Gripped by movies: From story-world to artifact absorption
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CHAPTER 3

BEGIN WHEREVER YOU PLEASE, AS LONG AS YOU KEEP ME INTERESTED. EXPOSITION LOCATION INFLUENCE ON INTEREST IN FILM: SUSPENSE AND CURIOSITY
ABSTRACT

Narrative and film studies theorists actively discuss the impact of exposition location on narrative interest. No study, though, has empirically investigated the impact of exposition location on viewers. Two forms of narrative interest, suspense and curiosity, were investigated in the present study as outcomes of various degrees of exposition delay: preliminary exposition (PES), delayed exposition (DES) and extra delayed exposition (EDES). Suspense and curiosity were both captured at the end of the film as well as during the viewing, i.e. during a suspense event or a curiosity event. 186 subjects (55.4% women) took part in a 3 (discourse structure exposition) X 2 (measurement event) between-subjects experimental design. The results reveal overall suspense (captured at the end of the film) to be significantly higher in PES than in the other discourse structures and curiosity to be significantly higher in DES and EDES than in PES. Two types of curiosity were found to work differently: curiosity for the identity of the murderer is higher in DES, whereas character curiosity is higher in EDES. EDES was expected to be low in both suspense and curiosity; however, it is the highest in character curiosity and the most appreciated. Exposition seems to draw curiosity on its own. Its power to involve audiences suggests that more research should focus on exposition location. Important differences were found between the overall and local measurements of emotions.

INTRODUCTION

Stories represent an important part of our lives. We are exposed to them in many different forms; news is presented in the form of stories, social or commercial campaigns make use of stories too, political speeches are often structured like stories, and finally stories represent a main form of entertainment – books, films, theater plays. Whatever the aim of the story – information, persuasion or entertainment – people will continue to follow it only if it keeps them interested. Improving our understanding of how stories arouse and maintain interest would be a great benefit to storytellers (filmmakers, writers, campaign developers), as well as to scholars interested in the art of narratives.
A key problem in storytelling is how to deal with the exposition. The exposition is the part of a story offering background information about the setting of the action (location and time), as well as about the characters themselves (Sternberg, 1978). Writers and filmmakers often regard exposition as a necessary evil because it is not interesting in itself, but only through its impact on the rest of the story. If not placed well in the discourse structure, it can easily get the audience bored (Sternberg, 1978; Thompson, 1999). Meanwhile, it is generally accepted amongst writers and filmmakers that, without exposition, the story would be difficult to understand, and the emotional reactions amongst viewers would probably be less intense (Bordwell, 1985; Sternberg, 1978; Thompson, 1999).

The present study focuses on the role of exposition location in a narrative discourse structure in raising viewers’ interest in film. Two specific forms of interest considered by the Structural-Affect Theory (SAT) are suspense and curiosity (Brewer & Lichtenstein, 1982); SAT identified particular discourse structures that lead to either suspense or curiosity, and associated these experiences with entertainment and interest. Interest is conceptualized as suspense (Sternberg, 1978; Tan, 1995) and curiosity (Lowenstein, 1994) in this chapter, and the impact of exposition location was investigated in relation to both these experiences.

To elaborate on the position of the exposition issue, we need an analytical distinction regarding the structure of a story: there is the set of events referred to in the story, and there is the discourse structure, which refers to the particular way the story events are being communicated (Chatman, 1978). The latter refers also to the way the story events are being ordered when communicated. There are two main possible positions of expositional material in a discourse structure: either the narrative starts with the exposition, what is called preliminary exposition, or the exposition is delayed and the narrative starts in the middle of the action (Bordwell, 1985; Sternberg, 1978). There seem to be both strengths and weaknesses in using either preliminary or delayed exposition. Starting a story with the exposition offers solid ground for the viewer’s hypotheses formation, well preparing the set-in of action and building up intense emotional experiences, like suspense (Bordwell, 1985; Sternberg, 1978). However, delayed exposition is much preferred among writers and filmmakers nowadays (Sternberg, 1978; Thompson, 1999), because a start in the middle of action works like a ‘teaser’ for the rest of the film: a surprising, intense action episode will immediately raise curiosity (Lowenstein, 1994).
Scholars have discussed potential effects of exposition location on different forms of interest (Bordwell, 1985; Sternberg, 1978; Thompson, 1999), but no study empirically tested their theoretical claims. Filmmakers also often express their preference for a certain location of exposition, but again no study has confirmed that their preferences have universal merit.

There are studies that have empirically tested how particular discourse structures lead to either suspense or curiosity (Brewer & Lichtenstein, 1982; Knobloch, Patzig, Mende, & Hastall, 2004; Hoeken & van Vliet, 2000; Doicaru & Tan, in prep.), but there are no existing empirical studies of film discourses featuring extensive exposition. Most empirical studies either focused on written stories, or on short film scenes. Furthermore, none of these studies looked at the role of exposition location on evoking interest reactions. Yet, the usual experience of movies is based on full-length feature films that include expositional information, therefore the location of exposition is an important factor for the understanding of how suspense and curiosity are experienced in a non-experimental setting. In the present study, I investigated experimentally how different levels of delay of exposition, in relation to an action scene, influence suspense and curiosity. Because the levels of both suspense and curiosity tend to vary in the course of a narrative (Sternberg, 1978), they should be measured both during the film and at the end of it.

**INTEREST**

Interest has been defined as an exploration response to the challenge of missing information (Silvia, 2006; 2008), and it has clear motivational components such as the seeking out of information (Krapp, 1999). Interest has also been investigated in relation to stories; previous research revealed that people spend more time reading interesting texts (Ainley, Hidi, & Berndorff, 2002) than uninteresting ones. In the studies just referred to, the stimulus that elicits interest has been defined in broad terms. In this chapter I will conceptualize suspense (Tan, 1996; Sternberg, 1978) and curiosity (Kagan, 1972; Lowenstein, 1994) as forms of interest, responding to more narrowly defined narrative stimulus features. Suspense is interest elicited by the expectation of a specific event that will occur in the near future; the event must be of such importance that the prospect of its occurrence or non-occurrence evokes strong feelings of hope and/or fear (Ortony, Clore & Collins, 1988). For one to experience suspense, the nature of the Outcome Event must be quite specific, but
its occurrence uncertain (e.g., Zillmann, 1996). The leading question for suspense is: is this specific event going to happen or not? Another important aspect of suspense is that for the emotion to be intense, there must be the perception of the event’s proximity. Suspense produces tension, impatience for the expected event to be revealed, and even frustration (e.g., Tan, 1996).

According to the theories of interest (Kashdan, Rose, & Finchman, 2004; Silvia, 2006), curiosity is the most frequent subtype of interest. Curiosity is activated by important events that require an explanation (Lowenstein, 1994) and do not necessarily belong to the future of the story, but can belong to the past as well. The nature of the expected event is much less specific than in the case of suspense, implying a broad array of possible events (Brewer & Lichtenstein, 1981; 1982; Kagan, 1972; Lowenstein, 1994). The questions leading the viewer are more open than in the case of suspense: What is the cause of this situation? Whatever is going to happen? What are the characters’ motivations? In contrast to suspense, in curiosity the event answering the questions is not expected to be proximal to the narrative here and now.

EXPOSITION AND DISCOURSE STRUCTURE
Most mainstream narratives, including the ones studied here, present causally connected actions performed by psychologically motivated protagonists. According to SAT (Brewer & Lichtenstein, 1982), all narratives feature at least one Initiating Event and one Outcome Event when presenting action scenes. The Outcome Event is a story event with a great significance (e.g., an explosion), while the Initiating Event is announced the Outcome Event (e.g., a ticking bomb). They can be ordered in a discourse structure in two ways: the Initiating Event precedes the Outcome Event, creating what is called a linear discourse structure, or the other way around, creating a reversed discourse structure. A linear discourse structure will mainly lead to suspense, because the Initiating Event announces the Outcome Event, creating expectations. A reversed discourse structure will mainly lead to curiosity because the Outcome Event spawns questions about what/who made the respective event happen, how and why. However, story events do not only derive their interestingness from the discourse structure, but also from information added by expository materials and the location of this information in the discourse.
The function of exposition is to introduce the reader into the story-world by providing information about location, time, characters, their goals and the canons of operability in the story-world (Sternberg, 1978). Different locations of the exposition in the discourse structure will affect the experience of a target action scene differently (Bordwell, 1985; Sternberg, 1978). Preliminary exposition is expected to provide a strong primacy effect and a strong basis for building clear-cut hypotheses; hence it helps build up suspense in the action scene. A delayed exposition should build up more curiosity about background information, and make the buildup of clear hypotheses more difficult, as open expectations are easier to build with such a structure (Sternberg, 1978). As a first conclusion, it is expected that preliminary exposition will mainly keep up interest through suspense, while a delayed exposition will mainly keep up interest through curiosity. The present study aims to test whether different degrees of delay of the exposition in relation to the position of the Initiating and Outcome Events (Brewer & Lichtenstein, 1982) affect the suspense and curiosity that are experienced. Three degrees of delay were tested (see Figure 1).

![Figure 1. Discourse structures with different positioning of Exposition: a) Preliminary exposition; b) Delayed exposition; c) Extra delayed exposition.](image)

Note: IE = Initiating Event; OE = Outcome Event.

**Preliminary Exposition Structure (PES)**

In the preliminary exposition discourse structure, the exposition precedes both the Initiating Event and the Outcome Event (see Figure 1a). This structure is the most usual structure of a film starting with the exposition: the whole discourse structure is preserved as a linear or as Sternberg (1978) calls it, a natural discourse
structure, characteristic to classical fairy tales (e.g., “Once upon a time in a land far from here…”). In PES suspense is expected to be the main form of interest, and it should have the highest value comparing to the other discourse structures. According to Thompson (1999) the exposition presented in the beginning gets the audience accustomed to the characters and to their motives, therefore facilitating the process of hypotheses formation. The audience is prepared for the suspenseful event starting with the Initiating Event because they form clear hypotheses (Brewer & Lichtenstein, 1982). Clear expectations increase the emotional value of the Outcome Event and the levels of experienced suspense (Doicaru, Tan & Kuijpers, 2011).

Delayed Exposition Structure (DES)
The delayed exposition discourse structure perfectly fits the structure of a story that is primarily driven through curiosity. It is typical for mystery and detective stories (Bordwell, 1985; Brewer & Lichtenstein, 1982; Sternberg, 1978). The exposition is placed after the Outcome Event, but precedes the Initiating Event (see Figure 1b). For curiosity to arise, an extraordinary event must take place (Kagan, 1972; Lowenstein, 1994): the Outcome Event represents such an extraordinary event, and stimulates the desire to find out what caused it (what is the Initiating Event). In addition, the exposition itself, as it unfolds, will also provide clues that stimulate curiosity further (Lowenstein, 1994). Thus, in this structure of Outcome Event–Initiating Event, curiosity is expected to show higher levels than in other discourse structures tested in this study.

Extra Delayed Exposition Structure (EDES)
The third discourse structure represents an extra delay of the exposition (see Figure 1c). Like the delayed exposition discourse structure, it starts with the Outcome Event, but unlike the former, the Initiating Event follows it immediately, with exposition being presented in the end. EDES will predominantly evoke curiosity because it starts with the Outcome Event, and such an extraordinary event stimulates curiosity (Brewer & Lichtenstein, 1982; Lowenstein, 1994). However, the EDES level of curiosity should be lower than the DES curiosity, because in the former the expository details come only after the highly awaited information is already revealed, the Initiating Event being revealed right away. It is expected that curiosity reaches its highest levels when the most expected information is kept from the audience until the end of the film, like in the case of DES. EDES
resembles narratives with a purely expository function, like the conventional news story. It can be considered a good alternative to the other two when both forms of interest, suspense and curiosity, need to be kept at a minimum (e.g., Knobloch, Patzig, Mende & Hastall, 2004). Previous studies (e.g., Knobloch, Patzig, Mende & Hastall, 2004) used it as a control condition, testing it against the effects of more typical entertaining narrative discourse structures on suspense and/or curiosity.

**HYPOTHESES**

Based on theories of narrative discourse structure (Sternberg, 1978; Brewer & Lichtenstein, 1982), as well as on previous empirical research on how discourse structure can influence suspense or curiosity, I expect that:

**H1a:** In PES the level of overall suspense will be significantly higher than the level of overall curiosity.

**H1b:** In PES the level of overall suspense will be higher than the levels of overall suspense in DES and EDES.

**H2a:** In DES the level of overall curiosity will be significantly higher than the level of overall suspense.

**H2b:** In DES the level of overall curiosity will be higher than the levels of overall curiosity in PES and EDES.

In the hypotheses, reference is made to overall suspense and curiosity, and by overall, I mean the (suspense and curiosity) levels across the entire stimulus film. Such an operationalization of suspense and curiosity is similar to those employed in most previous empirical studies (e.g., Doicaru, Tan & Kuijpers, in prep.; Knobloch-Westerwick & Keplinger, 2008; Zillmann, 1996). The overall levels result from a final evaluation of the entire variations across the film stimulus due to the development of the discourse structure. Suspense and curiosity are higher at some moments in the discourse structures than at others. For instance, in PES experienced suspense is predicted to climax right before the Outcome Event (Doicaru, Tan, & Kuijper, 2011; de Wied, 1991; Tan & Diteweg, 1996); curiosity may be higher in DES, after some expositional, potentially contradictory information has already been given away (Lowenstein, 1994). To explore how
the level of overall suspense and overall curiosity would be different from local suspense and local curiosity, both experiences were measured not only at the end of the film but also at two additional moments during it: one corresponded with the event at the expected suspense climax in PES, the other with the event at the expected curiosity climax in DES.

RQ1: _Do levels of overall suspense and curiosity differ from those of local suspense and curiosity?_

RQ2: _Does the moment of film interruption (suspense or curiosity climax event) affect overall suspense and/or curiosity?_

**METHOD**

To test the above mentioned hypotheses and research questions, a 3 (discourse structure exposition) X 2 (measurement event) between-subjects experiment was conducted. A selected narrative film was manipulated through video editing techniques into having three different discourse structures: preliminary (PES), delayed (DES) and extra delayed (EDES) exposition discourse structures. The film was interrupted for measurement either at the suspense or at the curiosity climax event to assess local suspense and local curiosity. In all conditions overall measures of suspense and curiosity were also taken after the entire film. Participants were randomly assigned to the six conditions. I acknowledge that having a film interrupted at some point during the viewing does not perfectly replicate the usual cinema film viewing experience. However, one’s film viewing experience is often interrupted in real situations too, when not in a cinema theater: films on TV are interrupted by advertisements, whereas personal videos are often interrupted so that the viewer may perform other activities. On this note, the experiment mirrors real life viewing experiences, even though not entirely so, because in real life during the interruption the viewer may not be asked to assess his viewing related emotions and thoughts. These particular experimental conditions will be taken into consideration when discussing the findings of the experiment.
PARTICIPANTS
Participants were recruited 1) from the university survey pool, 2) through ads placed on social media platforms and 3) through flyers distributed in university buildings amongst students. One hundred and eighty six Dutch students of communication studies took part in the study (55.4% women). Ages ranged between 18 and 52 \((M = 22.5, SD = 3.9)\). I assigned different conditions to the two participants older than 32. Each of the conditions counted 30 or 31 participants. Participants were randomly assigned to conditions.

MATERIALS
Film
As experimental material, an approximately 8 minute-long film was used; the material was taken from the short film ‘Forest Falls’ (Calleros, Tucker, & McDuffie, 2011). This film was selected from a website specializing in broadcasting independent short films; the website categorized its genre as a thriller. The original 27 minute long film was shortened to eight minutes, focusing on one character and presenting only one line of action. A girl from a group of four college graduates on an outing in the woods discovers the body of one of her friends, and soon after she gets killed herself. The murderer is the lodge owner, and this is clearly revealed in the scene. This brief version of the film was edited in three ways to obtain the three different discourse structures.

INDEPENDENT VARIABLES
Discourse structure exposition
The PES version (Figure 1a) started with the exposition: four people in their twenties arrived at a cabin lodge in the mountains, and they were planning to stay for the weekend. All characters were introduced here: first the four main characters, then the lodge owner and finally a solitary camper at the camping site nearby. Location, time and some traits of the characters, including their goals were introduced. The Initiating Event was the moment when, in the middle of the night, while the four protagonists were sleeping, the lodge owner placed a mask on his face. The Outcome Event was the death of one of the girls (the last one left alive), being shot by the masked man after a chase through the forest. DES (Figure 1b) started with the girl running through the forest in the middle of the night and ultimately getting killed by a masked man (Outcome Event). The film then went back in time to the exposition. In the end, the identity of the killer was revealed:
the lodge owner put a mask on his face (Initiating Event). The EDES version (Figure 1c) also started with the Outcome Event, but right after the murder was revealed the audience could see it was the lodge owner who put a mask on his face. The exposition came after this revelation of the murderer’s identity.

In all versions, the Outcome Event included a few shots before the actual outcome was presented. The outcome was the girl being shot, but this event was in all three versions preceded by a brief sequence (a few seconds) of the girl running through the forest and right into the masked man, who was holding a gun. This start of DES and EDES is a common start in mystery/detective films, which is right in the middle of an action that ends up with a murder.

**Climax Event of Local Measurement**

The suspense climax event is when the girl ends up facing the masked man in the middle of the forest, right before she gets killed. The curiosity climax event is at the end of the exposition, when the audience gets introduced to the last character: a lonely camper in the forest. According to Lowenstein, curiosity is higher when there are more options for the solution, making the search more challenging – in this case when there are more possible culprits introduced (Lowenstein, 2004). After this event, in DES, the murderer is identified (see Figure 2).

![Discourse structures](image)

*Figure 2.* Discourse structures with different positioning of exposition, and the location of the interruption moments in each of them: a) Preliminary exposition; b) Delayed exposition; c) Extra delayed exposition.

*Note: IE = Initiating Event; OE = Outcome Event; * = the interruption moments where suspense or curiosity were expected to be the highest across all three discourse structures – e.g., suspense climax* = the highest expected value of local suspense.*

BEGIN WHEREVER YOU PLEASE
DEPENDENT VARIABLES

**Questionnaire 1** was presented at the interruption of the film, either at the suspense or the curiosity climax event, and measures local suspense and curiosity.

**Local suspense**
Local suspense was measured through five items from a scale developed previously (Doicaru, Tan, & Kuijpers, 2011). One item related to fear was used in this scale (‘I feel fear that something terrible will happen to the protagonists when the film starts again’), and 4 other ones related to the dimension of impatience/tension (e.g., ‘I held my breath to see what would happen next when the film was interrupted’, $\alpha = .82$, $M = 2.89$, $SD = 1.21$).

**Local curiosity**
To measure local curiosity, four items were used: two refer to curiosity for determinants of the narrative situation at the curiosity climax event (‘At this moment I want to know who is responsible for the current situation in the film’, $\alpha = .79$, $M = 3.62$, $SD = 1.51$), and the other two refer to curiosity for future events (e.g., ‘I am curious to see what will happen to the characters in the end’, $\alpha = .92$, $M = 3.92$, $SD = 1.37$).

**Questionnaire 2** was applied at the end of the film, and it measures overall suspense, overall curiosity and film appreciation.

**Overall suspense**
Four items (all except the fear one) of suspense used in Questionnaire 1 were adapted and used here. The items were rephrased to capture the overall judgments of suspense along the film (e.g., ‘There were times while watching when I held my breath waiting to see what will happen to the protagonists next’, $\alpha = .88$, $M = 2.82$, $SD = 1.28$).

**Overall curiosity**
Three types of overall curiosity were distinguished, each measured by a single item. One item refers to character curiosity (‘While watching the film I often wanted to know more about the characters’, $M = 3.38$, $SD = 1.49$), one item measured curiosity for the identity of the murderer (‘While watching the film I wanted to know who the murderer was’, $M = 3.38$, $SD = 1.73$), and the third one measured curiosity for
future developments (‘I often found myself being curious of what would happen next to the protagonists’, $M = 3.53$, $SD = 1.37$). Finally, the variable *Film appreciation* was measured using one item ($M = 2.43$, $SD = 1.42$). Gender and age were included in the questionnaire as well.

All items except gender and age were measured by using a 7-point Likert scale ranging from 0 (*not at all like that*) to 6 (*very much like that*).

**PROCEDURE**

Viewings by two to six participants each took place in classrooms at the University of Amsterdam, equipped with 155 cm X 87 cm screens. Participants watched the version of film to which they were assigned. At the right peak event the film was interrupted, and Questionnaire 1 was handed out to the participants. After watching the rest of the film the second questionnaire was handed out. Sessions lasted 30 minutes.

**RESULTS**

**OVERALL SUSPENSE AND DISCOURSE STRUCTURE**

A two-way ANOVA on overall suspense was conducted with discourse structure and measurement event as independent variables. Gender and age as well as the experimenter (there were two different experimenters collecting data) were covariates in this and in all next ANOVAs on overall emotions. A significant main effect was obtained of discourse structure on overall suspense, $F(2, 177) = 4.1$, $p < .05$, $partial \eta^2 = .04$. PES raised the highest level of suspense overall (See Table 1). A LSD post-hoc test revealed that the difference between PES and DES ($p < .05$) as well as the one between PES and EDES are significant ($p = .05$). No significant difference between the other two discourse structures was found. This result is in accordance with Hypothesis 1b. An unexpected finding was the significant main effect of the measurement moment on the overall suspense, $F(1, 177) = 11.88$, $p < .001$, $partial \eta^2 = .06$. Overall suspense was lower when the film had been interrupted at the suspense climax event ($M = 2.52$, $SD = 1.2$) than when interrupted at the curiosity climax event ($M = 3.12$, $SD = 1.28$).
OVERALL CURIOSITY AND DISCOURSE STRUCTURE

Three separate one-way ANOVA analyses were conducted on overall curiosity 1) for the identity of the murderer; 2) character curiosity, and 3) for future narrative events. Overall curiosity for the identity of the murderer exhibited a significant main effect of discourse structure, $F(2, 177) = 12.54, p <= \cdot001$, partial $\eta^2 = .12$. DES raised the highest level of curiosity for the identity of the murderer, followed by EDES (see Table 1). The difference between DES and PES (LSD post hoc test $p <= \cdot001$) was significant, but the difference between DES and EDES was not. Surprisingly, it seems that in EDES there was significantly more curiosity for the identity of the murderer than in PES ($p <= \cdot001$). Interestingly, I also found a significant interaction effect between exposition discourse structure and measurement moment on curiosity for the identity of the murderer, $F(2, 177) = 3.11, p < .05$, partial $\eta^2 = .03$. The interaction seems to be meaningful especially for the comparison between DES and EDES; in PES, the level of curiosity is just significantly lower, regardless of interruption event. For the other two discourse structures, the level of curiosity for the identity of the murderer seems to be similar when the film is interrupted at the suspense climax event (in the beginning of the clips); but when the film is interrupted at the curiosity climax event, the level of curiosity for the identity of the murderer increased in DES and decreased in EDES (see Figures 2b and 2c). I will discuss implications of these findings in the next section.

Table 1. Means Overall Suspense and Curiosity for Three Discourse Structures (Standard Deviations in Parentheses)

<table>
<thead>
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<th>DISCOURSE STRUCTURE</th>
<th>Suspense</th>
<th>Curiosity_ID</th>
<th>Curiosity_CH</th>
<th>Curiosity_FE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preliminary Exposition</td>
<td>3.16</td>
<td>2.61*</td>
<td>2.93</td>
<td>3.41</td>
</tr>
<tr>
<td></td>
<td>(1.42)</td>
<td>(1.68)</td>
<td>(1.6)</td>
<td>(1.53)</td>
</tr>
<tr>
<td>Delayed Exposition</td>
<td>2.66</td>
<td>3.99**</td>
<td>3.31**</td>
<td>3.52**</td>
</tr>
<tr>
<td></td>
<td>(1.17)</td>
<td>(1.27)</td>
<td>(1.31)</td>
<td>(1.31)</td>
</tr>
<tr>
<td>Extra-Delayed Exposition</td>
<td>2.66</td>
<td>3.56**</td>
<td>3.87**</td>
<td>3.64**</td>
</tr>
<tr>
<td></td>
<td>(1.2)</td>
<td>(1.57)</td>
<td>(1.42)</td>
<td>(1.28)</td>
</tr>
</tbody>
</table>

The ANOVA on overall character curiosity revealed a significant main effect of discourse structure, $F(2, 177) = 7.11, p <= \cdot001$, partial $\eta^2 = .07$. Table 1 shows the differences in means. LSD post-hoc tests revealed that character curiosity in the EDES condition was significantly higher than in the PES ($p <= \cdot001$) and the DES ($p < .05$) conditions. The ANOVA on curiosity for future narrative events did not yield a significant main effect of discourse structure (see Table 1). It seems that
hypothesis 2b is only partially confirmed, in the case of curiosity regarding the identity of the murderer.

DIFFERENCES BETWEEN OVERALL SUSPENSE AND CURIOSITY WITHIN EACH DISCOURSE STRUCTURE

To test whether overall suspense is significantly stronger than overall curiosity when watching PES (H1a), and whether overall curiosity is perceived to be significantly stronger than overall suspense in the DES condition (H2a), first the data file was split in three, based on discourse structure. A paired sample t-test was conducted to compare the level of overall suspense with the level of overall curiosity regarding the identity of the murderer for each discourse structure. The results showed that at the end of the film, PES was appreciated to have produced significantly more suspense than curiosity regarding the identity of the murderer ($t(60) = 2.18, p < .05$), and DES was appreciated to have produced significantly more curiosity related to the identity of the murderer than suspense ($t(60) = -7.93, p \leq .001$, see Table 1). The data show that EDES raised significantly higher curiosity regarding the identity of the murderer than suspense ($t(63) = -3.93, p \leq .001$).

Another paired sample t-test was conducted on character curiosity. The results showed that there was no significant difference in the case of PES between overall suspense and overall character curiosity. There was a significant difference, though, between overall suspense and overall character curiosity in the case of both DES ($t(60) = -3.73, p \leq .001$) and EDES ($t(63) = -7.93, p \leq .001$). For both of them character curiosity was recalled to have been more intense than suspense (see Table 1).

Finally, a last paired sample t-test was conducted on overall curiosity for future events in film. The findings revealed again that there was no significant difference in the case of PES between overall suspense and overall future events curiosity. There was a significant difference between overall suspense and overall curiosity for future events in the case of both DES ($t(60) = -7.3, p \leq .001$) and EDES ($t(63) = -6.79, p \leq .001$). In both cases, curiosity was recalled to be more intense than suspense (see Table 1). It seems that hypothesis 1a is confirmed only for one particular type of curiosity – i.e., that regarding the identity of the murderer. Hypothesis 2a is confirmed for all types of curiosity.
EXPLORATION REGARDING LOCAL SUSPENSE AND LOCAL CURIOSITY

Research Question 1
Paired sample t-tests showed that overall suspense was significantly higher than local suspense at the curiosity climax event in PES \((t(30) = 2.63, p < .05)\). Overall suspense was significantly lower than local suspense at the suspense climax event in DES \((t(29) = -2.96, p < .01)\) and also in EDES \((t(31) = -2.86, p < .01)\). For the means and standard deviations check Tables 1 and 2. To explore the difference between local and overall curiosity, overall curiosity for the identity of the murderer and character curiosity were averaged in one variable called *overall curiosity for past events* \((M = 3.39, SD = 1.32)\). Paired sample t-tests were performed with the new variable and local curiosity for past events. It seems that local curiosity at the suspense climax event was significantly higher than the overall curiosity in PES \((t(29) = -3.34, p < .01)\), and that the local curiosity at the curiosity climax event was significantly higher than overall curiosity in DES \((t(30) = -2.11, p < .05)\). For the means and standard deviations see Tables 1 and 3.

Research Question 2
Three one-way ANOVAs were conducted on local suspense, local curiosity for past events, and local curiosity for future events, with discourse structure and measurement moment (suspense vs. curiosity climax event) as independent variables. Age, gender, and the experimenter were used as covariates in all the following ANOVAs. No significant main effects were found either on local suspense or on local curiosity for future events. A main effect of discourse structure on local curiosity for past events, \(F(2, 177) = 6.49, p < .01\), *partial \(\eta^2 = .07\)*, was however found, as well as an interaction effect between discourse structure and measurement moment on local curiosity for past events, \(F(2, 177) = 11.5, p <= .001\), *partial \(\eta^2 = .11\)*. LSD post-hoc tests revealed that the local curiosity for past events was significantly lower in PES \((M = 3.11, SD = 1.57)\) than in DES \((M = 3.86, SD = 1.35, p < .01)\) and in EDES \((M = 3.9, SD = 1.46, p < .01)\). Regarding the interaction effect, curiosity for past events appears to be the strongest in DES only at the curiosity climax event, but not significantly stronger than the strongest moments of curiosity in the other discourse structures. The lowest level of local curiosity for past events was experienced in PES at the curiosity climax event.
Table 2. Means Local Suspense for Three Discourse Structures, Measured at the Suspense and Curiosity Climaxes (Standard Deviations in Parentheses)

<table>
<thead>
<tr>
<th>DISCOURSE STRUCTURE</th>
<th>MEASURED AT CLIMAX EVENT</th>
<th>LOCAL SUSPENSE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Suspense</td>
<td>3.17 (1.27)</td>
</tr>
<tr>
<td></td>
<td>Curiosity</td>
<td>2.57 (1.24)</td>
</tr>
<tr>
<td>PES</td>
<td>Suspense</td>
<td>2.84 (1.24)</td>
</tr>
<tr>
<td></td>
<td>Curiosity</td>
<td>2.91 (.95)</td>
</tr>
<tr>
<td>DES</td>
<td>Suspense</td>
<td>2.91 (1.21)</td>
</tr>
<tr>
<td></td>
<td>Curiosity</td>
<td>2.84 (1.35)</td>
</tr>
<tr>
<td>EDES</td>
<td>Suspense</td>
<td>3.38 (1.51)</td>
</tr>
<tr>
<td></td>
<td>Curiosity</td>
<td>4.30 (1.02)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4.06 (1.50)</td>
</tr>
</tbody>
</table>

Note. PES = preliminary exposition discourse structure; DES = delayed exposition discourse structure; EDES = extra delayed exposition discourse structure. Mean scores on a seven-point scale.

Table 3. Means Overall and Local Curiosity for Past Events for Three Discourse Structures (Standard Deviations in Parentheses)

<table>
<thead>
<tr>
<th>DISCOURSE STRUCTURE</th>
<th>OVERALL CURIOSITY</th>
<th>MEASURED AT CLIMAX</th>
<th>LOCAL CURIOSITY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2.79 (1.39)</td>
<td>Suspense</td>
<td>3.88 (1.12)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Curiosity</td>
<td>2.35 (1.60)</td>
</tr>
<tr>
<td>PES</td>
<td>3.61 (1.11)</td>
<td>Suspense</td>
<td>3.38 (1.51)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Curiosity</td>
<td>4.30 (1.02)</td>
</tr>
<tr>
<td>DES</td>
<td>3.76 (1.26)</td>
<td>Suspense</td>
<td>4.06 (1.50)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Curiosity</td>
<td>3.73 (1.42)</td>
</tr>
</tbody>
</table>

Note. PES = preliminary exposition discourse structure; DES = delayed exposition discourse structure; EDES = extra delayed exposition discourse structure. Mean scores on a seven-point scale.

EXPLORATION DISCOURSE STRUCTURE AND FILM APPRECIATION

An ANOVA was performed with film appreciation as the dependent and discourse structure and measurement moment as independent variables. A main effect of discourse structure on appreciation was found, $F(2, 177) = 3.85, p < .05$, partial $\eta^2 = .04$. The trend revealed that EDES was liked the most ($M = 2.77, SD = 1.43$) and PES the least ($M = 2.03, SD = 1.32$), with DES in between ($M = 2.48, SD = 1.44$). However, LSD post-hoc tests showed only that EDES was liked significantly better than PES ($p < .01$).
DISCUSSION

We found that the highest level of overall suspense was experienced when watching a film with preliminary exposition, consistent with H2a. What this finding shows is an empirical confirmation of the expectation launched by Thompson (1999) that exposition placed before a suspense scene increases the level of suspense. Even if filmmakers generally consider preliminary exposition to be boring, and prefer to avoid it, such a discourse structure has the distinct advantage that it offers enough information about the characters to motivate viewers to care about the Outcome Event. Nevertheless, it may be that starting a film in the middle of the action also catches effectively the interest of the viewers, not through suspense, but through curiosity.

In line with H1a, I found that suspense was experienced more than curiosity while watching a preliminary exposition discourse structure, but not for all types of curiosity. In fact, when watching the preliminary exposition version of the film, experienced suspense was only higher than curiosity for the identity of the murderer, and not higher than character curiosity or curiosity for future events. Considering the fact that in this discourse structure the murder occurs at the end of the film, and that the identity of the murderer is even known before the murder is produced, it is obvious that the curiosity for the identity of the murderer must be low. However, curiosity is still high when a film starts with exposition. In fact, it is as high as suspense is. Curiosity is quite high but for a different object than the identity of the murderer.

It seems then that curiosity is not an easy concept to work with, as it requires a curiosity object (Lowenstein, 1994). When conducting research on curiosity in narratives it is important to recognize the object of curiosity relevant to the research question. Curiosity for the identity of the murderer is most similar to what Brewer and Lichtenstein (1982) associated with a reversed discourse structure, having the Initiating Event as the object of curiosity. With this in mind, my findings represent a replication of the Structural-Affect Theory, adding to it that an exposition preceding the Initiating Event may enhance suspense effect of a linear ordering. The finding that various types of curiosity tend to catch the viewer’s attention, in ways other than how Structural-Affect Theory has outlined them, invites further research.
Whether curiosity is higher than suspense in the delayed exposition structure (H2a) has also been tested. My results empirically confirm theoretical expectations of Sternberg (1979) and Bordwell (1985), which suggest that a story starting in the middle of the action catches the interest of the audience mainly through curiosity. Even a further delay of the exposition as in the extra delayed structure does not result in a reduction of overall curiosity relative to overall suspense. It appears that starting in the middle of the action motivates viewers to follow the narrative, not much through suspense, but through curiosity. Viewers are curious to understand the action revealed to them, its context, and the motivations of the characters involved.

Hypothesis 2b, claiming that curiosity is higher in the delayed exposition structure than in the other discourse structures, could only be partially confirmed, for the curiosity related to the identity of the murderer. In line with the findings on the superiority of suspense over curiosity in the preliminary exposition structure, it seems that these results only represent a replication of the Structural-Affect Theory (Brewer & Lichtenstein, 1982) regarding curiosity in a reversed discourse structure. In the delayed exposition structure there is more curiosity for the cause of an outcome than in the preliminary exposition one, but surprisingly, the extra delayed exposition structure also leads to quite high levels of curiosity for the identity of the murderer. This is indeed an unexpected finding, because when exposition is extra delayed the identity of the murderer is revealed quite soon. The interaction effect of the discourse structure and the moment of measurement may shed light on his unexpected result. Namely, it seems that if there is an interruption in the film, the moment where that takes place is important for the overall experience. The participants only perceived the overall curiosity for the identity of the murderer to be higher in the delayed than in the extra delayed exposition structure when the film was interrupted at the curiosity climax event, but no difference was found when the movie was interrupted at the suspense climax. It may be that interrupting the flow of the viewing at a highly cognitive point, the viewer becomes aware of his intense cognitive processes and is thus more likely to recall the experience. This finding can be extremely relevant when deciding when to introduce advertising during a movie.

But how do the other types of curiosity function in response to delay of exposition? First, curiosity for future events, although it has the highest value of all curiosity types, does not differ across the discourse structures. The explanation
may be straightforward: it is a broad-scoped interest in what comes next. It could therefore include curiosity for the identity of the murderer, character curiosity and even suspense, and this is why I believe it could have equally high values in each of the discourse structures.

Counter to prediction, character curiosity turned out to be higher in the extra delayed exposition than in any of the other discourse structures. I expected that after the Outcome and the Initiating Events are revealed there is nothing left to be curious about. I now consider that the high rating of overall character curiosity in response to extra delay highlights the role of the exposition itself as a source of curiosity. Finding out the identity of the murderer does terminate curiosity as to who did it. However, it may be that more information about the character is expected, and sought for as the viewer formulates more questions. I may think of questions concerning the motives and background of the murder and the psychology of the perpetrator. Moreover, as the film kept going after the murderer had already been revealed, the extra delayed exposition discourse structure may appear as a version more focused on character development as a final goal. This directed focus on character development may be why the extra delayed structure was also liked most in my study.

What we have learnt from this study is that curiosity, in its various forms, is a more important narrative device than usually assumed (e.g., Brewer & Lichtenstein, 1982). The film viewer’s interest may more often take the form of curiosity, even when the plot seems built for suspense, as was also found in an earlier study of interest responses to a typical preliminary exposition suspense structure (Tan & Diteweg, 1996). It may even be the case that a film based exclusively on curiosity is more feasible than one based entirely on suspense because the build-up of suspense requires curiosity. Both the Initiating and the Outcome Events derive their affective value from understanding and empathizing with character and background details that can only come into place due to curiosity. However, one should beware of possible methodological pitfalls in the measurement of curiosity and suspense. A major threat to my account is that curiosity is simply easier to recall than is suspense. Suspense as an emotional response is easy to disrupt, and this explanation is supported by the finding that when interrupting a film at the suspense climax, suspense is recalled to be weaker than when interrupting the film at the curiosity climax, regardless of discourse structure. On the other hand,
curiosity is enhanced when the interruption takes place at a curiosity event. This unexpected finding is important for the theory of suspense and curiosity because it highlights some critical differences between the two forms of interest. It is interesting to investigate why suspense is disrupted while curiosity is enhanced by an interruption. These findings can also offer some important guidelines as to where it is best to interrupt movies for advertising, so as not to damage the film experience.

Finally, the local measurement of emotions offers much more insight over how misleading suspense and curiosity measurements can be. It does matter whether suspense and/or curiosity are captured at the end of a film or during the viewing; furthermore, it also matters at which event during the viewing they are being measured. Even if overall suspense in the preliminary exposition structure is perceived to be significantly higher than in any of the other discourse structures, while watching this film version, at the curiosity climax event suspense was actually quite low. At the end of the film, viewers seem to remember and recall mostly the suspense they experienced in the end, after the Initiating Event set in. At the same time, even if overall suspense in the delayed exposition structure is reported to be low and much lower than curiosity, it is quite high at the suspense climax event (right in the beginning of the film). Curiosity also differs in its overall value from the local values. It seems that the Initiating Event in the preliminary exposition structure not only initiates suspense but also curiosity; the suspense climax event is significantly higher in curiosity than what is reported at the end of the film. Even curiosity at the curiosity climax event of the delayed exposition structure is significantly higher than overall curiosity. To conclude, measuring and interpreting suspense and curiosity only at the end of a story does not capture the whole picture of the narrative experience. What is reported at the end of the film is much based on memory of the emotions: curiosity seems to be remembered to have been lower than it actually was; action scenes seem to produce not only suspense but also curiosity, though when a film ends with a suspense action scene, suspense may be the one mostly remembered at the expense of curiosity. This study has contributed to telling the two forms of interest apart, while also underlining the difficulty of capturing them separately from each other.
LIMITATIONS AND SUGGESTIONS FOR FUTURE RESEARCH

In closing, I propose a list of more general recommendations based on the issues encountered while conducting the experiment. 1) ** Interruption event:** The current design did not include a control condition in which to keep the film uninterrupted. Such a design would have been important in seeing how interruption itself affects the post-viewing evaluation of emotions. I suggest that future research should add an uninterrupted viewing condition to the design. 2) **Discourse structure and exposition:** In the present study only three discourse structures were investigated. For the exposition location all the three important possibilities were taken into account (preliminary, delayed, extra delayed) but not with respect to the Initiating Event-Outcome Event ordering. I did not test what happens with curiosity, suspense and interest when the exposition comes in between the Initiating Event and the Outcome Event, or when the exposition comes after the Initiating Event-Outcome Event structure. Future studies may include these exposition discourse structures too. 3) **Materials:** Only one film was used as stimulus material in the present study. It had a rather low level of suspense in general, and was not generally much appreciated in any of the conditions. Moreover, the film as I used it was already the result of some cutting from the original. This study should be replicated using films as suspenseful and appreciated as current popular supply. This too would render the findings more generalizable.

CONCLUSION

Our study is the first that empirically tests, and to a certain extent confirms, theoretical claims regarding the way different exposition locations in a narrative contribute to viewer interest (Bordwell, 1985; Sternberg, 17978; Thompson, 1999). Not only has it proven that suspense is overall higher in a preliminary than in a delayed exposition condition, and that curiosity is higher in a delayed than in a preliminary exposition condition, but the present study also revealed that different types of curiosity get activated by different types of discourse structures. There is not only a distinction between suspense and curiosity that needs to be made to analyze how different discourse structures get the audience’s interest; a distinction between different types of curiosity needs to be taken into account too. It appears that exposition alone can evoke a type of curiosity, character curiosity, once an extraordinary event precedes it. At a methodological level the present study
clearly emphasizes the need to pay attention to the way of measuring suspense and curiosity, because the emotions measured at the end of a narrative may much differ from what people actually experience during particular scenes.

This study in my view also has important implications for the field of filmmaking. It adds to the art of film storytelling a scientific basis for choices all filmmakers need to make regarding the ideal location of exposition. My findings do confirm that starting in the middle of the action is more effective in getting the audience interested, and getting it to like the film more, even though suspense may be perceived to be higher overall in the preliminary exposition structure. The study essentially confirms the idea that if a film starts in the middle of action, curiosity will set in, even if the main cause of the situation is given away right from the start, because even with details of the situation revealed, viewers will still be curious about the complexity of the characters.
REFERENCES


