On the other hand,

“television is becoming more and more like movies,²²³ fulfilling another McLuhan aphorism that all media tend to heat up over time. But this is because television, McLuhan would undoubtedly point out, has been surpassed by a new ‘environmental’ medium – the computer-linked Internet [sic!]” (McLean 6).

In the same vein, video-games offer a surplus of sensory information while they also ‘heated up’ over the past years. Consoles like Sony’s *Playstation 3* enable the viewing of DVDs, BluRays, internet access and playing video games. The fact that this console is able to produce a high-quality resolution that is even able to transport 3D and BluRay images is reflected in the types of video games that are released for this console. Unlike online games of the MMORPG type, ‘console video games’ resemble more and more cinematic narratives that allow for interactive involvement in the story. One of *Playstation 3*’s bestselling video game series is Naughty Dog’s *Uncharted* 1–3. The adventure game series resembles in plot and character conception Spielberg’s *Indiana Jones* series. Unlike earlier video games of the arcade mode such as *Space Invaders* or platform games such as Nintendo’s *Super Mario* series, current adventure games come with a well thought out plot, which could easily be made into a movie. *The Uncharted* games feature without a doubt a narrative structure. This is not questioned by ludologists, but as Frasca pointed out, it is questionable whether the game mechanics “should be viewed as extensions of narrative” (ibid. 222) or whether they have to be analyzed separately from the narrative design of those games. This question cannot be answered easily and is discussed in broad detail by Domsch in the fourth volume of this series.

Since this study is focusing on films, I would like to let this discussion fade into the background of this chapter by foregrounding the similarities of films and video games. *Uncharted* is not just similar to Hollywood movies in terms of its story but also with regard to the technology used. The production company Naughty Dog advertised the third part of this series as being created like a Hollywood movie (cf. Robinson). With motion capture technology and voice acting procedure they produced “gameplay and cinematics” at the same time in the studio (cf. *ibid.*). Motion capture has recently been used for Disney’s movie *Tron: Legacy* from 2010 to create a younger double as the antagonist of one of the main characters, Kevin Flynn. Both characters are played by Jeff Bridges. This aesthetic blur of the boundaries between cinema and video games was already discussed in chapter 2.3.6.

In the case of *Uncharted* it is not just the image and audio quality but also the gameplay mechanics that enhance the illusion of this game being an interactive

²²³ This is mainly referring to the ability of TV technology to produce high resolution images and to the quality of TV films and series such as *Misfits*.

film. Unlike MMORPGs or other games that foreground their gameplay elements, they almost disappear in *Uncharted*. While playing the game myself, I was often in doubt whether I was watching a cut-scene, in which the interactive elements are disabled and the cinematics are foregrounded, or whether I was actually playing the game. Most games feature only one 'camera angle' during the game. Depending on the genre the game is usually perceived from either a first-person perspective, as in *Bioshock*,²²⁴ in which the player cannot see the character or avatar but takes on a subjective point of view, 'through the eyes of the avatar' so to speak, or the a third-person perspective, in which the avatar is visible and the camera-angle is set to give high-angle shots, a 'bird's eye perspective'. In *Uncharted* the third-person perspective is employed throughout but the camera-angles rapidly change, not just during the cut-scenes but throughout the whole game. The shift of perspectives from far distance shots to close ups is very close to the aesthetic style of Hollywood films, such as *The Lord of the Rings*. Nevertheless, the question is if these kinds of video games are 'interactive films' and therefore qualify as corpus material for this study.²²⁵

This volume primarily focuses on interactive movies, or filmic games, that are playful but not necessarily 'goal-oriented', since this willing immersion into the storyworld by the player is similar to the experience of watching a conventional film. Therefore another game will be analyzed for this study, which has set new standards for the merging of cinematics and gameplay. *Heavy Rain* is one of the most ambitious projects in game design since it tried to break with game conventions by applying cinematic aesthetics (such as shifting camera angles) and an emotionally gripping story of a father who is trying to stop a serial killer. It is an "interactive drama psychological thriller video game" (cf. *Wikipedia*, *Heavy Rain*) published in 2010 and stands out because of its unique combination of elements from films and video games. It has also often been described as an 'interactive movie' in various reviews (cf. *ibid*). The combination of cinematic aesthetics and focus on story and character development made Quantic Dream advertise *Heavy Rain* as an interactive drama:

Heavy Rain is an interactive drama video game developed by Quantic Dream exclusively for the PlayStation 3. The game is directed by Quantic Dream's founder and CEO David Cage, who also wrote and directed the studio's two previous games, Omikron: The Nomad Soul and Fahrenheit.

²²⁴ This popular game genre is referred to as 'first-person-shooters' (cf. L. Davis).

²²⁵ Whether *Uncharted* qualifies as a FN or not shall not be discussed here, but it is highly questionable because it follows a uni-linear plot development. Furthermore, video games, their mechanics and the role of agency is discussed by Domsch in the fourth part of this series. He also discusses whether these 'linear' games qualify as FNs.

Heavy Rain's story is a dramatic thriller, centred around four protagonists involved with the mystery of the Origami Killer, a serial killer who uses extended periods of rainfall to drown his victims. Ethan Mars is a father who is trying to save his son from being the next victim, while investigative journalist Madison Paige, FBI profiler Norman Jayden, and private detective Scott Shelby are each trying to track down clues to the Origami Killer's identity. The player interacts with the game by performing actions highlighted on screen related to motions on the controller, and in some cases, performing a series of quick time events during fast-paced action sequences. The player's decisions and actions during the game will affect the narrative; the main characters can be killed, and certain actions may lead to different scenes and endings. (*Wikipedia, Heavy Rain*)

M. Davis, the author of several crime novels, also praised the cinematic qualities of this game: "At this point, I am little surprised by the increasing quality of graphics in computer games, but the quality of what can only be called cinematography in it is breathtaking. [...] The noir setting is more than just decorative in this game; the disturbing quality is almost unbearable" (*ibid.* 11). In his essay he goes on to elaborate on the subtle game play elements. Instead of a high "demand of physical skill" *Heavy Rain* integrates the mechanics even tighter into the cinematics, so the player is truly able to immerse in a "story which is rich, and the characterizations are complex. Despite the fact that it is obvious that you are looking at animation, you are drawn into the identity of the characters and their inner struggles" (*ibid.* 11)

It is not just the different camera angles that make this game a cinematic experience, but also the fact that other game elements, which usually are part of the screen in any video game such as a 'high score display' or a 'health bar', are omitted to create a true filmic feel. However, exactly those subtle game mechanics are the reason why *Heavy Rain* is so interesting. Quite contrarily to the intentional omission of status elements on the game screen, *Heavy Rain* foregrounds the game mechanics when they are required. In fight scenes, for example, the player is required to press a sequence of buttons on the controller as they are flashing on the screen. This element of physical involvement or play is even enhanced when *Heavy Rain* is played on the *Playstation Move*. The player has to exercise certain punches, swings and other physical exercises, which clearly foreground the *game* character of *Heavy Rain*.

With regard to its genre, *Heavy Rain* is cleverly chosen since detective plots are always already a game with the audience. As already discussed in chapter 3.1.2.3. mystery or detective stories play a game on two levels, on the level of the story world and by being a 'mind-game' for the audience who are trying to solve the mystery or murder before it is revealed in the course of the story (cf. Panek, "The Poet and the Detective: Defining the Psychological Puzzle Film" 62). *Heavy Rain* is not just a 'mind-game' but it is actually a game and the goal is clear, save the

boy and try to save all other characters by reacting quickly and solving the puzzles in due time. In contrast to what Perron has described as an 'interactive movie' (cf. *ibid.* 239–47), *Heavy Rain* has a clear objective. It is leaning more towards the *agôn* side of games and although there is no real 'game over' situation²²⁶, the player does experience a sense of 'losing the game' when she is unable to save all the main characters. In interactive movies the immersion into the game world is foregrounded. In *Heavy Rain* the plot is quickly driven forward and the player has to react quickly, as well. The moments of free play or *paidia* are rare. The player is invited to play with the son of Ethan Mars, for example, but these lesser goal oriented moments are rare. It is also possible to simply skip those elements to get to one of the eighteen alternate endings. Therefore, although *Heavy Rain* is clearly a more cinematic game than most video games, it is still a *movie game* and not an interactive film. The game mechanics are just as interesting as the actual narrative architecture. These kinds of games are discussed by Domsch in volume four of this series.

Nevertheless, a few concluding words are to be said about this game since it is an interesting case of a FN. The player is unaware whilst playing the game, which decisions or actions have an actual impact on the plot development. The promise of the game that every action has unpredictable consequences makes this game so appealing. Although the plot moves on in uni-linear temporality, the nodal situations are experienced as such. When the player is asked to involve actively in the action of the game, it is clear that his behaviour has consequences. In one scene, for example, Ethan is asked to chop off one of his fingers to save his son. He is only given a limited time frame to act and the player has to decide whether Ethan should do this or not. The continuations from these nodal situations lead to eighteen alternate endings in which either all or just some of the characters are alive. It is not possible to return to a former situation. The edges are uni-directional and although the nodal situations are experienced as such, they are not as clearly flagged out as in other video games. The inscribed temporality into the plot development and the uni-directionality of the edges makes the FN architecture of *Heavy Rain* an arborescent one with eighteen endings.

However, it does not just resemble the transmedia project *Dina Foxx* in its genre, but *Heavy Rain* also features subordinated axial structures. These embedded elements come into play, for example, when one of the characters is 'thinking'. The 'thoughts' circle around the head of the character and the player is invited to press the respective button to hear the character's thought. This narrative extension basically works like a footnote in a book. The player can choose to

²²⁶ Even when all the characters die the game still goes on. In the end Scott Shelby is always the killer.

hear the thoughts or not. In any case, the return to the main storyline is essential. Other similar cases are the moments when FBI agent Norman Jaden is 'playing' virtual games, for example. These moments resemble more *paidia* than *agôn* but they are not essential for the game, whereas action and puzzle elements are.

However, movie games that foreground the game mechanics with regard to a ludic experience are discussed in *Narrating Futures Vol. 4*. Domsch is also shedding a light on the debate between ludologist and narratologists with reference to FNs. He analyzes 'storyplaying', claiming that the players, or 'active agents', are influencing the narratives with their choices (cf. *ibid.*). Domsch's book gives insights on related topics that cannot be discussed here.

4.1.2 FNs and the Database: *Korsakow* Films and 'Hypernarrative Interactive Cinema'

And the database? No longer hierarchical, its order becomes that of a comprehensive but incomprehensible labyrinth: a vast and boundless maze of images and sounds, dreams, and visions in which one follows, backtracks, veers off, loses oneself in multiple trajectories, all the time weaving tenuous threads of association in the logically endless teleology and texture of desire. Here, the materials of the world are never fixed data or information merely requiring re-collection; here, from the first, they are unstable bits of experience and can only be re-membered. (Sobchack 311)

Cameron, Kinder and others have already tried to employ Manovich's concept of 'database narratives' to conventional motion pictures. In chapter 2.2. it was already explained why their concept is inadequate for cinematic narratives like *Lola Rennt*. However, the switch from film reel to digital data, or the transferral of images into binary digits, makes the concept of database applicable. The possibility to transfer filmic content into a database engine makes it possible to implement highly complex FN architectures. What is meant by 'database narratives' and how they are 'used' is explained by Manovich as follows:

This [...] places the opposition between database and narrative in a new light, thus redefining our concept of narrative. The 'user' of narrative is traversing a database, following links between its records as established by the database's creator. An interactive narrative (which can also be called a *hypernarrative* in an analogy with hypertext) can then be understood as the sum of multiple trajectories through a database. A traditional linear narrative is one among many other possible trajectories, that is, a particular choice made within a hypernarrative. Just as a traditional cultural object can now be seen as a particular case of a new media object (i.e., a new media object that has only one interface), traditional linear narrative can be seen as a particular case of hypernarrative. (Manovich 227)

Manovich's argument that a "traditional linear narrative can be seen as a particular case of hypertext" is questionable. His idea to equate new and old media, here traditional narrative and hypertext, is too simplified and as it was frequently stressed throughout this volume, narratives, whether FNs or PNs, always have to be analyzed with respect to the peculiarities of their medial form. This medium sensitivity is crucial, since it does not just explain NAFU's definition of 'interactivity', but also because the temptation is otherwise given to succumb to what Ryan has termed 'media blindness' and 'radical relativism' (cf. *Narrative Across Media*, 33–34).

With regard to FN films, Manovich's concept is useful nonetheless, since it illustrates the difference between 'using' a database and 'watching' a movie (which comes closest to his understanding of "traditional linear narrative"). Computerized environments allow for interactivity because their interfaces allow for mutually dependent action-response exchanges between the medium and the user. With regard to Manovich's database narratives, the user is able to traverse the narrative by (inter-)actively choosing a possible trajectory. In other words, the nodal situations in the FN architecture become 'usable' because an actual choice by the user is possible. This form of agency enables FN structures, which are truly complex and multi-linear. Before special cases of interactive films are to be analyzed, it has to be clarified what is to be understood as such 'database films'. Daly, who constructed her viewer from Manovich's idea, claims that cinema is able to stage such 'database films':

According to Manovich, instead of beginning with a script and then finding the elements to fulfill it, the database cinema starts with a database of elements and then generates narrative from the database. The database, though, is not a random collection, but a collection organized by a particular model. (171–72)

Daly uses this concept to illustrate a "cinema 3.0" (*ibid.*). Manovich and Daly argue that movies are databases because the shots and scenes are not filmed in sequentiality but in separate entities. Similar to Aarseth's idea of 'textons' and 'scriptons' (cf. *Cybertext* 62), a movie is therefore made from a database of shots and scenes. The final feature film is just one possibility which was realized from that database.

Progressive filmmakers are assembling cinematic events in new and expanded ways fundamentally different from classic conceptions of narrative: rearranging pieces in achronological order, utilizing repetition, and designing non-traditional structures of causation. Theorist Allan Cameron refers to this as 'modular narrative.' Database and modular narrative encourage games and pattern recognition. (Daly 171)

Daly refers to Cameron who analyzes Noé's *Irréversible* and Iñárritu's *21 Grams* as such 'modular narratives' (cf. Cameron 65–71). Manovich's and Daly's concepts have considerable flaws by claiming that those cinematic narratives are databases. The idea that a movie is made from a database of movie elements is convincing enough. Nevertheless, the movie or feature film which is later on screen in the cinema or released on DVD does not feature such a database. With regard to narratology it has to be said that the focus on the production side of such narratives is superfluous. In the special case of NAFU it has to be pointed out again that this study is focusing on abstract narrative architectures and not on the concrete production of narratives.

Daly uses Manovich's concept in a different way claiming that modern filmmakers produce narratives that do not follow a linear plot development due to the altered viewing habits of the digital generation. This was also described by Jenkins as indices of media convergence when 'older' media try to imitate 'newer' media (cf. *Convergence Culture* 221). However, they are, as Jenkins has rightfully argued, *imitations* of databases. They are not actual databases. As long as a film is carried by a media form that does not allow for interactivity, because it is not a computerized environment, it cannot be a database. *Irréversible*, like *Memento*, may follow an unconventional (because a-chronological or reverse chronological) way of narrating the story, nevertheless, it is still a movie.

This might be easier to understand with respect to FN architectures. A FN by definition has to display at least one nodal situation with more than one continuation. Neither *Irréversible* nor *21 Grams* is a FN because they do not feature such mutually exclusive continuations. Their disrupted display of the filmic content can easily be pieced together into one coherent story line. In the case of Nolan's *Memento* this is even more evident since the DVD version of the film contains an 'easter-egg' among the special features, which enables the viewer to watch the film in chronological order.

Databases, on the other hand, are not coherent story lines. Their structure disables such linearity because there are always other choices that are also possible. To explain this with Manovich's own example, if movies were true databases and a DVD would come with all the Aarsethian scriptons and textons that the user could arrange into many different narratives, the continuations would be mutually exclusive. To give an example, some DVDs come with alternate endings such as Boyle's *Sunshine*. This alternate ending was filmed but not used for the feature film itself. In a database the user could choose whether to arrange the narrative from the penultimate scene into narrative with a happy or a sad ending. Both endings, however, are mutually exclusive of each other.

Therefore this final chapter will focus on real database narratives. They are 'real' (or virtually real, to be precise) because their medial form allows the user

to follow different narrative trajectories. I would like to discuss the consequences of these database narratives for interactive motion pictures. With reference to Aarseth, database cinema enables the textons of the narrative to be arranged differently following the rules inscribed in the traversal function of the algorithm of the interactive movie. This is essentially the idea behind one of the most innovative attempts in recent studies on interactive films, namely Ben-Shaul's 'hyper-narrative-interactive cinema'. Ben-Shaul was clearly inspired by Manovich's concept of a hypertext in the form of a database. Ben-Shaul states that both, DVD and internet, promote an active participation by the user, because she is able to engage with the text in many ways. She can thereby construct a unique text in the process of this experience (cf. Ben-Shaul 32). Interactivity is supposed to empower the spectator, allowing them to take control over the narrative, change events, influence character psychology and decision-making (cf. *ibid.*). 'Much of the cinema's power over us is our lack of power over it.' (cf. Perlmutter 129).

By shifting the choice in a nodal situation from the protagonist to the viewer the promise made in *Lola Rennt*, that it is possible to change the future by opting for a different continuation, has become actuality in hyper-narrative cinema. Ben-Shaul calls those situations, in which the viewer is able to change the course of the narrative development, "crucial transitional points".

The best crucial points are those that are construed in such manner that they clearly evoke in the viewer his/her what if she did that or if only had he done that hypothetical conjectures. These are decision points ripe with moral, survival or emotional consequences (e.g. to shoot or not a threatening punk, to betray or not a loving husband, etc.). [...] Crucial points can be arrived at in the dramatic succession of events (evoking 'what if' conjectures) or returned to after having made the viewer retrospectively understand that in such points a decision inadvertently made was detrimental, or that a past event could have turned out differently (evoking 'if only' conjectures). [...] Likewise, a viewer may be engaged and led to actively search in retrospect for crucial changing points if he/she is made to understand that a hypothesis he/she raised concerning a favored narrative outcome turned out to be detrimental, thus raising in him/her an 'if only had she done that' derived hope or curiosity conjecture towards the past. (*ibid.* 32)

They are essentially nodal situations and it becomes possible for the viewer to 'play' the narrative again, but to choose a different continuation. The recipient becomes an interactor. The medium film that has been confined to the uni-linearity of its technology is freed from its medial chains. Thereby complex, (or hyper-) FN architectures can be realized without neglecting the emotional engagement by the viewer, which is one of the core conditions for both, cinema and *paidia* 'games'. Ben-Shaul's cinema offers nodal situations that lay the agency not just in the story world's protagonist ('running') or simply enable an extended experience ('running and clicking'), but the viewer becomes a real user, since her

decision has direct consequences for the mediated narrative ('clicking'). Therefore the 'crucial transitional points' in hyper-narrative cinema are nodal situation in which the degree of consequence is not just dependent on the behaviour of the protagonist, but on the agency of the user. Unfortunately Ben-Shaul's own filmic experiment of this kind, *Turbulence*, is not yet available on the market. It is thereby hard to judge how his concept will play out in a concrete example. However, his description of an engaging story line that includes the possibility to cross-traverse the narrative via different trajectories, which are bi-directional and the viewer or user can always return to a former nodal situation, seem to be closer to Perron's idea of interactive cinema than Wheeler's *TLC*. It is not possible to describe the narrative architecture of hyper-narrative cinema without being able to analyze a concrete example, nevertheless, the cross-traversing with possible points of return is unlike the previously described arborescent and axial structures. It is neither axial, because a return to the main plot line is not always necessary, not strictly arborescent, since the cross-traversing is not hierarchical, but it is a (moderate) network structure. Hyper-narrative interactive cinema refers to the possibility for users "to shift at different points in an evolving film narrative to other film narrative trajectories" (Ben-Shaul 1) The continuations are mutually exclusive of each other because the viewer has to return to a former visited nodal situation or crucial transitional point if she wants the story to continue differently. However, the possibility to experience these different continuations and to thereby shift through the narrative itself is a network.

[...] a network is a set of interconnected nodes [...]. That is why networks may be regarded as topological configurations, which are well suited for explaining the increasing complexity of interactions and the emergence of non-predictable developmental patterns as a result of generic 'creative' processes. (Schäfer and Gendolla 89)

This structure allows for movement within the narrative architecture that is not guided by a reigning principle. Otherwise impossible movements such as cyclical traversing are possible within these networks. The user can move in all directions. However, it has to be questioned whether Ben-Shaul's cinema is really structured like a network. It might function like a database but an engaging filmic narrative is probably created by employing what is described by Wages as 'branchings with bottlenecks' and 'multiple exploration paths', which have been frequently used for adventure games and interactive films (cf. Wages 46–47). The result of the filmic experience is more comparable to an actual movie like Howitt's *Sliding Doors*.

One example of this type of interactive movie is Bob Bejan's *I'm Your Man*, which was shown for the first time in specially equipped cinemas in 1992 (cf.

Ryan, *Narrative as Virtual Reality* 272). In this film the audience chooses by a majority vote (through pressing a button), which course of action the film will take.²²⁷ Ryan gives a detailed analysis of the film along with an impressive illustration that could be read as the 'narrative map' of the movie (*ibid.* 271–80). The narrative flow of the film is interrupted by the decision points, or nodal situations, that break the action. The viewers are asked to vote in these situations. They step out of their role as viewer and change into their role as user or player. Similar to Resnais' *Smoking/No Smoking* the film starts off from one narrative situation, which is always the same, and branches into three different continuations. Those continuations converge again and diverge again. In the end there are three alternate endings possible (cf. *ibid.*). This might be an interactive film, which employs a database to deliver the different chunks of filmic material, but it is far from being a complex network structure. Comparing the chart of the movie to the tree diagram of *Smoking/ No Smoking*, it is actually less complex.

Furthermore, the audience is kept emotionally engaged in the narrative because the classical way of storytelling in new Hollywood is employed, whichever continuation is taken (cf. Thompson, *Storytelling in New Hollywood*). This is aptly described by Ryan since the plot unfolds from exposition to complication to climax to resolution only to end in 'epilogue' (cf. *Narrative as Virtual Reality* 273–75). This was already described by Wages as 'multiple exploration paths' in which the audience is invited to make different experiences, depending on the chosen continuation, but the control over the temporality of the narrative and over plot conventions is still in the hands of the filmmaker.

Eine, vom Standpunkt der Narration in interaktiven Medien viel sinnvollere Handhabe, Verzweigungsstrukturen zu ‚zähmen‘, ist die Rückführung zuvor abgezwigter Pfade in einen Knoten des Geschichtsrückgrats. Die Struktur der Verzweigung mit Engpässen beziehungsweise Rückfaltungsstruktur bietet klar unterscheidbare Pfade und erlaubt trotzdem, das Gesamtszenario überschaubar zu halten. (Wages 46–47)

As was already shown, interactivity is not an indicator for the complexity of a FN architecture. The hierarchical organization of interactive movies such as *I'm Your Man*, however, makes it possible to narrate an appealing story. A mild form of

²²⁷ The world's first interactive movie *Kinoautomat* from 1967 worked similarly. At nine points during the film the action was stopped. A moderator appeared on stage and asked the audience to choose between the next two continuations, which were on separate film reels. Following the majority vote, the chosen continuation was played. Decades after the original screenings, the film was broadcast on Czech television, with the two reels split across two TV channels. Although similar to *Mörderische Entscheidung*, the filmic experiment was not well received in Czech republic. (cf. *Wikipedia, Kinoautomat*).

this new kind of interactive temporal-spatial storytelling is extremely popular in Japan – the *visual novel*. This is an interactive fiction game featuring mostly static graphics, usually with anime-style art. As the name might suggest, they resemble mixed-media novels or tableau vivant stage plays. Although it is questionable if this subgenre can count as a film since it abandons the common denominator of storytelling in film: the pictures are static and it is not possible to call these products motion pictures. It is more an interactive comic strip. A more elaborate form are the so-called *Choose Movies* that work along the lines of Choose-Your-Own-Adventure books. The story is told here by motion pictures.

Also called DVD TV game (or DVDi, 'DVD interactive') is a standalone game that can be played on a set-top DVD player. The game takes advantage of technology built into the DVD format to create an interactive gaming environment compatible with most DVD players without requiring additional hardware. This technology has already been used for gaming, advertising, music, education, and corporate training. (Doucette)

In this case the movie works along the lines of what has already been mentioned. However, there is a decisive difference: the options of choice are not added as supplementary material but are part of the story itself. Although the choice is still limited to, e.g. eleven possible stories in *The Abominable Snowman*, openness is realised in these types of narratives since there is no 'main' story that will be chosen above others as in those films discussed by Bordwell. Additionally only by choosing, i.e. only by realising the choice event, is the story about to evolve at all (cf. Part one of this volume). The notion of interactivity and the element of choice is not just an option but an essential and therefore these formats must be seen as FNs.

Whereas a DVD has only a limited set of textons, it also follows the logic of the transversal function to shift the narrative along time's arrow towards one of the eleven alternate endings in *The Abominable Snowman*. The nodal situations do empower the viewer to choose between alternate paths. This choice is under information, the nodes are overt and clearly marked as part of the rules system as in *Smoking/ No Smoking*. The fun of this DVD is to play it again and to choose differently in each of the decision points. By replaying the DVD the decisions are reversible but not while playing it in one run. The FN architecture therefore resembles a hierarchically organized tree structure as already exemplified in *Smoking/No Smoking*. The edges are uni-directional in the game and the paths follow parallel lines. Completely different outcomes are impossible. The point of divergence with regard to location is always the Himalaya and the Northern siblings will always encounter the Yeti in one form or another. The idea of an unhinged database that shifts freely can therefore not be presented on a medium such as this DVD.

However, algorithmic programming enables the user to truly experience a database narrative, unhinged of the temporality of the medium itself. Such a database engine was designed by Florian Thalhoffer, namely the *Korsakow* software. It is described by Thalhoffer as dynamic software (cf. *ibid.*). The dynamic system enables for a different kind of narrative organization than what has been possible so far. The engine produces a *Korsakow* or *K-Film*:

A K-Film is a database film produced using the Korsakow System. K-Films cover all genres, including fictional narrative, documentary, and experimental. They have also been used in/as/for installations, performances, traditional postproduction, online portfolios, etc. (*ibid.*)

The database elements or textons are called SNUs.

A SNU is a 'Smallest Narrative Unit'. Around here we pronounce it 'snoo'. It is the fundamental building block of a Korsakow Film. With Korsakow, you're essentially taking your media assets (typically, pieces of edited video with durations of 20 secs to 2 minutes) and SNU-ifying them. That is, applying keywords and other rules to each piece of media that will appear in your K-Film. (*ibid.*)

The transversal function is the algorithm inscribed in the engine. This algorithm is accessible via links that make it possible for the user to shift through the narrative. These links are called POCs:

Like 'SNU', the term POC (for 'Point of Contact') was invented by Heinz Emigholz. A POC is not merely a link. It is the *possibility* of a link. In other words, a link is the obvious manifestation of a POC. But: there can be a POC without a link. For example, if there are Out-keywords that don't find a SNU with a matching In-keyword. In this case there is no link, but there is still a POC. In a way, POCs are like docking points: They simply wait for the right SNU to come up. (*ibid.*)

Suppan describes the K-Film *13ter Stock* in her work on interactive storytelling.

„Ein Beispiel für die Umsetzung von interaktivem Storytelling ist der Film *13. Stock* der von Florian Thalhoffer, freier Designer und Dozent für Interactive Storytelling in Berlin mit Hilfe der Software Korsakow entwickelt wurde. Der Film handelt von Bewohnern eines Hochhauses in Bremen. Der Leser hat die Möglichkeit, über ein Menü zu bestimmen, wann er welche Szene sehen möchte. Weiter kann bestimmt werden, in welcher Reihenfolge er die Szenen sehen möchte und welche Länge die einzelnen Interviews haben sollen. Ein weiteres Beispiel ist der Film *Berlin Connection*. In diesem Film hat der Leser (Spieler) die Möglichkeit, in die Rolle des Hauptdarstellers zu schlüpfen und kann so den Fortgang der Handlung bestimmen.“ (*ibid.* 25)

What has been formerly criticized by Rafferty is now the working principle of this kind of narrative; the user does indeed become the editor of the film. Unlike the

CYOA, the nodal situations (or POCs) do not propel the narrative forward towards a goal. It should therefore be stressed that the CYOA is essentially a *movie game* with regard to the *ludus* pole, since the objective of the narrative is to get to one of the eleven possible endings. This also emphasizes the narrative as being plot driven whereas the database *K-movie* leans more towards the *paidia* pole. The user can shift through the narrative space, which is exactly what is described by Vivian Sobchack (cf. *ibid.* 311). The temporality of the medium is unhinged and the hierarchical organized arborescent structure of the narratives described so far gives way to a rhizomatic network structure that enables truly bi-directional shifting from one POC to the other. A *K-film* is therefore a radical FN, since there is no inbuilt directionality. The architecture is more like a network in the sense that the user can choose different paths through it. However, this openness is counterplotting the causal linking of events. The user becomes more a complete idea of the narrative universe, in the case of *13ter Stock* this means that the user or viewer gets to know who lives on 13th floor and how the people are related.

This is displayed in the total sum of continuations, which are accessible from a POC. A POC can lead to a single continuation (if it is a 'dead end' or a mock node) or to an array of possible continuations in a two digit number (if many SNUs are connected to a POC). A scene from *13ter Stock* that links the lives of many inhabitants together is therefore more likely to have a higher number of continuations than a scene on the lonely rooftop. The degree of consequence, however, is almost non-existent since the textons, or POCs, are merely possibilities to shift in the narrative space. The decision which POC to choose has no influence on the narrative development at all. If a narrative is the linking of at least two events then a *K-film* is a narrative; if the causality principle has to be employed it is none. Since narrative is the human's only cognitive device to create meaning out of this world, it is questionable what meaning the user will gather from a *K-film*. As Thalhoffer states himself: "Ich möchte dem Betrachter meiner Filme nicht die Welt erklären, sondern ihm Gelegenheit geben, Fragen zu stellen und selbst Antworten zu finden" (qtd. in Suppan 31)

The radicality of a network structure, which features nodes with multiple continuations, is freed from the temporality of the medium itself (in terms of linearity such as the screen duration in conventional motion pictures). There is no initial point of divergence or a point of convergence anymore as in *Smoking/No Smoking* or even *Mr. Nobody*, but a mere play of possibilities. The question is whether that rhizomatic structure is taking away an essence of narrative itself. As exemplified on *Mr. Nobody*, if all possibilities are possible and reversible, time becomes unhinged. The narrative is stripped from its very essence of time and becomes a flow. A *K-film* is a radical resolution of the promise inscribed in the nodal situation (the node is always lacking temporality itself, since only its

performance takes place in time). In other words, a *K-film* has only a minimum of narrative proclivity.²²⁸ This is reflected in the role of the recipient of a *K-film*. The possibility to view multiple continuations without an over-arching plot or narrative frame-work and without any kind of recognizable objective makes it very hard for the recipient to make sense of a *K-film*. These computer aided filmic mosaics are not movie games but they are also not interactive films. Furthermore, in the case of *13ter Stock* the different continuations are not mutually exclusive of each other. They happen in the same story world and do not logically interfere with each other. The user is simply given the choice to view them in a self-chosen sequence. This makes *13ter Stock* into a database mosaic that has his equivalent in the realm of conventional films in episodic movies like *Paris, je t'aime*.

Until Ben-Shaul releases his hyper-narrative film *Turbulence* a network FN film remains a theoretical construct, which has not yet been made. This is the threshold of FN in motion pictures.

4.2 'Clicking': FNs and the User

The shift from old to new media is also a shift from passive viewer to active user. By shifting from analogue to digital media forms the FN architectures are no longer limited to arborescent structures. Transmedia projects, such as *Dina Foxx*, employ axial structures. In interactive films, such as *Tender Loving Care*, and movie games, such as *Heavy Rain*, a combination of axial and arborescent structures is employed to guarantee different experiences for the players or viewers. The authorial control over the narrative, however, is never fully in the hands of the player or viewer. This could only be made achievable in network structures, which are either ultimate or no FNs at all. Network films like *13ter Stock* enable an uncontrolled traversing through the database, but the narrative threads are almost non-existent. They resemble filmic mosaics with hardly any narrative

²²⁸ "The term narrative proclivity is here used in a sense similar, but not identical to Marie-Laure Ryan's term 'narrativity'. Narrative proclivity is not something that an object 'has' or does not have, but a measure of the relative ease with which an object lends itself to being conceived in terms of a (fictional) storyworld. This says nothing about the complexity of the storyworld, nor does it imply any aesthetic judgment. On the contrary, many a modernist aesthetic position would rather privilege an object in which less narrative information is spelled out for the recipient. Also, narrative proclivity as a term is used here not to make a theoretical statement about events and their fundamental ability of being conceived as a narrative, but merely as a practical measurement. As Christoph Bode has stated convincingly, *any* two events can be narrativized. Thus, narrativity, as it is used here, is not a question of 'yes' or 'no', but of 'how easily'?" (Domsch, *Narrating Futures Vol. 4*)

core. It is yet to decide whether Ben-Shaul’s *Turbulence* (cf. Zax) will enable network architectures to stage ultimate openness in a FN sense. Networks immediately evoke a sense of spatiality because of their vastness. Social networks like *facebook* or *myspace* and the network structure of the world-wide-web in general, have reached global dimensions. The narrative architectures of FNs, whether networks or tree structures, also immediately evoke a sense of such spatiality because their narrative architecture can be traced out as a map, which is a multitudinous web of nodes and edges. Furthermore FNs always have the tendency to explode the narrative space and to explode the materiality of the medium. The shift from hierarchically linked events to rhizomatic structures expands the narrative space while encoding it into the computer language, which consist of the simple binary opposition of 0 and 1. It is only possible to stage such a complex narrative space in a computer-mediated environment, which uses a very simple language. It has to be noted, however, that it is the relationship between the user and the medium itself, which creates the FN. In actively-nodal and dynamic media the role of the user, player or viewer is ever more crucial than in static and passive media. It must be said that FNs can only realize their full potential in computer-mediated environments, in which it is no longer the protagonist who is performing the nodal situation as in ‘running’, but it is the user who is performing the node by ‘clicking’.

Network structures or database narratives therefore become more linked to the idea of postmodernity as Ben-Shaul points out. He sums up the postmodern idea that “language and other forms of communication are polysemic and multi-directional. Any attempt to fix, stabilize or systematize the process of signification was [...] an attempt to control human and textual freedom and creativity” (*ibid.* 19) With regard to FN structures the narrative space is of interest. The space itself becomes the most important feature of the narrative itself. With regard to this the nodal power of a single node might be minimal with its degree of consequence, but the nodal power of the whole narrative space becomes immense. The user is able to experience a FN as narrative spatiality. A FN is a narrative space which is becoming “mediated experientialty” (Fludernik 13) and unhinged from time.²²⁹

²²⁹ The temporality of the medium is no longer important. Films are always bound to their screen duration but the transferral of films from film reel to digital FNs enables the viewer to experience the FN free from the dominating temporality of the medium film itself.

5 Conclusion: FNs in Film and Their Future

We will arrive at a moment of self-alienation as in a static spectacle. – Walter Benjamin (qtd. in *Technocalyps*)

This book started with the definition of time with regard to future as the defining principle of FNs²³⁰ but ended with a spatial idea of it. The future is in the nodal architecture of FNs and the more complex those structures are, the more ‘open’ FNs can be. In other words, the case studies are assembled from ‘running’ to ‘clicking’.

Lola is the emblematic metaphor for cinema: a running woman combining both motion and emotion into one moving image as Tykwer pointed out. The first filmic example is very different from the last case study, which is discussed in this volume. A *K-Film* shifts the focus from a development of a narrative to the user’s performance. By clicking through *13ter Stock* the user can experience a mediated form of narrative space. The emblematic symbol for this is the POC itself. It does not combine motion and emotion like *Lola*, but it displays stasis and artificiality. The protagonist²³¹ is non-existent in a narrative that is more a filmic mosaic of society than a filmic narrative. That society in its totality becomes tangible through the narrativization of the context: the space. The last threshold would therefore be the symbolic of the database. The nodal situation is exemplifying the symbolic principle of 1 and 0, since the choice is always an either or. The continuations that lead away from a nodal situation are mutually exclusive and they have to be marked out as such. Otherwise the return to the same situation would be impossible. If the origo of the narrative is, however, doubly employed by the user as protagonist and user, as recipient and character, the full potential of a nodal situation can be made experienceable in the terms of virtual reality that shifts the user to its final stage *as resident*, i.e. *Second Life* (short: SL).

This ability to simulate a life like narrative is even more drastically, although less aesthetically, implemented by *Second Life*. The aim of this ‘game’ is to offer in fact a second life where anything is possible.

Second Life (SL) is a virtual world developed by Linden Lab that launched on June 23, 2003, and is accessible via the Internet. A free client program called the Second Life Viewer enables its users, called Residents, to interact with each other through avatars. Residents can explore, meet other residents, socialize, participate in individual and group activities,

²³⁰ With reference to the degree of openness which is conveyed in the term future time.

²³¹ *13ter Stock* does not have a protagonist or an avatar. There is no digital double of the user in the story world. At the same time, the characters of *13ter Stock* are more properties or functions of the database and refute any kind of identification.

and create and trade virtual property and services with one another, or travel throughout the world, which residents refer to as the grid. (Wikipedia, *Second Life*)

SL is not goal oriented. When it was previously described by Perron that interactive movies resemble more *paidia* or free play, instead of rule governed and goal oriented *ludus* games (cf. *ibid.*), then SL is closer to this idea than the case studies discussed in 4.1.1. and 4.1.2. The users define their own roles, and the genre conventions emerge during the continuation of the game. Furthermore creative freedom is enhanced by the possibility of SL residents to create their own objects (prims) by an easy programming device. The only constant in SL is time and once a member of the community decides for a name of his/her avatar this cannot be changed, either. Apart from that anything is possible.

Second Life seems to me especially interesting as a major example of the intersections of life, video games, and narrative. It is maybe the example of an open sandbox structure, allowing countless forms of emergent gameplay, but at the same it is completely lacking in any pre-structured narrative. (NAFU Wiki.)

It could be argued if SL is in any way suitable for a narrative project at all. But then again, since there is no goal oriented objective integrated in the SL world the only reason for people to interact virtually is to ‘write their own narrative’. Sven Sittlich’s book about SL includes interviews with various avatars and they all claim that their only reason to be here is to ‘experience stories together’.

Im Virtuellen erlebt anscheinend jeder, der sich darauf einlässt, eine Geschichte, etwas Einprägsames, das er mit herübernimmt in sein Leben vor dem Monitor [...] Wir erzählen uns doch alle gemeinsam eine Geschichte [...]. Klar, die Avatare in dieser Welt sammeln doch während ihres Lebens eine Menge Geschichten an, gute und schlechte Momente und Erlebnisse [...]. Im Virtuellen erlebt anscheinend jeder, der sich darauf einlässt, eine Geschichte, etwas Einprägsames, das er mit herübernimmt in sein Leben vor dem Monitor. [...] Ich habe manchmal das Gefühl, dass sie ein Eigenleben bekommen hat [...] wie eine Romanfigur. [...] Es geht in Second Life um die vielen Facetten der Freiheit: Es gibt im Virtuellen kein eingebautes Ziel, keine Belohnung von der Welt selbst und keine Highscore [...] (Sittlich, 33–40)

Nevertheless virtual realities, MMORPGs and ARGs obtain their appeal for the users by blurring reality and virtual reality. This is especially evident as in SL, since the currency Linden Dollar can be exchanged into real money in real life and real people are actually making a living out of SL by programming clothes, for example. The user can become absolutely absorbed in that virtual reality and the emotional engagement with the narrative can lead to what Gilles Deleuze has described in his ‘society of control’.

In the disciplinary societies one was always starting again (from school to the barracks, from the barracks to the factory), while in the societies of control one is never finished with anything—the corporation, the educational system, the armed services being metastable states coexisting in one and the same modulation, like a universal system of deformation. (Deleuze, *Society of Control*)

The user has to stay online as much as possible and work on his meta-stable identity by constantly updating his avatar, by taking part in the collectively organised raids (as in *World of Warcraft*) or by buying the latest clothes (as in SL) to be integrated in the collective, to experience (virtual) life. The program itself, also not pre-scripted or in any way dominating the mode of interaction with the medium or between the users, has become a society of control where ‘one is never finished with anything’.

If we look at the channel of communication, it is obvious that the roles of sender and recipient are becoming interchangeable introducing a new form of media communication which can be best described as rhizomatic.

Gilles Deleuze and Félix Guattari used the term ‘rhizome’ to describe theory and research that allows for multiple, non-hierarchical entry and exit points in data representation and interpretation. In *A Thousand Plateaus*, they opposed it to an arborescent conception of knowledge, which worked with dualist categories and binary choices. A rhizome works with horizontal and trans-species connections, while an arborescent model works with vertical and linear connections. Their use of the ‘orchid and the wasp’ was taken from the biological concept of mutualism, in which two different species interact together to form a multiplicity (i.e. a unity that is multiple in itself). Horizontal gene transfer would also be a good illustration. (“A Thousand Plateaus” 407)

Like in real life the communicative roles are interchangeable, there is no hierarchical structure and it is also opposed to arborescent modes as produced in forking path narratives. This allows for Friedrich Kittler’s technological media theory as “he sees [...] in writing programmes and in burning structures into silicon chips a complete continuum: ‘[...] Today, human writing runs through inscriptions burnt into silicon by electronic lithography [...]. The last historic act of writing may thus have been in the late seventies when a team of Intel engineers [plotted] the hardware architecture of their first integrated microprocessor.’” (cf. Huber 169–88)

Due to computer aided environments it is possible to store/save the real, nature itself, transfer it and eventually, manipulate it. Digital media have actual access to the real. Virtual worlds have become post-human as their processes run beyond what can be grasped by the human senses. Eventually this leads to the addictive potential that is immanent to the living of virtual lives. A significant number of *World of Warcraft* players do become addicted to the game and have to undergo rehabilitation methods originally designed for drug addicts.

Bianco describes this as ‘the open-ended reality studio’; a cinematic event that is, unlike the film, ‘a loop without memory’. “The event has no beginnings or endings but rather rolls vertiginous summoning of inserts without the master shot. The centring observer diverts the images through a forced chronology only to lose her sense of location by the end of the interval. And the afterburners of sensation and revelation are an affective rhythm, a jagged undulation, the flush of losing what comes next but happened before, and the ‘practice of what remains.’” (382–94)

Although Bianco is describing the latest trend in movies,²³² the post human / post organic cinema also referred to as *techno-cinema*, resembles the *paidia* experience of SL. Bianco shows that the structures of virtual reality games or techno-cinematic events do no longer aim at narrative closure or at winning the game, but ‘winning’ is simply the never-ending continuation of the game (cf. 392–96). Virtual realities, like SL, offer life-like experiences, which present emergent narratives in truly open virtual worlds. If the future is completely open and every human can actively influence her own destiny by working together in a social sphere and if we see the real world as a 3D temporal-spatial environment with emergent narratives as we go along, it becomes clear that truly open FNs are optimally realised in virtual realities, since these offer a multitude of nodal situations, emergent narratives, 24 hours continuation, a high level of interactivity, the need to work together as a collective and most of all the notion of being endless – ‘winning’ SL means continuing, as in real life in which ‘the journey is its own reward’.

Radical FNs are the stage for a Deleuzian society of control. Absolute freedom is not possible in SL, or any other form of virtual reality, if this virtual reality demands a constant attention of the user. Filmic narratives of this kind are described by Bianco as ‘techno-cinematic events’. He interprets them as games that play on the premise that winning consists only of the continuation of play, “a game for post-human bodies”. (cf. Bianco 396)

232 It is worth noticing that recent movies are not so much interested in the possibilities of interaction and forking path narratives as to exceed the human mind by pushing it beyond its sensational limits. The latest example of this would be *Avatar* in which an extremely reduced storyline is combined with a ‘posthuman viewing experience’ in Bianco’s sense. It is impossible to see all that is going on and therefore the computer game was released on the market at the same time. The viewer is invited to play the game to gather all the background information about the world of *Avatar* herself. Or to say it with Jenkins, the story is no longer getting pitched but the fictional world, which makes it necessary to embrace the virtual reality to experience a unique engaging narrative (cf. *Convergence Culture* 321).

The techno-cinematic event is one of captured and controlled energetics and dynamics as expressed in post-human practices. Techno-cinematic events are material processes shot through with the energetic capacity to auto-affect their own material constituencies and to affect other bodies by design. [...] The perpetually produced present splits off from its relationship to organicism, linear historicism, and narrative temporalities, extensions and dimensionalities. [...] Technoscientific and techno-cinematic experimentation exceed their initial parameters or initial conditions in a given open-system at a point where control meets catastrophe. (*ibid.* 392)

Techno-cinema²³³ aims at a post-human/post-organic understanding of space, time, and image/matters,²³⁴ (cf. Bianco 394). The disorienting and post-human consequences of such a cinema were discussed with regard to *Mr. Nobody*. The radicality of the concept even challenged the nature of time in itself. Techno-cinema films, however, are no radical form of FNs, since the idea of future that is staged here is no longer a human experience of time, but an eternal rerun that can only be achieved by machines. A narrative conveys meaning. An eternal rerun does not.

Finally, a few concluding words should be given to sum up this volume. This study introduced the work mechanics of FNs and made it therefore possible to identify FNs in films and games. All of these work with nodal situations in arborescent, axial or network architectures by offering the viewer, viewser or user to experience spatio-temporal mediated narratives. In this volume they were unified under the umbrella concept of ‘future narratives in film’. The film reel is not the defining marker of these narratives but their use of moving images. By moving from conventional to digital database narratives that lead us away from the imaginary to the (virtual) real, these FNs can become a posthuman narrative experience. In the most radical form the user is transformed into a resident and the structure of this volume is reversed. Instead of ‘running and clicking’ the resident in SL is ‘clicking and running’. The algorithm is at the heart of the origo but its consequences are felt by the resident. In other words, the narrative experience is not just computer-mediated virtual reality but the resident itself starts *living* a virtual life. Subsequently we need to ask whether virtual realities are able to convey FNs at all. The answer is the same as Thalhoffer has given. The resident needs to create the meaning by herself out of a space with infinite possibilities. The last question is therefore, whether the best FN is life itself.

233 “The opening of *Run Lola Run* is both aggressive and supercilious in its playfulness: ‘after the game is before the game’, an epigraph tells us, implying that the game is never-ending” (Coates 120). Coates also reads *Lola* as techno-cinema.

234 This refers the Bergsonian understanding of image and matter (cf. Bergson 17).

I would like to mention Aarseth again and his famous ‘elevator-example’: if an elevator is encompassed in your definition of narrative, then your definition is overproductive. With reference to FN: the best FN is not life, since this would also mean that our definition of FN is over-productive. More importantly though, life cannot be the best FN because it can only be experienced one-way following the direction of time’s arrow. In other words, a decision in real life has irreversible consequences. Although every moment in time encapsulates a nodal situation with more than one continuation only one continuation can be performed. The uni-directionality of the edges chosen makes it impossible to return to a former visited nodal situation. A FN, on the other hand, is a narrative space that allows for an experience which has no direct consequence for our everyday life. The advantages of bi-directional edges were already discussed with regard to *Groundhog Day* and *Source Code*. But even in FNs with uni-directional edges it is always possible to start again and to choose differently. These alternate scenarios can only be constructed cognitively or by the aid of media forms. This is the reason for the importance of the FN concept. It cannot only be found in various media but it is vital for us because the mediated experience of FNs render it possible to consider the future manageable. In non-fictional environments such as risk insurances, FNs can be used to stage different outcomes and to render this multitude experienceable for the recipient. The advantage of filmic FNs is that they make even highly complex scenarios immediately understandable.

FNs manifest themselves best somewhere between the concept of viewer and resident in the realm between *ludus* and *paidia*. At the heart of nodal situation should still be a human interactor or an anthropomorphic protagonist to enable the experientiality of a FN as openness in a sense that the human mind can grasp. With regard to motion pictures the realm of the imaginary as a place for illusions FNs can be experienced best by a complex but not rhizomatic structures that enable the recipient to experience the concept of the nodal situation as more than one continuation. This exemplifies that there is always a choice and this is the political power of the imaginary that can be staged in FNs in films.

Works Cited

Primary Sources

- 11:14*. Dir. Greg Marcks. Perf. Rachael Leigh Cook, Hilary Swank, and Patrick Swayze. New Line Cinema, 2003. DVD.
- 12 Monkeys*. Dir. Terry Gilliam. Perf. Bruce Willis, Madeleine Stowe, and Brad Pitt. Universal Pictures, 1995. DVD.
- 13ter Stock*. Dir. Florian Thalhafer and Kolja Mensing. Verbrecher Verlag, 2007. DVD-Rom.
- Afternoon, a Story*. Written by Michael Joyce. Eastgate Systems, 1990. CD-Rom.
- American Idol*. Dir. Ken Warwick et. al. Freemantle Media Enterprises, 2002–2012. TV.
- Avatar*. Dir. James Cameron. Perf. Sam Worthington, Zoe Saldana, and Sigourney Weaver. 20th Century Fox Media, 2009. DVD.
- Being Erica*. Dir. Holly Dale. Perf. Erin Karpluk, Michael Riley, and Kathleen Laskey. Alive, 2009–2011. DVD.
- Big Brother*. Dir. Various. Endemol, 1999–2012. TV.
- Blade Runner: The Final Cut*. Dir. Ridley Scott. Perf. Harrison Ford, Rutger Hauer, and Daryl Hannah. Warner Home Entertainment, 2007. DVD.
- Blind Chance*. Dir. Krzysztof Kieslowski. Perf. Boguslaw Linda, Tadeusz Lomnicki, and Zbigniew Zapasiewicz. Film Polski, 1987. DVD.
- Call of Duty: Modern Warfare 2*. Dir. Jesse Stern. Activision, 2009. Playstation 3.
- Choose Your Own Adventure: The Abominable Snowman*. Dir. Bob Doucette. Perf. William H. Macy and Frankie Muniz. Goldhil Entertainment, 2006. DVD.
- Deutschland sucht den Superstar*. Dir. Various. Grundy Light Entertainment GmbH, 2002–2012. TV.
- Die Tür*. Dir. Anno Saul. Perf. Mads Mikkelsen and Jessica Schwarz. Wüste Film GmbH, 2009. DVD.
- eXistenZ*. Dir. David Cronenberg. Perf. Jude Law, Jennifer Jason Leigh, Ian Holm, and Willem Dafoe. Kinowelt GmbH, 2000. DVD.
- Fight Club*. Dir. David Fincher. Perf. Brad Pitt and Edward Norton. 20th Century Fox Media, 1999. DVD.
- Groundhog Day*. Dir. Harold Ramis. Perf. Bill Murray. Andie MacDowell, and Chris Elliott. Sony Pictures, 1993. DVD.
- Heavy Rain*. Dir. David Cage. Quantic Dream, 2010. Playstation 3.
- I'm Your Man*. Dir. Bob Bejan. Perf. Mark Metcalf and Dana Beck. ChoicePoint Films, 1992. DVD.
- Inception*. Dir. Christopher Nolan. Perf. Leonardo DiCaprio, Joseph Gordon-Levitt, and Ellen Page. Warner Home Video, 2010. DVD.
- Irréversible*. Dir. Gaspar Noé. Perf. Monica Bellucci and Vincent Cassel. Mars Distribution, 2002. DVD.
- Jabob's Ladder*. Dir. Adrian Lyne. Perf. Tim Robbins and Elizabeth Pena. TriStar Pictures, 1990. DVD.
- La Jetée*. Dir. Chris Marker. Perf. Arielle Dombasle, Alexandra Stewart, and Jean Négroni. Studiocanal, 1962. DVD.
- Last Life in the Universe*. Dir. Pen-Ek Ratanaruang. Perf. Tadanobu Asano, Sinitta Boonyasak, and Laila Boonyasak. Artificial Eye, 2004. DVD.
- L.A. Noire*. Dir. Brendan McNamara. Rockstar Games, 2011. Playstation 3.

- Lola Rennt*. Dir. Tom Tykwer. Perf. Franka Potente, Moritz Bleibtreu, and Herbert Knaup. Laser Paradise/DVD, 2003. DVD.
- LOST*. Dir. J.J. Abrams and Damon Lindelof. Perf. Matthew Fox, Evangeline Lilly, and Dominic Monaghan. Buena Vista Home Entertainment, 2004–2010. DVD.
- Memento*. Dir. Christopher Nolan. Perf. Guy Pierce, Carrie-Anne Moss, and Joe Pantoliano. Columbia Tristar Home Video, 2002. DVD.
- Misfits*. Dir. Howard Overman. Perf. Iwan Rheon, Nathan Stewart-Jarrett, and Antonia Thomas. Clerkenwell Films, 2009–2012. DVD.
- Mörderische Entscheidung: Umschalten Unerwünscht*. Dir. Oliver Hirschbiegel. Perf. Mapi Galan and Nils Tavernier. Gemini-Filmproduktionsgesellschaft Köln and Allianz-Film Berlin, 1991. TV.
- Mr. Nobody*. Dir. Jaco Van Dormael. Perf. Jared Leto, Diane Kruger, Sarah Polley, and Toby Regbo. Concorde Video, 2011. DVD.
- Paris, Je t'aime*. Dir. Tom Tykwer et. al. Perf. Marianne Faithfull, Steve Buscemi, Juliette Binoche, Bob Hoskins, Elijah Wood, Nick Nolte, and Natalie Portman. Ascot Elite Entertainment Group, 2007. DVD.
- Rashomon*. Dir. Akira Kurosawa. Perf. Toshiro Mifune, Masayuki Mori, and Minoru Chiaki. RKO Radio Pictures, 1950. DVD.
- Requiem for a Dream*. Dir. Darren Aronofsky. Perf. Jared Leto and Jennifer Connelly. Artisan Entertainment, 2000. DVD.
- Scourge of Worlds: A Dungeons & Dragons Adventure*. Dir. Dan Krech. Perf. Dan Hay, Lester Rosenthal, and Anna Deas. Warner Music Group Germany, 2004. DVD.
- Scott Pilgrim vs. the World*. Dir. Edgar Wright. Perf. Michael Cera, Kieran Culkin, and Mary Elizabeth Winstead. Universal Pictures, 2010. DVD.
- Scrubs*. Dir. Bill Lawrence. Perf. Zach Braff, Sarah Chalke, Donald Faison, and Judy Reyes. Touchstone, 2011–2012. DVD.
- Sleepless in Seattle*. Dir. Nora Ephron. Perf. Tom Hanks and Meg Ryan. TriStar Pictures, 1993. DVD.
- Sliding Doors*. Dir. Peter Howitt. Perf. Gwyneth Paltrow, John Hannah, and John Lynch. Arrow, 1998. DVD.
- Smoking/No Smoking*. Dir. Alain Resnais. Perf. Sabine Azéma and Pierre Arditi. Fox Pathé Europa, 2004. DVD.
- Source Code*. Dir. Duncan Jones. Perf. Jake Gyllenhaal, Michelle Monaghan, and Vera Farmiga. Studiocanal, 2011. DVD.
- Sunshine*. Dir. Danny Boyle. Perf. Cillian Murphy, Rose Byrne, and Mark Strong. Fox Searchlight Pictures, 2007. DVD.
- Technocalyps*. Dir. Frank Theys. Perf. Terence McKenna. HomeScreen, 2007. DVD.
- Tender Loving Care*. Dir. David Wheeler. Perf. John Hurt, Michael Esposito, and Beth Tegen. Aftermath Media, 1999. DVD.
- Timecrimes*. Dir. Nacho Vigalondo. Perf. Nacho Vigalondo and Bárbara Goenaga. Karbo Vantas Entertainment, 2007. DVD.
- The Butterfly Effect*. Dir. Jonathan Mackye Gruber and Eric Bress. Perf. Ashton Kutcher, Amy Smart, and Eric Stoltz. Warner Home Video, 2007. DVD.
- The Lord of the Rings: The Fellowship of the Ring*. Dir. Peter Jackson. Perf. Elijah Wood, Liv Tyler, Viggo Mortensen, Hugo Weaving, and Cate Blanchett. New Line Media, 2001. DVD.
- The Matrix*. Dir. Andy and Larry Wachowski. Perf. Keanu Reeves, Carrie-Ann Moss, and Laurence Fishburne. Warner Bros. Entertainment, 1999. DVD.

- The Spirit*. Dir. Frank Miller. Perf. Gabriel Macht, Samuel Jackson, and Scarlett Johansson. Lionsgate Entertainment, 2008. DVD.
- The X-Factor*. Dir. Simon Cowell. Perf. Various. SYCOtv, 2004–2012. TV.
- Tomb Raider: Lara Croft*. Dir. Toby Gard. Core Design, 1996. Playstation.
- Trainspotting*. Dir. Danny Boyle. Perf. Ewan McGregor, Johnny Lee Miller, and Robert Carlyle. Miramax Films, 1996. DVD.
- Uncharted: Drake's Deception*. Dir. Amy Hennig. Naughty Dog, 2011. Playstation 3.
- Vantage Point*. Dir. Pete Travis. Perf. Dennis Quaid, Matthew Fox, and William Hurt. Columbia Pictures, 2008. DVD.
- Wer rettet Dina Foxx?* Dir. Max Zeitler. Perf. Jessica Richter, Max Woelky, Sven Gerhardt, and Björn Bugri. UFA Lab, 2011. TV and Web. <http://dinafoxx.zdf.de/>.

Secondary Literature

- Aarseth, Espen J. "Multi-Path Narrative" *Routledge Encyclopedia of Narrative Theory*. Ed. David Herman, Manfred Jahn, and Marie-Laure Ryan. New York: Routledge, 2005. 323–24.
- Aarseth, Espen J. *Cybertext: Perspectives on Ergodic Literature*. Baltimore: Johns Hopkins University Press, 1997.
- Aarseth, Espen J. "Non-Linearity and Literary Theory" *The New Media Reader*. Ed. Noah Wardrip-Fruin and Nick Montfort. Cambridge, Mass.: MIT Press, 2003. 762–80.
- Abbott, Horace P. "The Future of All Narrative Futures" *Understanding Narrative*. Ed. James Phelan and Peter J. Rabinowitz. Columbus: Ohio State University Press, 1994. 529–41.
- Abbott, Horace P. *The Cambridge Introduction to Narrative*. 2nd ed. Cambridge: Cambridge University Press, 2008. Cambridge Introductions to Literature.
- Abbott, Horace P. "Narrative and Life", 2010. *The Cambridge Introduction to Narrative*. 2nd ed. Cambridge: Cambridge University Press, 2008. 1–39. Cambridge Introductions to Literature.
- Aitchison, Jean. *The Seeds of Speech: Language Origin and Evolution*. Cambridge: Cambridge University Press, 2005. Cambridge Approaches to Linguistics.
- Aldama, Frederick L. "Gerard Genette" *Twentieth-Century European Cultural Theorists: First Series*. Ed. Paul Hansom. *Dictionary of Literary Biography* Vol. 242. Detroit: Gale Group, 2001.
- Alifragkis, Stavros and Francois Penz. "Spatial Dialectics: Montage and Spatially Organised Narrative in Stories Without Human Leads" *Digital Creativity* 17.4 (2006): 221–33.
- Allen, Michael J. *Contemporary US Cinema*. Harlow: Pearson Education Limited, 2003.
- Anderson, Tim J. *Left Behind: 'Studying the Process of Disintermediation: Why Now? Why Ever?'*. Web. 2 Nov. 2011. <http://flowtv.org/wp-content/uploads/2010/09/timanderson.pdf>.
- Arai, Keiko. "Who Controls the Narrative? A Stylistic Comparison of Different Versions of Raymond Carver's 'So Much Water So Close to Home'" *Style* 41.3 (2007): 319–41. Web. 21 Nov. 2011 http://findarticles.com/p/articles/mi_m2342/is_3_41/ai_n27483973/?tag=content;col1.
- Arnheim, Rudolf. *Entropy: An Essay on Disorder and Order*. Berkley: University of California Press, 1971.
- Ashton, Dyrk. *Using Deleuze: The Cinema Books, Film Studies and Effect*. Diss. Bowling Green State University, 2006. Ann Arbor: UMI, 2006.

- Aslinger, Ben. *Managing Media Production in the Age of Convergence*. Web. 2Nov.2011.
<http://flowtv.org/wp-content/uploads/2010/09/benaslinger.pdf>.
- Ayckbourn, Alan. *Plays: Intimate Exchanges (1982)*. Web. 16 Mar. 2012.
<http://intimateexchanges.alanayckbourn.net/>.
- Bachman, Maria K. "Who Cares? Novel Reading, Narrative Attachment Disorder, and the Case of The Old Curiosity Shop" *Journal of Narrative Theory* 37.2 (2007): 296–325.
- Backe, Hans-Joachim. *Strukturen und Funktionen des Erzählens im Computerspiel: Eine typologische Einführung*. Würzburg: Königshausen & Neumann, 2008.
- Baddeley, Alan D., Michael W. Eysenck, and Mike Anderson. *Memory*. Hove: Psychology Press, 2009.
- Baetens, Jan a. K. H. "Speed, Rhythm, Movement: A Dialogue on K. Hume's Article 'Narrative Speed'" *Narrative* 14.3 (2006): 349–355.
- Bakhtin, Mikhail. M. "Forms of Time and of the Chronotope in the Novel: Notes Toward a Historical Poetics" *Narrative Dynamics*. Ed. Brian Richardson. Columbus: Ohio State University Press, 2002. 15–25.
- Bal, Mieke. "Over-Writing as Un-Writing: Descriptions, World-Making, and Novelistic Time" *The Novel*. Ed. Franco Moretti. Princeton: Princeton University Press, 2006. 571–610.
- Balazs, Bela. "Der sichtbare Mensch" *Texte zur Theorie des Films*. Ed. Franz-Josef Albersmeier. Stuttgart: Reclam, 2003. 224–33.
- Bareis, J. A. "Mediality and Mediation: The Role of the Narrator in Transmedial Narratology" *Johannes-Gutenberg-Universität*. Mainz. 1 Jul. 2011.
- Barker, Cory. *'Til Series Finale Do Us Part?: Fan Commitment and the Long-running Series. The Value of Buzz – Engagement in the New Era of Television*. Web. 2Nov.2011.
<http://flowtv.org/wp-content/uploads/2010/09/corybarker.pdf>.
- Battersby, James L. "Narrativity, Self, and Self-Representation" *Narrative* 14.1 (2006): 27–44.
- Baumgartner, Holly L. "Visualizing Levinas: Existence and Existents Through Mulholland Drive, Memento, and Vanilla Sky" Diss. Bowling Green State University, 2005.
- Bazin, André. "Die Entwicklung der kinematographischen Sprache" *Texte zur Theorie des Films*. Ed. Franz-Josef Albersmeier. Stuttgart: Reclam, 2003. 256–74.
- Beard, William and David Cronenberg. *The Artist As Monster: The Cinema of David Cronenberg*. Toronto: University of Toronto Press Incorporated, 2006.
- Becker, Christine. *'Til Series Finale Do Us Part?: Fan Commitment and the Long-running Series. Sticking With the Soap*. Web. 2 Nov. 2011.
<http://flowtv.org/wp-content/uploads/2010/09/christinebecker.pdf>.
- Becker, Ilka. "Fotografie: Sichtbares und Sagbares" *Bild Erzählung* 4. München: Terrain Vague, 2008. 15.
- Becker, Ilka. "Laokoon und die Trennung der Künste" *Bild Erzählung*. 4. München: Terrain Vague, 2008. 10–11.
- Becker, Ilka. "Manet und die Nachzeitigkeit der Geschichte" *Bild Erzählung* 4. München: Terrain Vague, 2008. 14.
- Ben-Shaul, Nitzan S. *Hyper-Narrative Interactive Cinema: Problems and Solutions*. Amsterdam: Rodopi, 2008.
- Berg, Charles R. "A Taxonomy of Alternative Plots in Recent Films: Classifying the 'Tarantino Effect'" *Film Criticism* 31.1–2 (2005): 5–61.
- Bergson, Henri. *Creative Evolution*. Boston: University Press of America, 1983.
- Berlatsky, Eric. "Lost in the Gutter: Within and Between Frames in Narrative and Narrative Theory" *Narrative* 17.2 (2009): 162–87.

- Bianco, Jamie S. "Techno-Cinema" *Comparative Literature Studies*. 41.3 (2004): 382–94.
- Birke, Dorothee. *Memory's Fragile Power: Crises of Memory, Identity and Narrative in Contemporary British Novels*. Trier: WVT Wissenschaftlicher Verlag, 2008.
- Biro, Matthew. Rev. of *Gramophone, Film, Typewriter* by Friedrich A. Kittler. *CLIO* 29.4 (2000): 485.
- Birr, Hannah, ed. *Probleme filmischen Erzählens*. Berlin, Münster: Lit Verlag, 2009.
- Bizzocchi, Jim. *The Fragmented Frame: The Poetics of the Split-Screen*. Web. 23 Feb. 2012. <http://web.mit.edu/comm-forum/mit6/papers/Bizzocchi.pdf>.
- Bode, Christoph. *Der Roman: Eine Einführung*. Tübingen: Francke, 2005.
- Bode, Christoph. *Future Narratives. Theory, Poetics, and Media-Historical Moment*. Berlin: De Gruyter, 2013. Narrating Futures.
- Boessen, Brett. *Managing Media Production in the Age of Convergence*. Web. 2 Nov. 2011. <http://flowtv.org/wp-content/uploads/2010/09/brettboessen.pdf>.
- Bohnenkamp, Anne and Tilman Lang, eds. *Literaturverfilmungen*. Stuttgart: Reclam, 2005.
- Bolz, Norbert. *Das ABC der Medien*. München: Fink, 2007.
- Bonta, Mark. "Rhizome of Boehme and Deleuze: Esoteric Precursors of the God of Complexity" *SubStance. A Review of Theory and Literary Criticism*. 39.1 (2010): 62–75.
- Bordwell, David. "Film Futures" *SubStance* 31.1 (2002): 88–104.
- Bordwell, David. "Intensified Continuity: Visual Style in Contemporary American Cinema" *Film Quarterly* 55.3 (2002): 16–28.
- Bordwell, David. *Poetics of Cinema*. New York: Routledge, 2008.
- Bordwell, David. *Observations on Film Art: INCEPTION; or, Dream a Little Dream within a Dream with Me*. Web. 9Mar.2012.
- Bordwell, David and Kristin Thompson. *Film Art: An Introduction*. 8th ed. New York: McGraw-Hill, 2008.
- Bordwell, David and Kristin Thompson. *INCEPTION; or, Dream a Little Dream within a Dream with Me*. Web. 9 Mar. 2012. <http://www.davidbordwell.net/blog/2010/08/06/inception-or-dream-a-little-dream-within-a-dream-with-me/>.
- Bordwell, David and Kristin Thompson. *The end of cinema as we know it – yet again*. Web. 9 Mar. 2012. <http://www.davidbordwell.net/blog/2006/10/29/the-end-of-cinema-as-we-know-it-yet-again/>.
- Borges, Jorge L. "The Garden of Forking Paths" *The New Media Reader*. Ed. Noah Wardrip-Fruin and Nick Montfort. Cambridge, Mass.: MIT Press, 2003. 29–34.
- Bowen, Deborah. "Preserving Appearances: Photography and the Postmodern Realism of Anita Brookner" *Mosaic* 28.2 (1995): 123–48.
- Branigan, Edward. *Narrative Comprehension and Film*. London: Routledge, 2001. Sightlines.
- Braun, Michael. *Sein und Zeit: Duncan Jones' Gedankenspiel'film 'Source Code'*. Medienobservationen. Web. 30 Jan. 2012. http://www.medienobservationen.lmu.de/artikel/kino/kino_pdf/braun_code.pdf.
- Brereton, Brad. *Database Logics and New Media Convergences in Science Fiction. A Reading of Spielberg's 'Minority Report' and 'AI'*. Web. 28 Nov. 2011. <http://web.mit.edu/comm-forum/mit6/papers/Brereton.pdf>.
- Brereton, Pat. *Smart Cinema, DVD Add-ons and the Re-Educated Viewer*. Web. 23 Mar. 2012. http://web.mit.edu/comm-forum/mit7/papers/Brereton_SmartMITproposal.pdf.
- Brincken, Jörg von. *Das Leid an der Zeit. Gaspar Noés Skandalwerk 'Irréversible' als zeitbasiertes Filmereignis*. Medienobservationen. Web. 28. Nov. 2011. http://www.medienobservationen.lmu.de/artikel/kino/kino_pdf/brincken_irreversible.pdf.

- Broad, Lisa K. *Prisoners of Possibility: Robbe-Grillet's 'La Belle Captive' as 'Quantum Text'*. Senses of Cinema. Web. 18Mar.2012.
<http://sensesofcinema.com/2008/feature-articles/robbe-grillet-belle-captive/>.
- Brockmann, Madalina. *Metamorphosis and Identity: Psychoanalytical Notes to Miyazaki's 'Spirited Away' and 'Howl's Moving Castle'*. Medienobservationen. Web. 28. Nov. 2011.
http://medienobservationen.lmu.de/artikel/kino/brockmann_metamorphosis.htm.
- Bruckmoser, Barbara. *Hyperfiction – Belletristik am Bildschirm?*. Medienobservationen. Web. 28. Nov. 2011.
<http://www.medienobservationen.uni-muenchen.de/artikel/literatur/Hyper.html>.
- Bruner, Jerome S. *Actual Minds, Possible Worlds*. Cambridge: Harvard University Press, 1986.
- Bruner, Jerome S. "Life as Narrative" *Social Research* 54.1 (1987): 11–32.
- Bruner, Jerome S. "The Narrative Construction of Reality" *Critical Inquiry* 18.1 (1991): 1–21.
- Buchholz, Laura. "The Morphing Metaphor and the Question of Narrative Voice" *Narrative* 17.2 (2009): 200–19.
- Buckingham, David and Rebekah Willett. *Video Cultures: Media Technology and Everyday Creativity*. New York: Palgrave Macmillan, 2009.
- Buckland, Warren, ed. *Puzzle Films: Complex Storytelling in Contemporary Cinema*. Ed. Warren Buckland. Malden, MA: Wiley-Blackwell, 2009.
- Bühler, Karl. *Sprachtheorie: Die Darstellungsfunktion der Sprache*. 3rd ed. Stuttgart: Lucius & Lucius, 1999.
- Bünger, Traudl. *Narrative Computerspiele. Struktur & Rezeption*. München: kopaed, 2005.
- Cameron, Allan. "Contingency, Order, and the Modular Narrative: 21 Grams and Irreversible" *Velvet Light Trap* 58.1 (2006): 65–78.
- Campbell, Jane L. "Confecting Sugar: Narrative Theory and Practice in A. S. Byatt's Short Stories" *Critique: Studies in Contemporary Fiction* 38.2 (1997): 105–22.
- Caracciolo, Marco. "Those Insane Dream Sequences: Distorted Experience in Literature and Video Games" Johannes-Gutenberg-Universität. Mainz. 2 Jul. 2011.
- Carey, James W. "Harold Adams Innis and Marshall McLuhan" *The Antioch Review* 27.1 (1967): 5–39.
- Carlsten, Jennie. "'Somehow the Hate Has Got Mislaid': Adaptation & The End of The Affair" *Cinephile* 2 (2006): 3–7.
- Carolyn, Michelle. "(Re)contextualising Audience Receptions of Reality TV" *Particip@tions* 6.1 (2009): 137–70.
- Carroll, Noël and Jinhee Choi, eds. *Philosophy of Film and Motion Pictures: An Anthology*. Malden, MA: Blackwell Publishers, 2006.
- Cavazza, Marc and Stéphane Donikian, eds. *Virtual Storytelling: Using Virtual Reality Technologies for Storytelling: 4th International Conference, ICVS 2007, Saint-Malo, France, December 5–7, 2007, Proceedings*. Berlin: Springer, 2007. Lecture Notes in Computer Science.
- Cesar, Pablo, Konstantinos Chorianopoulos, and Jens F. Jensen, eds. *Interactive TV: A Shared Experience: 5th European Conference, EuroTV 2007, Amsterdam, the Netherlands, May 24–25, 2007, Proceedings*. Berlin: Springer, 2007. Lecture Notes in Computer Science.
- Chamberlain, Daniel. *Putting the TV Back in Television Studies*. Web. 2 Nov. 2011.
<http://flowtv.org/wp-content/uploads/2010/09/danielchamberlain.pdf>.
- Chandler, Aaron. Rev. of *Enduring Words: Literary Narrative in a Changing Media Ecology* by Michael Wutz. ORT: University of Alabama Press, 2009. *symploke* 18.1–2 (2010): 402–04.

- Charon, Rita. "Narrative Medicine: Attention, Representation, Affiliation" *Narrative* 13.3 (2005): 261–70.
- Chatman, Seymour B. *Story and Discourse: Narrative Structure in Fiction and Film*. Ithaca: Cornell University Press, 1993.
- Chua, Lawrence. "Peter Greenaway: An Interview" *Peter Greenaway: Interviews*. Ed. Peter Greenaway. Mississippi: University Press of Mississippi, 2000.
- Coates, Paul. "Just Gaming? Kieslowski's *Blind Chance*, Tykwer's *Run Lola Run*, with a Note on Heaven" *After Kieślowski*. Ed. Steven Woodward. Detroit: Wayne State University Press, 2009. 113–26.
- Cozarinsky, Edgardo and Jorge L. Borges. *Borges In/and/on Film*. Detroit: Gale Research, 1994.
- Crawford, Chris. *Chris Crawford on Interactive Storytelling*. Berkeley: New Riders Games, 2005.
- Currie, Mark. *About Time: Narrative, Fiction and the Philosophy of Time*. Edinburgh: Edinburgh University Press, 2007.
- Cwynar, Christopher. *TwitterTube. The Presentational Turn? On the Implications of Twitter for Television's Development in the Digital Convergence Era*. Web. 2 Nov. 2011. <http://flowtv.org/wp-content/uploads/2010/09/christophercwynar.pdf>.
- Daly, Kristen. "Cinema 3.0: The Interactive Image" *SCMS* 50.1 (2010): 81–98.
- Davis, Lauren. *First-Person Shooters Get Their Own Turing Test*. Web. 23 Feb. 2012. <http://io9.com/5356901/first+person-shooters-get-their-own-turing-test>.
- Davis, Madison J. "Is Heavy Rain in the Forecast". *World Literature Today* July-August (2010): 9–11.
- Dawson, Max. *Putting the TV Back in Television Studies*. Web. 2 Nov. 2011. <http://flowtv.org/wp-content/uploads/2010/09/maxdawson.pdf>.
- Dawson, Paul. "The Return of Omniscience in Contemporary Fiction" *Narrative* 17.2 (2009): 143–61.
- DeFehr, Wayne. "The Mythology of McLuhan" *English Studies in Canada* 36.2–3 (2010): 29–32.
- Deleuze, Gilles. *Das Bewegungs-Bild. Kino I*. Frankfurt am Main: Suhrkamp, 1989.
- Deleuze, Gilles. *Das Zeit-Bild. Kino II*. Frankfurt am Main: Suhrkamp, 1990.
- Deleuze, Gilles. *Difference and Repetition*. New York: Columbia University Press, 1994.
- Deleuze, Gilles. *Society of Control*. *l'autre journal*. Web. 23 Feb. 2012. <http://www.nadir.org/nadir/archiv/netzkritik/societyofcontrol.html>.
- Deleuze, Gilles and Félix Guattari. *A Thousand Plateaus: Capitalism and Schizophrenia*. London: Continuum, 2004.
- DeSmet, Alan. *Scourge of Worlds: A Dungeons and Dragons Adventure*. Web. 26 Feb. 2012. <http://www.highprogrammer.com/alan/gaming/dnd/greyhawk/sow/>.
- Diffrient, David S. *Alternate Futures, Contradictory Pasts: Forging Paths and Cubist Narratives in Contemporary Film*. *Screening the Past*. Web. 23. Nov. 2011. <http://www.latrobe.edu.au/screeningthepast/20/alternate-futures.html>.
- (Dis)Orienting Media and Narrative Mazes*, 2011. Web. 26 Feb. 2012. <http://www.ruhr-uni-bochum.de/disorienting-media/panelsites/panel5a.htm>.
- Distelmeyer, Jan, Christine Hanke, and Dieter Mersch (eds). *Game over?! Perspektiven des Computerspiels*. Bielefeld: Transcript, 2008.
- Dizikes, Peter. *The Meaning of the Butterfly. Why Pop Culture Loves the 'Butterfly Effect', and Gets It Totally Wrong*. The Boston Globe. Web. 15 Feb. 2012. http://www.boston.com/bostonglobe/ideas/articles/2008/06/08/the_meaning_of_the_butterfly/?page=full.
- Domsch, Sebastian. *Storyplaying: Agency and Narrative in Video Games*. Berlin: De Gruyter, 2013. Narrating Futures.

- Douthat, Ross. "... As Dreams Are Made On: Inception" Rev. of *Inception* by Christopher Nolan. *National Review* 62.15 (2010): 50.
- Dove-Viebahn, Aviva. *Serial Narratives and Viewing Demands I*. Web. 2 Nov. 2011. <http://flowtv.org/wp-content/uploads/2010/09/avivadoveviebahn.pdf>.
- Dubbelman, Teun. *Narrative in Transition: How New Media Change Our Experience of Stories*. Web. 6 Feb. 2012. <http://web.mit.edu/comm-forum/mit7/papers/Teun%20Dubbelman.pdf>.
- Eder, Jens. "Zur Spezifik audiovisuellen Erzählens" *Probleme filmischen Erzählens*. Ed. Hannah Birr. Berlin, Münster: Lit Verlag, 2009. 7–32.
- Eisenstein, Sergej M. "Dramaturgie der Film-Form: Der dialektische Zugang zur Film-Form" *Texte zur Theorie des Films*. Ed. Franz-Josef Albersmeier. Stuttgart: Reclam, 2003. 275–304.
- Elsaesser, Thomas. "The Mind-Game Film" *Puzzle Films: Complex Storytelling in Contemporary Cinema*. Ed. Warren Buckland. Malden, MA: Wiley-Blackwell, 2009. 13–41.
- Elsaesser, Thomas and Malte Hagener. *Filmtheorie zur Einführung*. 3rd ed. Hamburg: Junius, 2011.
- Erdinast-Vulcan, Daphna. "The I That Tells Itself: A Bakhtinian Perspective on Narrative Identity" *Narrative* 16.1 (2008): 1–15.
- Esposito, Tony. "Til Series Finale Do Us Part? Fan Commitment and the Long-running Series." Web. 2 Nov. 2011. <http://flowtv.org/wp-content/uploads/2010/09/tonyesposito.pdf>.
- Eysenck, Michael W. and Mark T. Keane. *Cognitive Psychology*. 5th ed. Hove: Psychology Press, 2005.
- Faina, Joseph. *TwitterTube. Twitter's New Celebrity: The Mediated Need for Recognition*. Web. 2 Nov. 2011. <http://flowtv.org/wp-content/uploads/2010/09/josephfaina.pdf>.
- Faulstich, Werner. *Grundkurs Filmanalyse*. 2. Aufl. Stuttgart: UTB, 2008.
- Faulstich, Werner. *Grundwissen Medien*. 5th ed. München: Fink, 2004.
- Felix, Jürgen, ed. *Die Wiederholung*. Marburg: Schüren, 2001.
- Ferenz, Volker. *Don't Believe His Lies: The Unreliable Narrator in Contemporary American Cinema*. Trier: WVT Wissenschaftlicher Verlag, 2008. Focal Point.
- Feyersinger, Erwin. "Transferring Narratological Concepts of Space to Augmented Reality Environments" Johannes-Gutenberg-Universität. Mainz. 2 Jul. 2011.
- Fischer, Ernst P. *Schrödingers Katze auf dem Mandelbrotbaum: Durch die Hintertür zur Wissenschaft*. München: Goldmann Verlag, 2008.
- Fludernik, Monika. *Towards a 'Natural' Narratology*. London: Routledge, 2005.
- Flusser, Vilém. *Kommunikologie*. Frankfurt: Fischer Taschenbuch Verlag, 1998.
- Font, Domènec. *In the Fabric of Time*. Formats. Web. 26 Feb 2012. http://www.upf.edu/materials/depeca/formats/pdf/_art_dos_ing2.pdf.
- Forrest, Tara, ed. *Alexander Kluge: Raw Materials for the Imagination*. Amsterdam: Amsterdam University Press, 2012.
- Forté, Tania. "Scripting for Hollywood: Power, Performance and the Heroic Imagination in Abu Hanna's 'Real Arabian Nights'" *History & Memory: Studies in Representation of the Past* 18.2 (2006): 48–85.
- Freedman, Eric. *Reality TV: Déjà Vu All Over Again? The Culture of Trauma*. Web. 2 Nov. 2011. <http://flowtv.org/wp-content/uploads/2010/09/ericfreedman.pdf>.
- Friesen, Norm. "Marshaling McLuhan for Media Theory" *English Studies in Canada* 36.2–3 (2010): 5–9.
- Fuchs, Michael. "'It's Not a Lake. It's an Ocean' Alan Wake, Transmedia Storytelling, and Meta-Media-Convergence" Johannes-Gutenberg-Universität. Mainz. 2 Jul. 2011.

- Fuchs, Kristen. *Reality TV: Déjà Vu All Over Again? Reality Crime Television in the 1950s*. Web. 26 Jan. 2012. <http://flowtv.org/wp-content/uploads/2010/09/kristenfuhs.pdf>.
- Fuller-Seeley, Kathryn. *Reality TV: Déjà Vu All Over Again? Aspects of Reality Television in 1930s US Culture*. Web. 2 Nov. 2011. <http://flowtv.org/wp-content/uploads/2010/09/kathrynfullerseeley.pdf>.
- Furze, Robert. "MIT7: Unstable Platforms: The Promise and Peril of Transition" *Massachusetts Institute of Technology, US/ Dublin City University, Ireland* 13–15 May 2011.
- Galili, Doron. *Putting the TV Back in Television Studies*. Web. 2 Nov. 2011. <http://flowtv.org/wp-content/uploads/2010/09/dorongalili.pdf>.
- Gallegos, Jose. Rev. of *Discourse Networks, 1800/1900* by Friedrich A. Kittler. ORT: Stanford University Press, JAH. *Nineteenth-Century Prose* 19.1 (1990): 126–27.
- Game One. *Episode 069: Storytelling Special*. Web. 4 Jun. 2008.
- Gardner, Jared. "Graphic Narrative and New Media Convergence" Johannes-Gutenberg-Universität. Mainz. 1 Jul. 2011.
- Gaylord, Joshua. "The Radiance of the Fake: Pylon's Postmodern Narrative of Disease" *The Faulkner Journal* 20.1–2 (2004): 177–95.
- Geimer, Alexander. *Der mindfuck als postmodernes Spielfilm-Genre*. Jump Cut Magazin. Web. 7 Mar. 2011. <http://www.jump-cut.de/mindfuck1.html>.
- Genette, Gérard. *Die Erzählung*. Stuttgart: UTB GmbH, 2010.
- Gilbert, Anne. *Serial Narratives and Viewing Demands I. Nowhere on the Next 'Arrested Development'*. Web. 2 Nov. 2011. <http://flowtv.org/wp-content/uploads/2010/09/annegilbert.pdf>.
- Gilbey, Ryan. "Never Can Say Goodbye" Rev. of *Toy Story 3* by Lee Unkrich and *Inception* by Christopher Nolan. *New Statesman* 139.5010 (2010). 42.
- Glass Osten, Kyra von der. "Animating Reality: Creating a New 'Real' With Animation Tools". Web. 2 Nov. 2011. <http://flowtv.org/wp-content/uploads/2010/09/kyra-glassvonderosten.pdf>.
- Goldstein, Leigh. *The Mass Audience Lives! (Or Does It?): Publics and The Mass Audience*. Web. 2 Nov. 2011. <http://flowtv.org/wp-content/uploads/2010/09/leighgoldstein.pdf>.
- Gough-Gordon, Elizabeth. *Putting the TV Back in Television Studies. TV Screens and the Mediation of Live Event Spectatorship*. Web. 2 Nov. 2011. <http://flowtv.org/wp-content/uploads/2010/09/elizabethgoughgordon.pdf>.
- Gow, Gordon. "Marshall McLuhan and the End of the World as We Know It" *English Studies in Canada* 36.2–3 (2010): 19–23.
- Granelli, Steven. *Reality TV: Déjà Vu All Over Again?*. Web. 2 Nov. 2011. <http://flowtv.org/wp-content/uploads/2010/09/stevengranelli.pdf>.
- Gray, Jonathan. *Introducing Television*. Flow. Web. 2 Nov. 2011. <http://flowtv.org/2006/04/television-mode-of-address/>.
- Gray, Jonathan and Jason Mittell. *Speculation on Spoilers: Lost Fandom, Narrative Consumption and Rethinking Textuality. Particip@tions* 4.1 (2007). Web. 5 Nov. 2011. http://www.participations.org/Volume%204/Issue%201/4_01_graymittell.htm.
- Greenaway, Peter. *Fear of Drowning by Numbers, Règles du Jeu (en anglais)*. Paris: Dis Voir, 1989.
- Greenaway, Peter (ed.). *Peter Greenaway: Interviews*. Mississippi: University Press of Mississippi, 2000.
- Grieb, Margit. *Transformations of the (Silver) Screen: Film After New Media*. Diss. University of Florida. Web. 12 Mar. 2012. http://etd.fcla.edu/UF/UFE0000690/grieb_m.pdf.

- Grishakova, Marina. "Beyond the Frame: Cognitive Science, Common Sense and Fiction" *Narrative* 17.2 (2009): 188–99.
- Groening, Stephen. *The Mass Audience Lives! (Or Does It?)*. Web. 2 Nov. 2011. <http://flowtv.org/wp-content/uploads/2010/09/stephengroening.pdf>.
- Groensteen, Thierry. "Ein erster Blumenstrauß von Zwängen. Die Spielregeln des OuBaPo" *Schreibheft, Zeitschrift für Literatur* 51 (1998): 182–202.
- Grusin, Richard. "DVDs, Video Games, and the Cinema of Interactions" *Ilha do Desterro Florianópolis* 51 (2006): 69–91.
- Gurevitch, Leon. *The Cinemas of Interactions: Cinematics and the 'Game Effect' in the Age of Digital Attractions*. Senses of Cinema. Web. 20 Mar. 2012. <http://sensesofcinema.com/2010/feature-articles/the-cinemas-of-interactions-cinematics-and-the-game-effect/-in-the-age-of-digital-attractions/>.
- Haas, Norbert, ed. *Schriften. Band II. Weinheim/ Berlin: Quadriga, 1986*.
- Hall, Stefan. "'You've Seen The Movie, Now Play The Video Game': Recoding The Cinematic in Digital Media and Virtual Culture" Diss. Bowling Green State University, 2011.
- Hallet, Wolfgang. "The Rise of the Multimodal Novel: Generic Change and Its Narratological Implications" Johannes-Gutenberg-Universität. Mainz. 1 Jul. 2011.
- Haltorf, Marek. *The Cinema of Krzysztof Kieślowski: Variations on Destiny and Chance*. London: Wallflower, 2004.
- Hank, Sara. *Zeitschleifenfilme und ihr Umgang mit Kausalität, Schicksal und dem freien Willen*. München: Grin Verlag, 2010.
- Harries, Dan, ed. *The New Media Book*. London: BFI Publishing, 2002.
- Harris, Charles B. "A Continuing, Strange Love Letter": Sex and Language in *Lost in the Funhouse*" *Passionate Virtuosity. The Fiction of John Barth*. Ed. Charles B. Harris. Urbana: University of Illinois Press, 1983. 106–26.
- Harris, Paul A. "Deleuze's Cinematic Universe of Light: A Cosmic Plane of Luminance" *SubStance* 39.1 (2010): 115–24.
- Harvey, Colin B. "A Taxonomy of Transmedia Storytelling" Johannes-Gutenberg-Universität. Mainz. 30 Jun. 2011.
- Hawthorne, Christopher. *The Salon Interview with Greenaway*. Web. 12 Sept. 2004. <http://users.skynet.be/chrisrenson-makemovies/greenaw6.htm>.
- Hellekson, Karen. *Science Fiction: What Does the Future Hold?*. Web. 2 Nov. 2011. <http://flowtv.org/wp-content/uploads/2010/09/karenhellekson.pdf>.
- Heller, Heinz B. "Ou bien ou bien: Differenz und Wiederholung in Alain Resnais' *Smoking / No Smoking*" *Die Wiederholung*. Ed. Jürgen Felix. Marburg: Schüren, 2001.
- Hendershot, Heather. *Science Fiction: What Does the Future Hold? One of Fifty-Seven Academics, Punching the Air*. Web. 2 Nov. 2011. <http://flowtv.org/wp-content/uploads/2010/09/aheatherhendershot.pdf>.
- Herman, David. "Storytelling and the Sciences of Mind: Cognitive Narratology, Discursive Psychology, and Narratives in Face-to-Face Interaction" *Narrative* 15.3 (2007): 306–34.
- Hickethier, Knut. *Einführung in die Medienwissenschaft*. Stuttgart: Metzler, 2003.
- Hickethier, Knut. *Film- und Fernsehanalyse*. 4th ed. Stuttgart: Metzler, 2007.
- Hill, Annette. *Reality TV: Audiences and Popular Factual Television*. New York: Routledge, 2005.
- Hill, Elbert R. "A Hero for the Movies" *Children's Novels and the Movies*. Ed. Douglas Street. New York: Frederick Ungar Publishing Company, 1983. 236–43.
- Holmes, Su. "'The Viewers Have ... Taken Over the Airwaves'? Participation, Reality TV and Approaching the Audience-in-the-Text" *Screen* 49.1 (2008): 13–31.

- Homer, Sean. *Jacques Lacan*. London: Routledge, 2005.
- Huber, Jörg. "Friedrich A. Kittler: Geschichte der Kommunikationsmedien" *Raum und Verfahren*. Ed. Alois Martin Müller. Basel: Stroemfeld/Roter Stern, 1993. 169–88.
- Huizinga, Johan. *Homo ludens: Vom Ursprung der Kultur im Spiel*. 19th ed. Reinbek bei Hamburg: Rowohlt, 2004.
- Hummel, Andreas. *Kennzeichen der 'Soap Opera': Zur unterschiedlichen Aktualisierung in deutschen und amerikanischen Fernsehserien*. Medienobservationen. Web. 01 Dec 2011. <http://www.medienobservationen.uni-muenchen.de/artikel/tv/Soap.html>.
- Hurley, Marian, Deborah Mellamphy, and Jill Moriarty. *Space and Time in Film: Issue Editors' Note*. Web. 15 Feb. 2012. <http://www.alphavillejournal.com/Issue%202/PDFs/ArticlesPDF/2Editors'Note.pdf>.
- Huwiler, Elke. "Storytelling in Performances: A Historical Perspective" Johannes-Gutenberg-Universität. Mainz. 2 Jul. 2011.
- Imagined Futures*. ASCA Research Project. Web. 10 Mar. 2012. <http://www.imaginedfutures.org/>.
- Iyengar, Sheena. *The Art of Choosing: The Decisions We Make Everyday – What They Say About Us and How We Can Improve Them*. London: Little, Brown Book Group, 2010.
- Jackel, Susan. "(Herbert) Marshall McLuhan" *Canadian Writers, 1920–1959: Second Series*. Ed. William H. New, 1989. 88. Dictionary of Literary Biography.
- Jackson, Josh D. *Comics Across Media: 'Comic Book Companies and Experimentation with Transmedia Property Management and Digital Delivery'*. Web. 2 Nov. 2011. <http://flowtv.org/wp-content/uploads/2010/09/joshdavidjackson.pdf>.
- Jackson, Tony. "Writing, Orality, Cinema: The 'Story' of Citizen Kane" *Narrative* 16.1 (2008): 29–45.
- Jahraus, Oliver. *Filmmetapher – Bewusstseinsmetapher: Zu Christopher Nolans Meisterwerk 'Inception'*. Medienobservationen. Web. 28 Nov. 2011. http://www.medienobservationen.lmu.de/artikel/kino/kino_pdf/jahraus_inception.pdf.
- Jenkins, Henry. *Convergence Culture: Where Old and New Media Collide*. New York: New York University Press, 2006.
- Jenkins, Henry. *Fans, Bloggers, and Gamers: Exploring Participatory Culture*. New York: New York University Press, 2006.
- Jenkins, Henry. *Game Design as Narrative Architecture*. Web. 23 Oct. 2011. <http://web.mit.edu/cms/People/henry3/games&narrative.html>.
- Jenkins, Henry. *Textual Poachers: Television Fans & Participatory Culture*. London: Routledge, 1992.
- Jenkins, Henry. *The Revenge of the Origami Unicorn: Seven Principles of Transmedia Storytelling*. Web. 2 Nov. 2011. http://henryjenkins.org/2009/12/the_revenge_of_the_origami_uni.html.
- Jenkins, Henry. "Fictionality across Media: Transmedial Concepts of Fictionality" Johannes-Gutenberg-Universität. Mainz. 1 Jul. 2011.
- Johnson, Derek. *Managing Media Production in the Age of Convergence. 'Creative License: Setting the Terms of Convergence'*. Web. 2 Nov. 2011. <http://flowtv.org/wp-content/uploads/2010/09/derek-johnson.pdf>.
- Johnson, Gary. "Consciousness as Content: Neuronarratives and the Redemption of Fiction" *Mosaic* 41.1 (2008): 169–84.
- Johnson, Kirsten and Jim Bizzocchi. "Lost Cause: An Interactive Film Project" *International Digital Media and Art Association Beyond Boundaries* (2007): 569–78.

- Johnson-Lewis, Erika. *Serial Narratives and Viewing Demands II*. Web. 2 Nov. 2011. <http://flowtv.org/wp-content/uploads/2010/09/erikajohnsonlewis.pdf>.
- Jones, Adrian. "Meaning and the Interactive Narrative: In the Context of Object-Oriented Interactive Cinema" MA Thesis. Simon Fraser University of Surrey, 2003.
- Juul, Jesper. *Half-Real: Video Games Between Real Rules and Fictional Worlds*. Cambridge, Mass.: MIT Press, 2011.
- Juul, Jesper. "The Paradox of Interactive Tragedy: Can a Video Game have an Unhappy Ending" Johannes-Gutenberg-Universität. Mainz. 2 Jul. 2011.
- Kachgal, Tara. "Til Series Finale Do Us Part?" *Fan Commitment and the Long-running Series*. Web. 2 Nov. 2011. <http://flowtv.org/wp-content/uploads/2010/09/tarakachgal.pdf>.
- Kafalenos, Emma. "Reading Visual Art, Making- and Forgetting-Fabulas" *Narrative* 9.2 (2001): 138–45.
- Kaiser, Tina. *Geldmaschine 'Deutschland sucht den Superstar'*. Web. 18 Mar 2012. http://www.welt.de/wirtschaft/article1680376/Geldmaschine_Deutschland_sucht_den_Superstar.html.
- Kallwies, Nicole, ed. *Mediale Ansichten*. Marburg: Schüren, 2006.
- Kappelhoff, Hermann. *Narrative Space – Plot Space – Image Space*. Web. 22 Feb. 2012 http://www.hermann-kappelhoff.de/01/images/stories/narrative_space_onlineversion.pdf.
- Katz, Adam. "Narrative Thinking and Experiential Knowledge: The Example of Ronald Sukenick" *Texas Studies in Literature and Language* 47.3 (2005): 189–212.
- Kaul, Susanne, Jean-Pierre Palmier, and Timo Skrandies, eds. *Erzählen im Film: Unzuverlässigkeit – Audiovisualität – Musik*. Bielefeld: Transcript, 2009. Medienkulturanalyse.
- Keating, Patrick. "Emotional Curves and Linear Narratives" *The Velvet Light Trap* 58 (2006): 4–15.
- Kelomees, Raivo. *Stories with Choices: Artist's Multimedia Narratives*. Media in Transition 7. Web. 20 Nov 2011. http://web.mit.edu/comm-forum/mit7/papers/mit7_Raivo%20Kelomees%20Stories%20with%20Choices.pdf.
- Kinder, Marsha. "Narrative Equivocations between Movies and Games" *The New Media Book*. Ed. Dan Harries. London: BFI Publishing, 2002.
- Kirchmeier, Christian. *The Medium is the Message. James Camerons 'Avatar'*. Medienobservationen. Web. 30 Jan. 2012. http://www.medienobservationen.lmu.de/artikel/kino/kino_pdf/kirchmeier_avatar.pdf.
- Kiss, Miklós. *Navigation and Puzzle Films: Reallife Embodied Experiences*. RUBCast. Web. 10 Mar. 2012. <http://www.rubcast.rub.de/index2.php?id=880>.
- Kittler, Friedrich A. *Gramophone, Film, Typewriter*. Stanford, Calif.: Stanford University Press, 1999. Writing Science.
- Kittler, Friedrich A. "Pynchon and Electro-Mysticism" *Pynchon Notes* 54–55 (2008): 108–21.
- Klastrup, Lisbeth a. S. T. "A Game of Thrones: Transmedial Worlds, Fandom, and Social Gaming" Johannes-Gutenberg-Universität. Mainz. 30 Jun. 2011.
- Kloock, Daniela and Angela Spahr, eds. *Medientheorien: Eine Einführung*. 3rd ed. Stuttgart: UTB, 2008.
- Kneip, Ansbert. "Versicherungen. Die Katastrophen-Zähler" *Spiegel*. Web. 12 Nov. 2011. <http://www.spiegel.de/wissenschaft/natur/versicherungen-die-katastrophen-zaehler-a-624661.html>.
- Kolenic, Anthony J. "Madness in the Making: Creating and Denying Narratives from Virginia Tech to Gotham City" *The Journal of Popular Culture* 42.6 (2009): 1023–39.

- Korte, Helmut and Peter Drexler. *Einführung in die systematische Filmanalyse: Ein Arbeitsbuch*. 2., durchges. Aufl. Berlin: Schmidt, 2001.
- Kraidy, Marwan. "Reality Television and Politics in the Arab World (Preliminary Observations)" *Transnational Broadcasting Studies* 2.1 (2006): 7–28.
- Kracauer, Siegfried. "Die Errettung der physischen Realität: Eine Kunst, die anders ist" *Texte zur Theorie des Films*. Ed. Franz-Josef Albersmeier. Stuttgart: Reclam, 2003.
- Krützen, Michaela. *Dramaturgie des Films: Wie Hollywood erzählt*. Originalausg. Frankfurt am Main: Fischer Taschenbuch Verlag, 2004.
- Kupfer, Joseph. "Film Criticism and Virtue Theory" *Philosophy of Film and Motion Pictures: An Anthology*. Ed. Noël Carroll and Jinhee Choi. Malden, MA: Blackwell Publishers, 2006. 335–46.
- Kustritz, Anne. *Rethinking the Audience/Producer Relationship. Codebreakers, Tastemakers, and Transformers: Audience Influence in the Age of Industry 'Synergy'*. Web. 2 Nov. 2011. <http://flowtv.org/wp-content/uploads/2010/09/annekustritz.pdf>.
- Lacan, Jacques. "Die Bedeutung des Phallus" *Schriften II*. Ed. Norbert Haas. Weinheim Berlin: Quadriga, 1986. 119–32.
- Lally, Elaine. *At Home With Computers*. Oxford: Berg, 2002.
- Landow, George P. *Hypertext: The Convergence of Contemporary Critical Theory and Technology*. Baltimore, Md.: The John Hopkins University Press, 1993.
- Lange, Julia. *Reality TV: Déjà Vu All Over Again?*. Web. 2 Nov. 2011. <http://flowtv.org/wp-content/uploads/2010/09/julialange.pdf>.
- Larsen, Reif. *The Selected Works of T.S. Spivet*. London: Vintage, 2010.
- Lavik, Erlend. "Narrative Structure in *The Sixth Sense*: A New Twist in 'Twist Movies'" *The Velvet Light Trap* 58 (2006): 55–64.
- Lee, Micky. *Managing Media Production in the Age of Convergence*. Web. 2 Nov. 2011. <http://flowtv.org/wp-content/uploads/2010/09/mickylee.pdf>.
- Lehman, Peter and William Lühr. *Thinking About Movies: Watching, Questioning, Enjoying*. 3rd ed. Malden MA: Blackwell Publishers, 2008.
- Lessing, Gotthold E. *Laokoon: Über die Grenzen der Malerei und Poesie*. Stuttgart: Reclam, 1987.
- Levin Russo, Julie. *TwitterTube. Twansformative? The Future of Fandom on Twitter*. Web. 2 Nov. 2011. <http://flowtv.org/wp-content/uploads/2010/09/julielevinrusso.pdf>.
- Lieser, Wolf. *The World of Digital Art*. Potsdam: H.F.Ullmann, 2010.
- Lippert, Barbara. *HBO's 'Voyeur' Teases, Pleases*. Web. 2007. <http://www.adweek.com/news/advertising/hbos-voyeur-teases-pleases-89537>.
- Lizardi, Ryan. *Serial Narratives and Viewing Demands*. Web. 2 Nov. 2011. <http://flowtv.org/wp-content/uploads/2010/09/ryanlizardi.pdf>.
- Long, Jonathan J. "History, Narrative, and Photography in W.G. Sebald's *Die Ausgewanderten*" *The Modern Language Review* 98.1 (2003): 117–37.
- Lorenz, Edward N. *The Essence of Chaos*. 1st ed. Seattle: University of Washington Press, 1995.
- Louchart, Sandy and Ruth Aylett. "Narrative Theory and Emergent Interactive Narrative" *International Journal of Continuing Engineering Education and Lifelong Learning* 14.6 (2004): 506–18.
- Loyens, Axel. "Irreversible" oder "Wenn's einen selbst trifft, dann verliert man den Boden". *Medienobservationen*. Web. 2 Nov. 2011.
- Loyens, Axel. "Physik der Materie: Quantenmechanik" *Ludwig-Maximilians-Universität*, 2006.

- Lunenfeld, Peter. "The Myths of Interactive Cinema" *Narrative Across Media: The Languages of Storytelling*. Ed. Marie-Laure Ryan. Lincoln: University of Nebraska Press, 2004. Frontiers of Narrative.
- Mahne, Nicole. *Transmediale Erzähltheorie: Eine Einführung*. Göttingen: Vandenhoeck & Ruprecht, 2007.
- Manovich, Lev, ed. *Info-Aesthetics*. London: Bloomsbury Academic, 2010.
- Manovich, Lev, ed. *The Language of New Media*. Cambridge, Mass.: MIT Press, 2001.
- Mathijs, Ernest and Janet Jones, eds. *Big Brother International: Formats, Critics and Publics*. London: Wallflower Press, 2004.
- McClanahan, Annie J. "Salto Mortale: Narrative, Speculation, and the Chance of the Future" Diss. University of California, Berkeley, 2010.
- McCormick, Casey. *Science Fiction: What Does the Future Hold?*. Web. 2 Nov. 2011. <http://flowtv.org/wp-content/uploads/2010/09/caseymccormick.pdf>.
- McCracken, Harry. "You Oughta be in Pictures: New Software Puts Your Face in Movies and Games" *Popular Science* 15 Apr. 2009: 25.
- McEntaggart, Patrick. *Once Upon a Paradigm Shift: Interactive Storytelling in a New Media Context*. Web. 12 Dec. 2011. <http://www.inter-disciplinary.net/wp-content/uploads/2010/02/patrickpaper.pdf>.
- McGonigal, Jane. *Reality is Broken: Why Games Make us Better and How They Can Change the World*. New York: Penguin Press, 2011.
- McKenzie, Jon. "Networked Art: (Book Notes)" *sympløke* (2002): 205.
- McLean, Adrienne. "Marshall McLuhan, Television Culture, and 'The X-Files'" *Film Quarterly* 51.4 (1998): 2–11.
- McLuhan, Marshall and Terrence W. Gordon. *Understanding Media: The Extensions of Man*. Critical ed. Corte Madera, CA: Gingko Press, 2003.
- McVittie, Nancy. *Left Behind. Worth-less? Classic Newspaper Comics and 'Mary Worth' in a New World of Nostalgia and Irony*. Web. 2 Nov. 2011. <http://flowtv.org/wp-content/uploads/2010/09/nancymcvittie.pdf>.
- Meifert-Menhard, Felicitas. *Playing the Text, Performing the Future: Future Narratives in Print and Digiture*. Berlin: De Gruyter, 2013. Narrating Futures.
- Mersch, Dieter. *Medientheorien zur Einführung*. 1st ed. Hamburg: Junius, 2006.
- Meskill, Carla. "Producterly Texts: Implications for Language in Education" *Language and Education: An International Journal* 21.2 (2007): 95–106.
- Metz, Walter. "Woody's Melindas and Todd's Stories: Complex Film Narratives in the Light of Literary Modernism" *Film Criticism* 31.1–2 (2005): 107–31.
- Meyers, Erin. *TwitterTube. Stars – They Tweet Like Us! Celebrity Twitter Feeds and the Illusion of Intimacy*. Web. 2 Nov. 2011. <http://flowtv.org/wp-content/uploads/2010/09/erinmeyers.pdf>.
- Michelle, Carolin. "(Re)Contextualising Audience Receptions of Reality TV" *Participations* 6.1 (2009): 137–70.
- Mietzel, Gerd. *Pädagogische Psychologie des Lernens und Lehrens*. 7th ed. Göttingen: Hogrefe, Verlag für Psychologie, 2003.
- Mikkonen, Kai. "The 'Narrative is Travel' Metaphor: Between Spatial Sequence and Open Consequence" *Narrative* 15.3 (2007): 286–305.
- Miller, J. Hillis. "'World Literature' in the Age of Telecommunications" *World Literature Today* 74.3 (2000): 559–61.

- Mittell, Jason. "A Cultural Approach to Television Genre Theory" *Cinema Journal* 40 (2001): 3–24.
- Mittell, Jason. *Complex Television: The Poetics of Contemporary Television Narrative: A Proposal For a Multiplatform Book*. Web. 2 Nov. 2011. <http://mediacommons.futureofthebook.org/mcpress/complextelevision/book-proposal/>.
- Mittell, Jason. *Lost in an Alternate Reality*. Web. 2 Nov. 2011. <http://flowtv.org/2006/06/lost-in-an-alternate-reality/>.
- Mittell, Jason. *Lost in a Great Story*. Web. 2 Nov. 2011. <http://justtv.wordpress.com/2007/10/23/lost-in-a-great-story/>.
- Mittell, Jason. "Narrative Complexity in Contemporary American Television" *The Velvet Light Trap* 58 (2006): 29–40.
- Mittell, Jason. *Playing for Plot in the Lost and Portal Franchises*. Web. 2 Nov. 2011. <http://justtv.wordpress.com/2011/10/22/playing-for-plot-in-the-lost-and-portal-franchises/>.
- Mittell, Jason. *Sites of Participation: Wiki Fandom and the Case of Lostpedia*. Web. 5 Nov. 2011. <http://journal.transformativeworks.org/index.php/twc/article/view/118/117>.
- Mittell, Jason. "Strategies of Storytelling on Transmedia Television" Johannes-Gutenberg-Universität. Mainz.
- Mittell, Jason. *The New Criticism? Academia, Journalism, and Digital Critics*. Web. 2 Nov. 2011. <http://flowtv.org/wp-content/uploads/2010/09/jasonmittell.pdf>.
- Mittell, Jason. *The Quality of Complexity*. Web. 2 Nov. 2011. <http://justtv.wordpress.com/2011/05/24/the-quality-of-complexity/>.
- Monaco, James. *Film verstehen: Kunst, Technik, Sprache, Geschichte und Theorie des Films und der neuen Medien; mit einer Einführung in Multimedia*. 2. Aufl. Reinbek bei Hamburg: Rowohlt Taschenbuch Verlag, 2000.
- Mondada, Lorenza. "Video Recording Practices and the Reflexive Constitution of the Interactional Order: Some Systematic Uses of the Split-Screen Technique" *Human Studies* 32.1 (2009): 67–99.
- Montfort, Nick. "The Garden of Forking Paths" *The New Media Reader*. Ed. Noah Wardrip-Fruin and Nick Montfort. Cambridge, Mass. MIT Press, 2003. 29–34.
- Müller, Klaus P. "More Choice – Less Freedom? Mediated Narratives of Human History" MIT 7 Unstable Platforms: the Promise and Perils of Transition. Web. 22 Feb. 2012. <http://web.mit.edu/comm-forum/mit7/papers/Muller%20Draft%20MIT%20May%202011.pdf>.
- Mulvey, Laura. "Visuelle Lust und narratives Kino" *Texte zur Theorie des Films*. Ed. Franz-Josef Albersmeier. Stuttgart: Reclam, 2003. 389–408.
- Mundhenke, Florian. *Zufall und Schicksal – Möglichkeit und Wirklichkeit: Erscheinungsweisen des Zufälligen im zeitgenössischen Film*. Marburg: Schüren, 2008. Aufblende.
- Münker, Stefan and Alexander Roesler. *Was ist ein Medium?* 1st ed. Frankfurt am Main: Suhrkamp, 2008.
- Murphy, Sheila. "'This is Intelligent Television': Early Video Games and Television in the Emergence of the Personal Computer" *The Video Game Theory Reader 2*. Ed Bernard Perron and Mark J.P. Wolf. London: Routledge, 2008. 197–212.
- Murray, Janet H. *Hamlet on the Holodeck: The Future of Narrative in Cyberspace*. Cambridge, Mass.: MIT Press, 2000.
- Murray, Janet H. *The Last Word on Ludology v Narratology in Game Studies*. Web. 9 Jan. 2012. <http://lcc.gatech.edu/~murray/digra05/lastword.pdf>.
- Musser, George. "Kann die Zeit enden" *Spektrum der Wissenschaft* 4/2011 (2011): 56–64. Web.
- Nairn, Tom. "Into McLuhan's Maelstrom" *New Statesman* 74.1906 (1967): 362–63.

- Nandrea, Lorri. "Objectless Curiosity: Frankenstein, The Station Agent, and Other Strange Narratives" *Narrative* 15.3 (2007): 335–56.
- Neitzel, Britta. "Gespielte Geschichten: Struktur- und prozessanalytische Untersuchungen der Narrativität von Videospiele" Diss. Bauhaus-Universität Weimar, 2000.
- Neitzel, Britta. "Videospiele – zwischen Fernsehen und Holodeck" *TV Trash. The TV-Show I Love to Hate*. Ed Ulrike Bergemann and Hartmut Winkler. Marburg: Schüren, 2000. 107–22.
- Neitzel, Britta (ed.). "See? I'm real...": *Multidisziplinäre Zugänge zum Computerspiel am Beispiel von 'Silent Hill'*. 3. Aufl. Münster: Lit, 2010. MedienWelten.
- Neitzel, Britta and Rolf F. Nohr, eds. *Das Spiel mit dem Medium: Partizipation – Immersion – Interaktion*. Marburg: Schüren, 2006. Schriftenreihe der Gesellschaft für Medienwissenschaft.
- Nelmes, Jill. *Introduction to Film Studies*. 4th ed. London: Routledge, 2007.
- Neumann, Birgit and Ansgar Nünning. *An Introduction to the Study of Narrative Fiction*. 1st ed. Stuttgart: Klett, 2008.
- Newman, Michael Z. "Character and Complexity in American Independent Cinema: *21 Grams* and *Passion Fish*" *Film Criticism* 31.1–2 (2006): 89–106.
- Newman, Michael Z. *The Mass Audience Lives! (Or Does It?)*. Web. 2 Nov. 2011. <http://flowtv.org/wp-content/uploads/2010/09/michaelnewman.pdf>.
- Ng, Eve. *Rethinking the Audience/Producer Relationship. Fans as Producers? The Professionalization of Cultural Production at Commercial 'Fan Sites'*. Web. 2 Nov. 2011. <http://flowtv.org/wp-content/uploads/2010/09/eveng.pdf>.
- Nicholson, Hope. *Comics Across Media*. Web. 2 Nov. 2011. <http://flowtv.org/wp-content/uploads/2010/09/hopenicholson2.pdf>.
- Orth, Dominik. *Mediale Zukunft – Die Erreichbarkeit des (Anti-)Utopischen*. Medienobservationen. Web. 30 Jan. 2012. http://www.medienobservationen.lmu.de/artikel/kino/kino_pdf/orth_zukunft.pdf.
- Ott, Michaela. *Gilles Deleuze zur Einführung*. Hamburg: Junius, 2005. Zur Einführung. Oxford English Dictionary. Web.
- Ott, Michaela. *future, n.*: *Oxford English Dictionary*. Web. 24 Feb. 2012.
- Ott, Michaela. *motion picture, n.*: *Oxford English Dictionary*. Web. 24 Feb. 2012.
- Ott, Michaela. *space-time, adj. and n.*: *Oxford English Dictionary*. Web. 24 Feb. 2012.
- Panek, Elliot. *Serial Narratives and Viewing Demands I*. Web. 2 Nov. 2011. <http://flowtv.org/wp-content/uploads/2010/09/elliotpacak.pdf>.
- Panek, Elliot. "The Poet and the Detective: Defining the Psychological Puzzle Film" *Film Criticism* 31.1–2 (2006): 62–88.
- Parks, Lisa. *Remodeling Television*. Web. 2 Nov. 2011. <http://flowtv.org/wp-content/uploads/2010/09/lisaparks1.pdf>.
- Parsons, James. "Genette on Film: Temporal Order and Tense in Non-Chronological Cinema" *Enquiry* 2.1 (2010). Web. 12 Feb. 2012. <http://research.shu.ac.uk/aces/enquiry/index.php/enquiry/article/viewFile/16/25>.
- Pérez, Nathalie S. *El jardín de senderos que se bifurcan: Borges und das Rhizom nach Deleuze und Guattari*. 1. Aufl. München: Grin Verlag, 2009.
- Perlmutter, Ruth. "Memories, Dreams, Screens" *Quarterly Review of Film and Video* 22.2 (2005): 125–34.
- Perron, Bernard. "From Gamers to Players and Gameplayers: The Example of Interactive Movies" *The Video Game Theory Reader*. Ed. Mark J. P. Wolf and Bernard Perron. London: Routledge, 2003. 237–57.

- Pezzotta, Elisa. *Personal Time in Alternative and Time Travel Narrative: The Cases of 'Groundhog Day', 'Twelve Monkeys' and '2001: A Space Odyssey'*. Web. 15 Feb. 2012. <http://www.alphavillejournal.com/Issue%202/PDFs/ArticlesPDF/ArticlePezzotta.pdf>.
- Phelan, James. "Estranging Unreliability, Bonding Unreliability, and the Ethics of Lolita" *Narrative* 15.2 (2007): 222–38.
- Phelan, James. "The Narrative Turn and the How of Narrative Inquiry" *Narrative* 17.1 (2009): 1.
- Phelan, James. "Thoughts on Narrative Acquisition: Fiction, Nonfiction, and Allegory" *Narrative* 12.3 (2004): 231–32.
- Phelan, James. "Who's Here? Thoughts on Narrative Identity and Narrative Imperialism" *Narrative* 13.3 (2005): 205–10.
- Phelan, James and Peter J. Rabinowitz, eds. *A Companion to Narrative Theory*. Malden, MA: Blackwell Publishers, 2005.
- Phelan, James and Peter J. Rabinowitz, eds. *Understanding Narrative*. Columbus: Ohio State University Press, 1994.
- Pimenta, Joana. "Travelling Through the Layers of Time" Rev. of *Chris Marker* by Sarah Cooper. Manchester: Manchester University Press, 2008. *Film-Philosophy* 14.1 (2010): 401–14.
- Pogue, David. "Hollywood's Great Scenes, Starring You" *New York Times*, 2 Sept. 2009. Web. 12 Dec. 2011. <http://www.nytimes.com/2009/09/03/technology/personaltech/03pogue.html?pagewanted=all>.
- Poletti, Anna. "Auto/Assemblage: Reading the Zine" *Biography* 31.1 (2008): 85–102.
- Poletti, Anna and Gillian Whitlock. "Self-Regarding Art" *Biography* 31.1 (2008): v–xxiii.
- Polk, Jonathan D. *Comics Across Media. Leading the Transmedia Revolution: Comics and Other Media*. Web. 2 Nov. 2011. <http://flowtv.org/wp-content/uploads/2010/09/jonathandpolk.pdf>.
- Porpora, Mario. *We Will Be Here – Map of the Future*. Density Design. Web. 2 Nov. 2011. <http://www.densitydesign.org/2009/10/we-will-be-here-map-of-the-future/>.
- Porst, Jennifer. *Rethinking the Audience/Producer Relationship Roundtable. Producers' Pragmatic Perceptions of Audiences and Fans*. Web. 2 Nov. 2011. <http://flowtv.org/wp-content/uploads/2010/09/jenniferporst.pdf>.
- Poulaki, Maria. "The Subject Trapped in *Gomorrah*: Undecidability and Choice in Network Cinema" *Film-Philosophy* 16.1 (2012): 55–71.
- Poulaki, Maria. *Towards a Complex Systems Theory of Contemporary Films*. University of Amsterdam. Web. 10 Mar. 2012.
- Powell, Larson. "Harry Lehmann. Die flüchtige Wahrheit der Kunst" Rev. of *Die flüchtige Wahrheit der Kunst* by Harry Lehman. *The Germanic Review* 83.3 (2008): 271–74.
- Preis, Michael. *Das Ereignis der Zukunft. Prinzipien der Subjektconstitution in den Filmen 'Ghostrider', 'Knowing' und 'Next' mit Nicolas Cage*. Medienobservationen. Web. 30 Jan. 2012. http://www.medienobservationen.lmu.de/artikel/kino/kino_pdf/preis_ereignis.pdf.
- Pressman, Jessica. "House of Leaves: Reading the Networked Novel" *Studies in American Fiction* 34.1 (2006): 107–28.
- Price Baron, Julia. "Til Series Finale Do Us Part?: Fan Commitment and the Long-running Series. 'I Bet This Show Won't Ever End': TeenNick, 'Degrassi' Promos, and the Long-running Fan Relationship". Web. 2 Nov. 2011. <http://flowtv.org/wp-content/uploads/2010/09/juliapricebaron.pdf>.
- Rafferty, Terence. "Everybody Gets a Cut: DVDs Give Viewers Dozens of Choices – And That's the Problem" *Philosophy of Film and Motion Pictures: An Anthology*. Ed. Noël Carroll and Jinhee Choi. Malden, MA: Blackwell Publishers, 2006. 44–49.

- Raphael, Jackie. *TwitterTube*. Web. 2 Nov. 2011. <http://flowtv.org/wp-content/uploads/2010/09/jackieraphael.pdf>.
- Rauscher, Andreas. "Transmedia Storytelling as Ludo-Narrative-Patchwork" Johannes-Gutenberg-Universität. Mainz. 30 Jun. 2011.
- Rev. of *Source Code* by Duncan Jones. *Rotten Tomatoes*. Web. 18 Mar. 2012. http://www.rottentomatoes.com/m/source_code/.
- Richardson, Brian, ed. *Narrative Dynamics*. Columbus: Ohio State University Press, 2002.
- Richardson, Brian, ed. "Singular Text, Multiple Implied Readers" *Style* 41.3 (2007): 259–74.
- Richter, David H. "Your Cheatin' Art: Double Dealing in Cinematic Narrative" *Narrative* 13.1 (2005): 11–28.
- Rickels, Laurence A. "Introduction" *Discourse* 31.1–2 (2009): 3–8.
- Ricks, Christopher. "Electronic Man" *New Statesman* 68.1761 (1964): 925–26.
- Ricœur, Paul. *Time and Narrative I*. 3 vols. Chicago: The University of Chicago Press, 1984.
- Rieser, Martin and Andrea Zapp, eds. *New Screen Media: Cinema/Art/Narrative*. London: BFI Publishing, 2002.
- Robinson, Andy et al. *Uncharted 3 created like a Hollywood Movie: Studio Details Motion Capture and Voice Acting Procedure*. CVG. Web. 20 Feb 2012. <http://www.computerandvideogames.com/287741/uncharted-3-created-like-a-hollywood-movie-naughty-dog/>.
- Römer, Stefan. "Erzählanalysen". *Bild Erzählung* 4. München: Terrain Vague, 2008. 8–9.
- Römer, Stefan. "Zur Polarität von Ikone und Narration: Bildmacht und Bilderzählung" *Bild Erzählung* 4. München: Terrain Vague, 2008. 12.
- Rodowick, David N. *The Virtual Life of Film*. Cambridge, Mass.: Harvard University Press, 2007.
- Romney, Jonathan. "Rules of the Game" *Sight and Sound* 4.9 (1994): 10–13.
- Rose, Frank et al. *How the Internet is Changing Storytelling. Deep Media. Engagement: Is TV Finally Ready for a New Metric?*. Web. 13 Dec. 2011. <http://www.deepmediaonline.com/>.
- Rosenberg, Daniel and Anthony Grafton. *Cartographies of Time*. 1st ed. New York: Princeton Architectural Press, 2010.
- Roser, Traugott. "'Lola rennt'" oder: Drei vergebliche Versuche über Eindeutigkeit (1). *Magazin für Theologie und Ästhetik* 8. 2000. Web. 1 Mar. 2012. <http://www.theomag.de/08/tr1.htm>.
- Rost, Detlef H., ed. *Handwörterbuch Pädagogische Psychologie*. 2nd ed. Weinheim: Beltz, 2001.
- Rourke, Brian. "Malcolm Lowry's Memory Machine: An Eclectic Systeme" *Journal of Modern Literature* 29.3 (2006): 19–38.
- Rudolph, Sophie. "Ein Spiel von Liebe und Zufall: Smoking/ No Smoking von Alain Resnais" *Mediale Ansichten*. Ed. Nicole Kallwies. Marburg: Schüren, 2006.
- Rudrum, David. "From Narrative Representation to Narrative Use: Towards the Limits of Definition" *Narrative* 13.2 (2005): 195–204.
- Rudrum, David. "On the Very Idea of a Definition of Narrative: A Reply to Marie-Laure Ryan" *Narrative* 14.2 (2006): 197–204.
- Run Lola Run: Die Karriere eines Films*. Filmportal. JAH. Web. 7 Mar. 2011. <http://www.filmportal.de/thema/run-lola-run-die-karriere-eines-films>.
- Ryan, Marie-Laure. *Avatars of Story*. Minneapolis, Minn. University of Minnesota Press, 2006. Electronic Mediations.
- Ryan, Marie-Laure. "Beyond Myth and Metaphor: Narrative in Digital Media" *Poetics Today* 23:4 (2002): 581–609.

- Ryan, Marie-Laure. "Beyond Myth and Metaphor: The Case of Narrative in Digital Media" *The International Journal of Computer Game Research* 1.1 (2001). Web. 10 Oct. 2011. <http://www.gamestudies.org/0101/ryan/>.
- Ryan, Marie-Laure. "Cheap Plot Tricks, Plot Holes, and Narrative Design" *Narrative* 17.1 (2009): 56–75.
- Ryan, Marie-Laure. "From Parallel Universes to Possible Worlds: Ontological Pluralism in Physics, Narratology, and Narrative" *Poetics Today* 27.4 (2006): 633–74.
- Ryan, Marie-Laure. "Introduction" *Narrative Across Media: The Languages of Storytelling*. Ed. Marie-Laure Ryan. Lincoln: University of Nebraska Press, 2004. Frontiers of Narrative.
- Ryan, Marie-Laure. "Meaning, Intent, and the Implied Author" *Style* 45.1 (2011): 29–47.
- Ryan, Marie-Laure. Rev. of *Universal Grammar and Narrative Form* by David Herman. Durham: Duke University Press, 1995. *Style* 22 Sept. 1996: 514.
- Ryan, Marie-Laure. Rev. of *Heterocosmica: Fiction and Possible Worlds* by Lubomir Dolezel. Baltimore & London: The John Hopkins University Press, 1998. *Style* 22 Sept. 1998: 518.
- Ryan, Marie-Laure. "Semantics, Pragmatics, and Narrativity: A Response to David Rudrum" *Narrative* 14.2 (2006): 188–96.
- Ryan, Marie-Laure. "The Narratorial Functions: Breaking Down a Theoretical Primitive" *Narrative* 9.2 (2001): 146–52.
- Ryan, Marie-Laure. ed. *Narrative Across Media: The Languages of Storytelling*. Lincoln: University of Nebraska Press, 2004. Frontiers of Narrative.
- Ryan, Marie-Laure et al. "Storyworlds Across Media" Johannes-Gutenberg-Universität. Mainz. 30 Jun. 2011. Conference.
- Ryan, Marie-Laure. "Storyworlds Across Media: Greetings and Introduction" Johannes-Gutenberg-Universität. Mainz. 30 Jun. 2011. Conference.
- Sassón-Henry, Perla. *Borges 2.0: From Text to Virtual Worlds*. New York: Peter Lang, 2007.
- Schäfer, Jerome P. *Grand Imagier oder Kamera? Zur Erzählinstanz im filmischen Kommunikationssystem*. Medienobservationen. Web. 20 Oct. 2011. http://www.medienobservationen.lmu.de/artikel/kino/kino_pdf/schaefer_erzaelinanz.pdf.
- Schäfer, Jörgen and Peter Gendolla. "Reading (in) the Net: Aesthetic Experiences in Computer-Based Media" *Reading Moving Letters: Digital Letters in Research and Teaching*. Eds. Roberto Simanowski, Jörgen Schäfer and Peter Gendolla. Bielefeld: Transcript, 2010: 81–108.
- Scheible, Jeff. *Left Behind*. Web. 2 Nov. 2011. <http://flowtv.org/wp-content/uploads/2010/09/jeffscheible.pdf>.
- Schlicker, Alexander. *Kain und Raziel: Die Rache der unfreien Erlöser. Literatur- und medienwissenschaftliche Interpretationszugänge zur Video- und Computerspielserie 'Legacy of Kain'*. Medienobservationen. Web. 20 Oct. 2011. http://www.medienobservationen.uni-muenchen.de/artikel/computer/schlicker_legacy.html.
- Schmidt, Lisa. *Rethinking the Audience/Producer Relationship. Intensified Empathy: Show's Producer as Show's Fan?*. Web. 2 Nov. 2011. <http://flowtv.org/wp-content/uploads/2010/09/lisaschmidt.pdf>.
- Scholes, Robert. "Exploring the Great Divide: High and Low, Left and Right" *Narrative* 11.3 (2003): 245–69.
- Schut, Kevin. *Technology Tells a Tale: Digital Games and Narrative*. Web. 9 Jan. 2012. <http://www.digra.org/dl/db/05150.17157/>.

- Scott, Suzanne. *Rethinking the Audience/Producer Relationship*. Web. 2 Nov. 2011. <http://flowtv.org/wp-content/uploads/2010/09/suzannescott.pdf>.
- Sewell, Philip. *Putting the TV Back in Television Studies*. Web. 2 Nov. 2011. <http://flowtv.org/wp-content/uploads/2010/09/philipsewell.pdf>.
- Shaviro, Steven. "Emotion Capture: Affect in Digital Film" *Projections* 1.2 (2007): 37–56.
- Shaviro, Steven. "The Cinematic Body Redux" *Parallax* 14.1 (2008): 48–54.
- Singles, Kathleen. *Alternate History: Playing With Contingency and Necessity*. Berlin: De Gruyter, 2013. Narrating Futures.
- Sittlich, Sven. *Second Life: Wie virtuelle Welten unser Leben verändern*. Berlin: Ullstein, 2007.
- Slater, Maya. "Problems When Time Moves Backwards: Martin Amis's *Time's Arrow*" *English: The Journal of the English Association* 42.173 (1993): 141–52.
- Smith, Leonard A. *Chaos: A Very Short Introduction*. Oxford: Oxford University Press, 2007.
- Smith, Tony. "Til Series Finale Do Us Part? Fan Commitment and the Long-running Series. *Reasons for Staying Faithful: The Influence of Industry Discourses on Viewer Commitment for 'Enigma-Centric' Prime-Time Drama Series*. Web. 2 Nov. 2011. <http://flowtv.org/wp-content/uploads/2010/09/anthonymsmith.pdf>.
- Snickars, Pelle and Patrick Vonderau, eds. *The YouTube Reader*. Stockholm: National Library of Sweden, 2009.
- Sobchack, Vivian C. "Nostalgia for a Digital Object: Regrets on the Quickening of QuickTime" *Memory Bytes*. Ed. Lauren Rabinowitz and Abraham Geil. Duke: Duke University Press, 2004. 305–14.
- Sparshott, Francis E. "Vision and Dream in the Cinema" *Philosophy of Film and Motion Pictures: An Anthology*. Ed. Noël Carroll and Jinhee Choi. Malden, MA: Blackwell Publishers, 2006. 82–90.
- Speidel, Susanne. "Film, Form and Narrative" *Introduction to Film Studies*. 4th ed. Ed. Jill Nelmes. London: Routledge, 2007.
- Srivasta, Hari Om. *Interactive Technology and Markets*. Norwood, MA: Artech House, 2002.
- Staiger, Janet. "Complex Narratives: An Introduction" *Film Criticism* 31.1–2 (2006): 2.
- Staiger, Janet. *Serial Narratives and Viewing Demands II*. Web. 2 Nov. 2011. <http://flowtv.org/wp-content/uploads/2010/09/janetstaiger.pdf>.
- Steinhardt, Paul J. "Expansion des Raums: Kosmische Expansion auf dem Prüfstand" *Spektrum der Wissenschaft* 04 (2011): 36–44. Web.
- Sternberg, Meir. "Telling in Time (I): Chronology and Narrative Theory" *Poetics Today* 11.4, *Narratology Revisited II* (Winter, 1990): 901–48. Web.
- Sternberg, Meir. "Universals of Narrative and Their Cognitivist Fortunes (I)" *Poetics Today* 24.2 (2003): 297–395.
- Stevenson, Angus, ed. *Oxford Dictionary of English*. 3rd ed. New York, NY: Oxford University Press, 2010.
- Stewart, Garrett. *Framed Time: Toward a Postfilmic Cinema*. Chicago: University of Chicago Press, 2007.
- Strelow, Alexandra. *Serial Narratives and Viewing Demands I. Serialization and Space: An Introductory Discussion on Why and How Narrative Space Matters*. Web. 2 Nov. 2011. <http://flowtv.org/wp-content/uploads/2010/09/alexandrastrelow.pdf>.
- Strick, Philip. "Waiting for the End" *Sight and Sound* 4.9 (1994): 14–15.
- Suppan, Angela. *Interactive Story Telling*. München: Grin Verlag, 2007.
- Taylor, Edwin F. and John A. Wheeler. *Spacetime Physics: Introduction to Special Relativity*. 2nd ed. New York: W.H. Freeman, 1992.

- Taylor, Jim. *Everything you ever wanted to know about DVD: The Official DVD FAQ*. New York: McGraw Hill, 2003.
- Terranova, Tiziana. *Network Culture: Politics for the Information Age*. London: Pluto Press, 2004.
- Thalhofer, Florian. *Korsakow – Dynamic Storytelling*. Web. 20 Mar. 2012. <http://korsakow.org/>.
- Thompson, Kristin. *Storytelling in Film and Television*. Cambridge, Mass: Harvard University Press, 2003.
- Thompson, Kristin. *Storytelling in the New Hollywood: Understanding Classical Narrative Technique*. Cambridge, Mass.: Harvard University Press, 1999.
- Thon, Jan-Noël. "Subjectivity Across Media: On Transmedial Strategies of Subjective Representation" Johannes-Gutenberg-Universität. Mainz. 1 Jul. 2011.
- Thoss, Jeff. "Media Rivalry Updated: The Case of Scott Pilgrim" Johannes-Gutenberg-Universität. Mainz. 1 Jul. 2011.
- Todorov, Tzvetan. *Mikhail Bakhtin: The Dialogical Principle*. Minneapolis: University of Minnesota Press, 1998.
- Toepfer, Shane. *Reality TV: Déjà Vu All Over Again? 'That's Not Real, Is It...?': Reality Television, Professional Wrestling, and Authenticity*. Web. 2 Nov. 2011. <http://flowtv.org/wp-content/uploads/2010/09/shanetoepfer.pdf>.
- Toro, Alfonso de. *Das Jahrhundert von Borges: Der postmoderne und postkoloniale Diskurs von Jorge Luis Borges*. Web. 23 Oct. 2011. <http://www.uni-leipzig.de/~detoro/siglodeborges/Jhvonborgesneu.htm>.
- Totaro, Donato. "Gilles Deleuze's Bergsonian Film Project: Part 2: Cinema 2: The Time-Image" (1999).
- Tribe, Mark and Reena Jana. *New Media Art*. Köln: Taschen, 2009.
- Tulving, Endel. "How Many Memory Systems Are There" *American Psychologist* 40.4 (1985): 385–98.
- Tyree, Tia. *Reality TV: Déjà Vu All Over Again*. Web. 2 Nov. 2011. <http://flowtv.org/wp-content/uploads/2010/09/tiatyree.pdf>.
- Uroskie, Andrew V. "La Jetée en Spirale: Robert Smithson's Stratigraphic Cinema" *Grey Room* 19 (2005): 54–79.
- Valcke, Jennifer. "Static Films and Moving Pictures. Montage In Avant-Garde Photography and Film" PhD Thesis. University of Edinburgh, 2008.
- VanArendonk, Kathryn. *Serial Narratives and Viewing Demands I*. Web. 2 Nov. 2011. <http://flowtv.org/wp-content/uploads/2010/09/kathrynvandarendonk.pdf>.
- Vertov, Dziga. "Wir. Variante eines Manifestes" *Texte zur Theorie des Films*. Ed. Franz-Josef Albersmeier. Stuttgart: Reclam, 2003. 31–35.
- Vesterby, Tore, Jonas C. Voss, John P. Hansen et. al. "Gaze-Guided Viewing of Interactive Movies" *Digital Creativity* 16.4 (2005): 193–204.
- Wages, Richard, Benno Grützmaier, and Stefan Grünvogel. "Benutzerführung und Strukturen nichtlinearer Geschichten" "See? I'm real...": *Multidisziplinäre Zugänge zum Computerspiel am Beispiel von 'Silent Hill'*. Ed. Britta Neitzel. 3. Aufl. Münster: Lit, 2010. 41–57. MedienWelten.
- Wagman, Ira. *The Mass Audience Lives! (Or Does It?). Adding 'Mass' to Mass Audience Studies*. Web. 2 Nov. 2011. <http://flowtv.org/wp-content/uploads/2010/09/irawagman.pdf>.
- Walters, James. *Alternative Worlds in Hollywood Cinema: Resonance Between Realms*. Bristol: Intellect Books, 2008.
- Wardrip-Fruin, Noah and Nick Montfort, eds. *The New Media Reader*. Cambridge, Mass. MIT Press, 2003.

- Wasko, Janet. "The Future of Film Distribution and Exhibition" *The New Media Book*. Ed. Dan Harries. London: BFI Publishing, 2002.
- Weaver, James. "Rehabilitative Storytelling: The Narrator-Narratee Relationship in J. California Cooper's *Family*" *MELUS* 30.1 (2005): 109–34.
- Weber, Stefan. *Theorien der Medien. Von der Kulturkritik zum Konstruktivismus*. Stuttgart: UTB, 2010.
- Wedel, Michael. "Backbeat and Overlap: Time, Place, and Character Subjectivity in *Run Lola Run*" *Puzzle Films: Complex Storytelling in Contemporary Cinema*. Ed. Warren Buckland. Malden, MA: Wiley-Blackwell, 2009. 129–51.
- Wei, S. Louisa. "Uncovering Hidden Maps: Illustrative Narratology for Digital Artists/Designers" *Computers and Composition* 23.4 (2006): 480–502.
- Weiß, Maximilian. *Schrift, Schreiben und Schreibszenen in David Cronenbergs 'Naked Lunch'*. Medienobservationen. Web. 30 Jan. 2012. http://www.medienobservationen.lmu.de/artikel/kino/kino_pdf/weiss_lunch.pdf.
- '*Wer rettet Dina Foxx?*': *Internetkrimi*. ZDF – Das kleine Fernsehspiel. Web. 20 Feb. 2012 <http://dinafoxx.zdf.de/ZDFde/inhalt/0/0,1872,8227008,00.html?dr=1>.
- Weyand, Gabriele. *Order from Chaos: Re-Orientations in Complex Cinema*. RUBCast. Web. 10 Mar. 2012. <http://www.rubcast.rub.de/index2.php?id=882>
- Whalen, Tom. "Run Lola Run" *Film Quarterly* 53.3 (2000): 33–40.
- Wikipedia. *A Visual Novel*. Web. 19 Mar. 2012 <http://en.wikipedia.org>.
- Wikipedia. *Butterfly Effect*. Web. 19 Mar. 2012 <http://en.wikipedia.org>.
- Wikipedia. *Butterfly Effect in Popular Culture*. Web. 19 Mar. 2012 <http://en.wikipedia.org>.
- Wikipedia. *Gabriel Knight*. Web. 19. Mar. 2012 <http://en.wikipedia.org>.
- Wikipedia. *Kinoautomat – Wikipedia, the free encyclopedia*. Web. 16 Mar. 2012. <http://en.wikipedia.org>.
- Wikipedia. *Choose Your Own Adventure: The Abominable Snowman – Wikipedia, the free encyclopedia*. Web. 20 Mar. 2012. <http://en.wikipedia.org>.
- Wikipedia. *Mr. Nobody (film) – Wikipedia, the free encyclopedia*. Web. 18 Mar. 2012. <http://en.wikipedia.org>.
- Wikipedia. *Heavy Rain – Wikipedia, the free encyclopedia*. Web. 20 Mar. 2012. <http://en.wikipedia.org>.
- Wikipedia. *Misfits (TV series) – Wikipedia, the free encyclopedia*. Web. 19 Mar. 2012. <http://en.wikipedia.org>.
- Wikipedia. *Movie theatre – Wikipedia, the free encyclopedia*. Web. 19 Mar. 2012 <http://en.wikipedia.org>.
- Wikipedia. *Reality television – Wikipedia, the free encyclopedia*. Web. 19 Mar. 2012. <http://en.wikipedia.org>.
- Wikipedia. *Second Life – Wikipedia, the free encyclopedia*. Web. 19 Mar. 2012. <http://en.wikipedia.org>.
- Wikipedia. *Scrubs*, 2012. Web. 19 Mar. 2012. <http://en.wikipedia.org>.
- Wilson, Tony. *Understanding Media Users*. Oxford: Wiley-Blackwell, 2008.
- Winthrop-Young, Geoffrey. *Kittler and the Media*. Cambridge: Polity Press, 2011.
- Winter, Jennifer de. *Serial Narratives and Viewing Demands II*. Web. 2 Nov. 2011. <http://flowtv.org/wp-content/uploads/2010/09/jenniferdewinter.pdf>.
- Wolf, Mark J. P. and Bernard Perron, eds. *The Video Game Theory Reader*. New York: Routledge, 2003.

- Woodward, Steven, ed. *After Kieślowski: The Legacy of Krzysztof Kieślowski*. Detroit: Wayne State University Press, 2009.
- Young, Heather. *TwitterTube. Technology and the Social Uses of Television*. Web. 2 Nov. 2011. <http://flowtv.org/wp-content/uploads/2010/09/heatheryoung.pdf>.
- Zax, David. Rev. of *Turbulence* by Nitzan Ben-Shaul, JAHR. Web. 1 Mar. 2012. <http://www.fastcocreate.com/1679041/turbulence-an-interactive-movie-coming-soon-to-an-ipad-near-you>.
- Žižek, Slavoj. *The Fright of Real Tears: Krzysztof Kieślowski Between Theory and Post-Theory*. London: BFI Publishing, 2001.
- Žižek, Slavoj. *Welcome to the Desert of the Real! Five Essays on September 11 and Related Dates*. London: Verso, 2002.
- Žižek, Slavoj, Elizabeth Wright, and Edmond L. Wright, eds. *The Žižek Reader*. Oxford: Blackwell Publishers, 1999.

