Narrative versus Style

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Narrative versus Style: Effect of Genre Typical Events versus Genre Typical Filmic Realizations on Film Viewers' Genre Recognition

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Abstract

This study investigated whether film viewers recognize four basic genres (comic, drama, action and nonfiction) on the basis of genre-typical event cues or of genre-typical filmic realization cues of events. Event cues are similar to the narrative content of a film sequence, while filmic realization cues are similar to stylistic surface cues of a film sequence. It was predicted that genre recognition of short film fragments is cued more by filmic realization cues than by event cues. The results showed that: (a) filmic realization was the stronger cue in viewers’ genre recognition, except for drama recognition; (b) the influence of a genre-typical event on genre recognition decreased stepwise from drama to action to comic to nonfiction. The latter result is explained in terms of specific genre characteristics. The former result is consistent with a conception of memory for film that acknowledges the role of media-specific mental representations. It is suggested viewers possess a specific genre knowledge embodied in visual simulators that in most cases is dominant over genre knowledge embodied in event simulators, at least in a task requiring genre classification of film fragments lasting up to 24 seconds.
1. Introduction

The ability of viewers to recognize audiovisual genres is obvious when they zap through television channels. They seem to know within seconds whether they have selected a comedy or a nonfiction production. Their ability to differentiate between genres is of great importance. Genre impressions in different media may have their use for viewers and readers in priming attention (Roskos-Ewoldsen and Dillman-Carpentier, 2002), in shaping perceptual behavior and reading style (Carminati et al., 2006; Hanauer, 1998; Hawkins et al., 2005), in generating narrative expectations (Grodal, 1997) and in the development of emotions (e.g. Tan, 1995; Smith, 2003). Genre categorization may profoundly affect how the film involved is being processed by the viewer. An analogy with written discourse seems relevant here. Zwaan (1997) discovered that labeling one and the same text as news or as a literary piece resulted in the activation of different comprehension schemas. Readers of the purported literary text kept a great deal more of its surface structure elements in memory, whereas readers of the purported news text elaborated much more on the reported situations. In comparable ways viewers of a movie may interpret what they see and hear in quite different ways depending on their categorization of the film’s genre. For instance, an event like one person bumping into another may be perceived as accidental and innocuous in a comedy, but as telling of a character’s preoccupations with serious matters in a psychological drama. Such interpretations are appropriate in the sense that they support typical effects of films of different genres. Focusing on the innocuous
aspect of the situation helps to appreciate the event as funny, whereas elaborating on the concerns of the character facilitates empathy and sympathy, proper responses to drama.

Regular film viewers’ working knowledge of genre is illustrated not only in zapping, but also by their ability to select genres for the purpose of mood management. Genre recognition’s role in mood management is illustrated by the observation that given a mood state (e.g. tender, happy, sad, tense), people can tell what film genre they would like to view (Oliver, 2005).

That media users seem to recognize genres raises the question how this is achieved. What knowledge is used, and how is this knowledge organized? The present study explores some factors at work behind genre recognition focusing on film genre. Numerous studies can be found in the humanities on film genres that describe genre distinctions and similarities, the historical development of genres or the commercial and institutional significance of genres (e.g. Altman, 1999; Neale, 2000; Schatz, 1981). However, there is scarcely any empirical knowledge on the issue of how viewers arrive at a specific genre impression. Obviously in most situations movie viewers know in advance to which genre the film belongs that they are going to watch. Most films come indexed (Carroll, 2003), but in some situations like in channel zapping, the genre of the film is not known beforehand. In order to determine genre, viewers have to rely on cues provided by the current film sequence. It seems likely that even when watching indexed films, viewers use film cues to check and possibly refine their categorizations. This is, first, because indexes are not always reliable; it may happen that what is labeled a ‘psychological thriller’ turns out to be a horror movie. Second and more importantly, categorizing is not an end in itself, but it helps viewers to process the film they are watching so as to get maximum satisfaction out of it, for instance in terms of wanted
emotional experiences, as we just saw, and that is why they detect genre cues and refine genre categorizations all the time.

What cues are effective in genre recognition is far from clear. Film studies have proposed widely varying attributes such as plot and setting, iconography and film style (Altman, 1999; Bordwell and Thompson, 2004). Our study aims at assessing the validity of two major cues that are available to every film viewer, one being the events and the other the filmic realizations. In more familiar terms, event cues are similar to the narrative content cues of the film, while filmic realization cues are similar to stylistic surface cues.

*Events* consist of the narrative happenings in a scene, while filmic realizations consist of the cinematic representation of a scene. A fundamental difference between an event and its filmic realization is that events are perceived as units delimited in time, marked by a beginning and an end (Zacks and Tversky, 2001), while filmic realizations can be conceived more continuously. Newtson (1973; Newtson and Enquist, 1976) showed that people can easily demarcate events in a film displaying ongoing character behavior. In addition, Baird and Baldwin (2001) showed that viewers base their points of demarcation on their interpretation of the presented intentional actions of the characters. When an event has been demarcated, it is fitted into story schemas (e.g. Mandler, 1984). These schemas activate genre specific mental models, which in turn enable viewers to make inferences about the content, order and outcomes of events to come (e.g. Zacks and Tversky, 2001; Zwaan, Langston and Graesser, 1995). Some events may be assumed to be more typical for a given genre than others, because of their associations with themes and plots specific for a genre. For instance, thwarted love, helplessness of a protagonist, loss and regain of valuable objects are themes
common to drama, comedy and action genres, respectively. Examples of genre-typical events that fit these themes are a separation, loss of control, and a fight for a valuable object. Cue validity of events may be related to their genre-typicality in this sense.

*The filmic realization* is what a film looks and sounds like. It makes events perceivable and lends specific sensory qualities to them. Filmic realization is an expert term, referring to analytic categories such as character movement, camera movement, actor behavior, editing, lighting, setting, props, and so on. Dealing with these categories presupposes some knowledge of how films are made. There is a lack of research evidence on whether regular film viewers distinguish these analytic categories in viewing images and hearing sound. However, experiments on painting and object perception suggest that regular viewers do not need to distinguish between such analytical categories in order to successfully classify the objects with regard to their originality (Locher, 2003) or emotive expression (van Rompay et al., 2005). From the perspective of the film viewer, the filmic realization can be defined as “the tangible texture of the film, the perceptual surface we encounter as we watch and listen, and that surface is our point of departure in moving to plot, theme, feeling - everything else that matters to us” (Bordwell, 2005, p. 32).

How useful are events and filmic realization for categorizing genre? Traditionally, the event cue was considered to be the most important cue for genre recognition; events are classified as elements of myths and myths, in turn, form the basis for genre differentiation from Aristotle (335-323 BC/ trans. 1988) to Frye (1957). The idea that events can be a basis for telling genres apart is easy to accept: a final shoot-out is typical for a Western, a character sliding over a banana peel must be part of a comedy and the rejection of a lost son returning home by his merciless father is a
typical example of a drama. Most regular viewers will recognize such events as genre typical and many of them may be able to mention one or more typical events for the major film genres. Whereas most people cannot memorize the details of any film in the longer run, they can fall back on typical and schematized events, as the research in memory for stories has abundantly shown since Bartlett’s studies (Bartlett, 1932). In contrast, whether filmic realizations are perceived as such, and whether they are retained in memory and are used to recognize genres, is much less obvious. Remembering formal features requires attending to surface structure details, or data-driven processing, and people are not used to do this when following a story or watching a movie – although Baggett (1979) showed that the surface characteristics of movies are better retained than those of verbal stories. Nonetheless, there is some evidence of the use of stylistic surface features in recognizing genres. Genre recognition studies in literature (Hayward, 1994) and music (Dalla Bella and Peretz, 2005) showed that genres can be accurately recognized by their stylistic differences, while it has also been shown that genre affects attention for stylistic details (Zwaan, 1994; Zwaan and Radvansky, 1998). Visch and Tan (2007) showed that manipulation of a filmic realization cue, i.e. the velocity of a sequence, affected the genre recognition of a scene significantly. Another indication that surface features have cue validity is formal rather than psychological in nature. There are computer programs that detect genre, using shallow features such as words or even character combinations like trigrams, and comparable software has been developed that recognizes television genres, e.g. news and commercials, by filmic realization parameters such as cutting rate and presence of graphics (Agnihotri and Dimitrova, 1999; Taskiran et al., 2003).
The idea that only a so-called amodal, propositional description of perceptual images is retained in long-term memory, while the surface features of images are not stored in memory at all (e.g. Pylyshyn, 1973; 2002), has been influential for years (cf. Anderson, 1983, p. 46). Most recent memory research has essentially reversed the perspective on the role of deep meaning versus surface structure in memory. Researchers now realize that cognition is not a system of abstract processes running in a void, but that cognition is embodied (Barsalou, 1999, 2008; Borghi, 2004; Lakoff, 1987; Pecher and Zwaan, 2005; Thomas et al., 2006). According to one particularly influential view, memory consists of a set of perceptual simulators that retain perceptual information in a format closely resembling actual perceptual processes and attributes (Barsalou, 1999). The attributes involved directly reflect the surface characteristics of original stimuli. People can run perceptual simulations from memory in the absence of visual stimuli (Barsalou et al., 2003). In line with this view, regular film viewers do not only have event schemas but also perceptual simulators available. The perceptual simulators reflect the surface characteristics, that is, the specific filmic realizations of films that have been viewed. In categorization tasks, such as genre recognition, these simulators are matched with the incoming perceptions. However, the possibility remains of amodal representation formats supporting film surface feature recognition as an alternative to simulation. Pylyshyn (1973) proposed that dealing with mental images appears to involve analogue representations, but in fact consists of cognitive operations performed on an abstract code.

If event schemas are immediately derived from perceptual simulators, rather than resulting from the operation of rules or any other abstract mechanism (Barsalou et al., 2003), then they are secondary to perceptual cues. Therefore, filmic realization may
be an even stronger cue in genre recognition than events. However, there are other rationales, too, for a hypothesis of the superiority of filmic realization cues in film genre recognition. Realization cues may be expected to be more genre specific than events. Even if some events may be highly typical for a genre, they can still occur in other genres. For instance, a shoot-out also takes place in mob movies, when two gangs engage in a decisive battle, car chases can be found in action movies like The Matrix Reloaded (Wachowski and Wachowski, 2003) and in comedies such as Me, Myself and Irene (Farrelly and Farrelly, 2000). An additional reason for positing the superiority of filmic realization cues is that filmic realizations are directly perceptually accessible to the viewer. In contrast, events need time to unfold and to be demarcated and recognized by the viewer. Viewers may thus recognize genres before they have identified any event, as in zapping, or in watching music video clips that lack recognizable events.

In conclusion, we hypothesize that filmic realization has a stronger effect on genre recognition than portrayed events.

2. Method

Only original film materials were used, limited to the comic, action, drama and nonfiction genres. In our view, these genres can be seen as a set of basic genres from which specific subgenres may evolve and dissolve in time (Visch, 2007). The set of these four genres is already discussed by Aristotle, and they seem to be used throughout history for the classification of artistic products ranging from poetry to painting and from theatre to film. The universality of the genres can also be seen by their reliance on universal myths, as discussed by Frye (1957). However, it should be noted that this classification is global and inaccurate in view of expert knowledge of genres. In
particular, it confuses Aristotelian tragedy with ‘drama’; for a clarification of the latter two terms see Zillmann (1998). We adhered to this misunderstanding because it may be expected that non-expert informants could deal better with this classification because it is common in film publicity, such as program guides, movie databases, video shops and so on.

As we wanted to assess effects of genre typical filmic realizations independently of effects of genre typical events, and because filmic realizations and events do not exist separately from each other, we had to select combinations of an event and a filmic realization presented as one stimulus. Through selection, the factors filmic realization and event were each varied at four levels representing a genre: comic, drama, action and nonfiction.

2.1. Prototypical Events and Filmic Realizations

Events were selected that according to the authors fit within current themes or plots associated with the four genres. The portrayal of each event was complete in the sense that it represented a motivated and full action or change of state with an outcome (see Lehnert, 1981, for a formal definition of “plot units”). Due to the design of this study, further requirements for the four events used were that they should: (a) be prototypical for only one of the four genres and (b) occur in the other three genres as a non-prototypical event as well. An example of an event matching the requirements would be “tripping over” which combines prototypicality for the comic genre with occurrence in other genres. In contrast, "slipping over a banana peel" would be another prototype in the comic genre but not an event occurring in other genres, while an "unexpected setback" occurs in every genre, but is too general to be prototypical for the
comic genre. From a larger pool of events four items were chosen: “waiting for the elevator” as an event prototypical for the nonfiction genre, “happy reunion” for drama, “running chase” for action, and “tripping over” for comedy.

Filmic realizations that were considered typical for a genre were chosen using available classifications of the title from which a sequence was selected (e.g. label on package or from publicity materials or movie databases). Sequences of fiction event/filmic realization combinations were derived from digitized video or DVD releases of various feature films ranging from Chaplin’s *Idle Class* (1921) to Tarantino’s *Reservoir Dogs* (1992). Nonfiction filmic realizations were obtained from news items provided by the archives of the Dutch Institute of Image and Sound in Hilversum. This archive contains the majority of television programs broadcast on Dutch channels since 1951. In addition, nonfiction filmic realizations of the ‘waiting for the elevator’ event were shot as non-staged scenes on location. All sequences were 8 to 24 seconds in length.

2.2. Pilot Study

In order to obtain the best set of prototypical sequences for event and filmic realization, a pilot study was conducted. Both factors, filmic realization and event, have 4 levels: comic, drama, action and nonfiction. For each of the 16 filmic realization/event combinations, 4 replications were selected from different movies. In all resulting 64 sequences sound was omitted and image quality impoverished, so that only moving contours of actors were visible (see Figure 1). This was done in order to keep genre cues constant over all sequences and to avoid genre recognition by an actor’s face alone.
In a pilot study sixteen participants judged each of the 64 sequences as to their fittingness in the comic, drama, action and nonfiction genre on a 5-point scale. In the analysis genre prototypicality of the filmic realizations and events of each of 64 sequences was computed by taking the ratio between the judged fittingness of a sequence in its original genre and the mean judged fittingness of the sequence in the three remaining genres. These prototype scores were used to select 32 out of the 64 sequences to be used in the main experiment.
2.3. Main Experiment

2.3.1. Materials and variables. The stimulus materials consisted of 32 film sequences with the sound omitted and visual appearance impoverished (See Appendix for a list of selected sequences). The length of fragments ranged from 8 to 24 seconds. The sequences were selected according to three independent variables: (a) genre of event (4 levels), comprising: comic (tripping over), drama (happy reunion), action (running chase) and nonfiction (waiting for the elevator); (b) genre of filmic realization (4 levels), i.e. the catalogue genre of the films from which the sequences were derived, also comprising four levels: comic, drama, action, and nonfiction; and (c) replication (2 levels), i.e. for each event/ filmic realization combination two sequences from different films were taken. In addition to replication there were two other control variables: (a) order (2 levels), i.e. one half of the participants saw the 32 sequences in one randomized order, while the other half saw them in the reverse order; and (b) participant gender (2 levels). The dependent variable was fittingness judgments: the participants had to judge on a 5-point scale the fittingness of each sequence. Participants were also asked to judge the general quality of each fragment on a 5-point scale; these quality ratings served as an additional control variable, in order to exclude a potential nuisance effect of differences between sequences on genre recognition. Especially impoverishing sound and image qualities might result in such differences. The quality variable was measured by assessing the degree to which participants were able to follow the contents of each sequence on a 5-point scale from “easy” to “difficult”.

2.3.2. Design of the study. The design of the study is factorial, comprising the following variables: 4 (genre of event) x 4 (genre of filmic realization) x 2 (replication)
x 2 (order) x 2 (gender), with the first three variables within-subjects factors and the last two between-subjects factors.

2.3.3. Procedure and participants. Participants were tested in groups. Each sequence was presented two times separated by a short interval, after which the participant rated the sequence in the questionnaire.

Seventy-three first-year students of the University of Amsterdam participated in the experiment. Participation was rewarded with a cinema ticket. All informants were naïve as to the purpose of the study and randomly assigned to the conditions. Three of 73 participants were excluded from the analysis because they skipped a considerable part of the questionnaire, leaving a total of 70 participants.

3. Results

We analyzed results using MANOVA as the main statistical procedure. However, as our hypotheses entail fine-grained differences across and between the variables, we had to rely on paired sample t-tests for most of our results.

Effects of control variables were investigated. A MANOVA showed that judged quality of sequences interacted significantly (p < 0.05) with fittingness in the comical and the action genre. Gender, order and replication interacted significantly with at least one of the four fittingness judgments. In order to control for their effects, all four control factors were included as covariates in the analyses to be reported.

3.1. Correctness of Genre Recognition

The hypothesis about differential effects of events and filmic realizations on genre recognition presupposes that the selected sequences are recognized more or less
correctly. Table 1 shows that recognition for all genres exhibited a satisfactory level of accuracy.

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<td>drama</td>
<td>action</td>
<td>nonfiction</td>
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<td>9</td>
<td>12</td>
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<tr>
<td>Drama sequence</td>
<td>4</td>
<td>96</td>
<td>8</td>
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<tr>
<td>Action sequence</td>
<td>14</td>
<td>42</td>
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<tr>
<td>Nonfiction sequence</td>
<td>5</td>
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Table 1. Accuracy of Genre Recognition

*Note.* The values represent percentages of sequences judged by the participants as fitting “well” or “excellent” in a genre, i.e. values 4 or 5 on a five-point scale. The sequences referred to have the same genre of event and of filmic realization. Bold numbers represent percentages correct genre recognition.

3.2. Genre-Prototypicality of Events and Filmic Realizations

In the analyses presented here the mean fittingness scores of the two replications for each event-realization combination were used as the dependent measure. The analyses involve a set of t tests. An explanation of how we dealt with type I errors in testing predicted differences between means seems in order here. A straightforward way would be to apply Bonferroni corrections for the number of tests to control family wise error rate. However, in our study we believe there is ambiguity about what would constitute a family of tests. It could be argued that hypotheses relating to Prototypicality
of Events and Filmic Realizations are separate families. The same goes for tests within
genres (hypotheses about drama are arguably theoretically separate from those about
comic events). If we took this view then the amount of correction needed on our alphas
would be minimal. However, an alternative view would be that our family of
hypotheses should be more broadly defined; one might even argue that all of the
hypotheses are related in content. In that case the level of correction would severely
compromise the power of the tests. A better solution, we believe, is to circumvent the
issues of power and Type I errors by reporting effect sizes. The benefits of doing so are
that 1) our action is not determined by decisions about how we define families of
hypotheses with which readers might disagree; 2) results are not affected by the number
of tests conducted; and 3) readers can see the size of the effects we got without needing
reference to significance values. Our reporting of the results involved is consistent with
the APA statistics task force recommendations (Wilkinson, 1999), which reflect the
growing appreciation in the research community that null hypothesis significance
testing is inherently flawed and that effect sizes should be reported.

Events: The drama and the action event, i.e. the happy reunion and running
chase, were judged to fit better in their own genre than in any of the other genres (t-tests
with second to best genres: \( t(69) = 22.1, \ p < 0.01, \ r = .94; \ t(69) = 10.65, \ p < 0.01, \ r = .79 \) respectively).

The comic event was not judged to fit exclusively in the comical genre; there
was no significant difference between its fittingness in the comic genre and its
fittingness in either the drama or the action genre, although the difference between its
fittingness in the comic genre and the nonfiction genre was significant (\( t(69) = 4.65, \ p < \))
0.01, \( r = .49 \). However, within the comical fittingness scores, the comical event fit significantly better than any other event (\( t(69) = 5.58, p < 0.01, r = .56 \)).

The prototypicality of the nonfiction event suffered from similar problems: the nonfiction event was judged to fit significantly better in the drama genre than in the nonfiction genre (\( t(69) = -6.5, p < 0.01, r = .62 \)). Moreover, within the nonfiction genre, the nonfiction event failed to fit significantly better than any other event.

Summarizing, only the drama and the action event were recognized as being fully prototypical for their genre, the comic event to a lesser degree, and the nonfiction event was not recognized as being prototypical for its genre.

*Filmic realizations:* All filmic realizations were recognized to be prototypical for their own genre. T-tests showed that the recognition in the genre of origin was significantly better (\( p < 0.01, r > .45 \)) than recognition in the second-best genre.

### 3.3. Genre of Filmic Realization Determines Viewer's Genre Recognition

The factors filmic realization and event had a significant main effect on judged fittingness: \( F (12, 6657) = 442.83, p < 0.01; \ F (12, 6657) = 87.80, p < .01 \), respectively. A first indicator to validation of our hypothesis, i.e. the genre of filmic realization has a stronger effect on genre recognition than the genre of events has, is that the effect size (partial eta-squared) of filmic realization, 0.44, is superior to that of event, 0.14.

A second, more specific analysis to test our hypothesis is based on a selection of sequences where either the event or the filmic realization, but not both, is at odds with the target genre, that is, the genre of which the fittingness has to be judged. For each of the four genres, the effect of its event on its recognition, is proportional to the mean fittingness scores of the three filmic realizations (times two replications) featuring the
same event, but differing as to the genre of filmic realization. For instance, to see how the comic event tripping over affects comic recognition, the comic fittingness scores are taken of all sequences that show a tripping over and have a filmic realization in drama, action and nonfiction genres. Similarly, the mean genre fittingness scores of sequences having the same filmic realization typical for a genre, but differing as to generic event, reflect the effects of the genre typical filmic realization on the recognition of that genre. For instance, to see how the filmic realization of comedy affects comic recognition, the comic fittingness scores are taken of all sequences that have a comic filmic realization for drama, action and nonfiction events. The two sets of means are presented in Figure 2.

**Figure 2.** Influence of genre typical filmic realization and -event on the recognition of a genre.

*Note.* Means of Genre Fittingness Judgment in proper genre are obtained across realizations in remaining three genres (Events) and across realizations in remaining three events (Realizations). Differences among alphabetical letters indicate significant differences between the corresponding means with $p < .02$. 
Our hypothesis predicts that filmic realization will outperform the event in all four genre recognitions. In terms of the design, the prediction is: for target genre \( i \), the mean fittingness scores in genre \( i \) for the three sequences combining event \( j,k,l \) with filmic realization, are superior to those for the three sequences combining event \( i \) with filmic realization \( j,k,l \). All superiority predictions were subjected to a one-tailed t-test. For example, if the target genre \( i \) is nonfiction and we have 1) a sequence showing an event typical for comedy – “a tripping over, in a nonfiction style, and 2) a sequence showing a nonfiction event – “waiting for the elevator, realized in a comic fashion, then we expect from the hypothesis that the first sequence leads to a higher judged fittingness for non-fiction than the second. Similar comparative predictions are made for nonfiction and drama, and for nonfiction and action.

For nonfiction, the tests showed that all three genre combinations differed significantly in favor of the nonfiction filmic realization over the nonfiction event: comic - nonfiction: \( t(69) = 21.66, p < 0.01, r = .93 \), drama - nonfiction: \( t(69) = 18.12, p < 0.01, r = .91 \), and action - nonfiction: \( t(69) =19.71, p < 0.01, r = .92 \). For the comical genre as target, recognition likewise depended significantly more on the (comical) filmic realization than on the (comical) event of a sequence with all genre combinations: drama - comic: \( t(69) = 14.41, p < 0.01, r = .87 \); action - comic: \( t(69) =21.92, p < 0.01, r = .94 \); nonfiction - comic \( t(69) =16.8, p < 0.5, r = .20 \). As to the recognition of the action genre: the action filmic realization dominated the action event in the combination with comic \( (t(69) = 8.04, p < 0.01, r = .70) \) and drama events \( (t(69) = 10.08, p < 0.01, r = .77) \) but there were no significant results of action in combination with nonfiction. Concerning recognition of the drama genre, only the comic - drama combination differed significantly in favor of the dramatic realization \( (t(69) = 6.89, p < 0.01) \).
0.01, r = .64). Unexpectedly, the drama event significantly dominated the drama filmic realization in the combination with action and nonfiction (two-tailed: \( t(69) = 4.42, p < 0.01, r = .47; t(69) = 2.30, p < 0.05, r = .27 \), respectively).

4. Discussion

This study was concerned with the cues that are used in categorizing films as to genre by ordinary film viewers. In general, viewers can accurately recognize the genre of film fragments of limited duration that come without contextual information. The knowledge that viewers have of genre categories may have been developed by frequent exposure to genre differences in films and television programs. Genre recognition was demonstrated to make use of two fundamental properties of movies, namely the events represented in scenes, and the particular filmic realization of scenes.

The starting assumption that non-expert viewers recognize the genre of a film sequence by its surface characteristics, i.e. filmic realizations, has found support. In a direct comparison with the obvious competitor, a film’s content, i.e. the events shown in it, filmic realization proved to be the winner. Hypothesis 1, stating that the effect of genre-typical filmic realization on recognition is stronger than that of genre-typical events, was validated in a number of ways. First, the effect of realization on recognition was found to be higher than that of events for three out of four genres, with drama as the exception. Second, the effect size of the filmic realization on genre recognition proved to be far superior to the effect size of event. And third, all filmic realizations were recognized to fit best in their original genre, whereas some events, viz. comic and nonfiction, were not. We will return to a more detailed discussion of our findings later; for now it is important to stress the limitations to the generality of the findings.
A first limitation is posed by the task used in this study. Repeated rating of the degree to which sequences fit in a number of genres may not only raise the awareness of genre typical events, but raise the awareness of stylistic features even more, simply because taking these into account facilitates and quickens the task at hand in terms of the cognitive processing of the perceptual input. The awareness of style characteristics may be comparable to channel zapping, but well go beyond the level usual in regular film viewing, possibly to the point of explicit reasoning about genre. We cannot tell on the basis of the present data how explicit recognition processes have really been. Only more indirect measures of genre categorization may reveal how serious this limitation to external validity of results is. However, it should be noted that besides more or less explicit attending to stylistic features in the stimulus films, the task also required that knowledge of such features was already available in order to differentiate genres. This stylistic knowledge base can only have been acquired in the informants’ history of regular film viewing preceding participation in the study. In regular viewing there is no need to attend to stylistic features. Attending to these would probably be detrimental to the kind of mental state and corresponding emotional enjoyment that film patrons seek (Tan, 1996). Nonetheless our results suggest that they have been picked up in the participants’ viewing history, which is in line with our proposal that regular film viewers implicitly perceive generic stylistic features. We will return to the issue of explicitness of categorization during the experiment in a moment. A second limitation concerns the length of the stimulus sequences. They were short, ranging from 8 to 24 seconds. This range is not too far removed from calm zapping through television channels, but its brevity may have negative influences on the event cue. It seems probable that, on average, events need time to unfold that exceeds the range used in the
present study. In regular film viewings, events develop more completely and in doing so they will gain in validity as genre cues. And it seems equally probable that viewers will attend to filmic realization as long as they are uncertain about the nature of events while they are unfolding. Future experiments using longer sequences would be an interesting addition to the results found in this experiment. For example, when using 30-minute sequences instead of 15-seconds ones, the event-cue effect-line presented in Figure 2 can be expected to move upward, while the filmic realization effect line will remain the same as in this experiment. A third limitation to the present study concerns the role of filmic realizations. They were defined as the “look” and “sound” of a film as it is physically presented. The visually diminished quality and sound muteness of our material is, of course, a crude operationalization considerably reducing the cue strength of the filmic realization. The absence of film music may be the most notable deficit in our version of filmic realization.

All we can conclude so far is that regular viewers perceive some of the surface characteristics of films, and that they must have a stock of surface characteristic examples in memory in order to match new instances with. Two more fundamental issues are left open, one relating to cognitive operations involved in genre recognition, and to the representation format of stylistic knowledge. As regards the operations, to the degree that they are unaware of either noticing or remembering these, it may be assumed that people have an implicit memory for pictorial surface features, as proposed by Schacter (1996). To the degree they are aware, a model of explicit memory use, as in problem solving, is a more appropriate alternative. Additional research has to elucidate this issue. The same goes for our suggestion, that the representation of realization relevant knowledge is implemented in memory through perceptual simulators, as
proposed by Barsalou (1999, 2008). The representation format of stylistic film cues cannot be deduced from the present data. More specifically, they leave open the possibility that film surface characteristics are coded in an abstract rather than analogue (perceptual) format (Pylyshyn, 1976), or in a twofold representation format (Paivio, 1986). In addition, further research is needed to identify the parameters of filmic realization that are responsible for genre recognition, and to answer the question as to what degree they correspond with film-analytic categories, such as mise-en-scène, camera handling and editing.

The results of our experiment show, in accordance with our hypothesis, that although filmic realizations were shown to be the superior cue in genre recognition, genre-typical events also have an impact on recognition. It should be noted that not all events were judged as prototypical for their genres. Drama and action events were recognized as prototypical, but the comical event was judged to belong not exclusively to the comic genre, even if it was judged as the most comical event within the comic genre. The nonfiction event appeared to lack any prototypicality for the nonfiction genre.

We take a brief look at the differences between the characteristics of events and filmic realizations in the various genres, with a view to their contribution to recognition as shown in Figure 2. Dramatic events may be the most readily recognizable because of their apparent impact on protagonists’ emotion. They typically affect the protagonist’s emotional reaction rather than her action (Bordwell, 1985; Cordova, 2003; Lacey, 2000). In our example, the largest part of the happy reunions consists of a display of happiness. The drama-typical filmic realization would probably be a close-up, but alternative realizations do occur; perhaps the only constant factor is the high intensity
and long duration of the emotional reaction. Action events contrast with dramatic events in that they consist of actions in which protagonists are unlimited in employing their physical capabilities and all sorts of resources in defeating evil antagonists (Arroyo, 2000; Neale, 2000). Moreover, the action event serves as a suspense initiator in the plot, directing attention towards the outcome of the typical action event (Brewer and Lichtenstein, 1982; Carroll, 2003). Action genre filmic realization cues include fast editing, associated with the need to show the details of actions, to switch between views of parts and wholes of it, and to enhance the impression of speed and protagonist efficiency. The comic genre proved to be the fiction genre in which specific events have the least weight for its genre recognition. This can be explained by the comic event’s function of a “loose excuse” (e.g. Horton, 1991) to hold together a series of gags. Comic events are non-specific carriers of comic filmic realizations, consisting for example of actor movements that exaggerate small imperfections of normal behavior to absurd proportions (Mast, 1979; Wells, 1998).

The results of this study fit within a conceptual framework of genre knowledge in which regular film viewers’ experiences are organized around prototypes that are more like concrete examples of film sequences, including dynamic perceptual detail, rather than a set of abstract event prototypes or narrative schemas. Film viewers have embodied knowledge of genres that enables them to have detailed expectations of perceptual and emotional experiences. An underlying, more abstract representation may involve a hierarchy of events and their perceptual manifestations, with real-life and related nonfiction examples as a base level, branching out in various fictional event plus realization levels. When film viewers start to watch a particular movie or a short
sequence of it, filmic realization acts as a cue for immediate categorization of genre, while only after some time, unfolded events may gain in value as a cue.

In conclusion, this study has investigated how two main cue families, events and filmic realizations, affect recognition of the comic, the drama, the action and the nonfiction genre. The crude operationalization used in the experiment to distinguish the cue families can now be refined in further research, which may for instance focus on specific filmic realization cues such as camera usage, or on more elaborate events.

Acknowledgements
The authors express their gratitude to Marjolein Ham and Denise Ridder for their work on the presented experiment, including searching for the film materials and carrying out the experiment. We are indebted to Andy Field for his advice on statistical matters. We also wish to thank the journal editor Kees van Rees and two anonymous reviewers for their helpful comments which have greatly improved the quality of this manuscript.
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and other visual media and continues to do so. He is currently teaching and researching 
media entertainment, with a special view to user competences and emotional appraisal.
### Appendix

Overview of Conditions and Sequences of the Main Experiment

<table>
<thead>
<tr>
<th>Genre of event</th>
<th>Genre of filmic realization</th>
<th>Sample</th>
<th>Title</th>
<th>Description</th>
<th>Length (sec)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comic</td>
<td>Comic</td>
<td>1</td>
<td><em>The Rudi Carrell Show</em>: 1965. Dutch comic show.</td>
<td>Man trips over two times, rises, and trips over again.</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
<td><em>Unaccustomed as we are</em>: L. Foster, 1929.</td>
<td>Laurel and Hardy stumble during breakfast.</td>
<td>11</td>
</tr>
<tr>
<td>Drama</td>
<td></td>
<td>1</td>
<td><em>Sense and Sensibility</em>: Ang Lee, 1995.</td>
<td>Two women run from a hill, one of them trips over, the other helps her.</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
<td><em>Angela’s Ashes</em>: Alan Parker, 1999.</td>
<td>A drunken husband comes home at night and stumbles into the hall.</td>
<td>12</td>
</tr>
<tr>
<td>Action</td>
<td></td>
<td>1</td>
<td><em>Proof of Life</em>: Taylor Hackford, 2000.</td>
<td>A prisoner attached to a chain, runs and trips.</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
<td><em>Labyrinth</em>: J. Henson, 2000.</td>
<td>A girl and gnome are running. The gnome stumbles.</td>
<td>13</td>
</tr>
<tr>
<td>Nonfiction</td>
<td></td>
<td>1</td>
<td><em>Dutch News Broadcast</em>: NOS, 1993.</td>
<td>A German minister on visit in the Africa, stumbles, and is helped.</td>
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<tr>
<td>2</td>
<td>Dutch News</td>
<td>The Dutch queen proceeds with a chairwoman who trips over.</td>
<td></td>
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<td></td>
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<tr>
<td>Drama</td>
<td>Comic</td>
<td>1</td>
<td>A Day at the Races: S. Wood, 1937. A character reunites with an ice-cream cart instead of his brother.</td>
<td></td>
<td></td>
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<tr>
<td>2</td>
<td>Dumb and Dumber: P. Farrelly, 1995.</td>
<td>Imaginary reunion of a clumsy man with the woman of his dreams.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drama</td>
<td>1</td>
<td>Breaking the Waves: L. von Trier, 1996.</td>
<td>A bride and groom reunite when the groom exits from a small airplane.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nonfiction</td>
<td>1</td>
<td>Dutch News: Broadcast: NOS, 1995,</td>
<td>Two brothers reunite at the airport. One of them was believed to be dead.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Action</td>
<td>Comic</td>
<td>1</td>
<td>The Idle Class: Ch. Chaplin, 1921. Chase between Chaplin and a police cop in a park and through a car.</td>
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<td></td>
<td>2</td>
<td><em>The Big Store</em>: C. Riesner, 1941.</td>
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<td></td>
<td></td>
<td>Chase in a big department store.</td>
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<tr>
<td>Drama</td>
<td>1</td>
<td><em>A Star is Born</em>: F. Pierson, 1976.</td>
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<tr>
<td></td>
<td></td>
<td>Man chases a woman in a corridor to get her attention.</td>
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<td></td>
<td></td>
<td>Man subtly chases a woman on a crowded sidewalk in the rain.</td>
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<td></td>
<td>Two armed men chasing another in a street.</td>
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<td></td>
<td></td>
<td>An armed man is chased by policemen on a pavement.</td>
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<td></td>
<td>Policemen on a chase at night in a Dutch city centre.</td>
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<td></td>
<td></td>
<td>Man is chased by police at border of Haiti and Dominican Republic.</td>
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<td></td>
<td></td>
<td>A woman staggers in an elevator and tries to say something to man.</td>
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<td></td>
<td></td>
<td>Two cross-dressed men try to catch the elevator.</td>
<td></td>
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<tr>
<td>Drama</td>
<td>1</td>
<td><em>Titanic</em>: J. Cameron, 1999.</td>
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<td></td>
<td></td>
<td>A woman walks into an elevator with a bellboy carrying her beauty case.</td>
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<tr>
<td>Type</td>
<td>Example</td>
<td>Details</td>
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<td>A mechanic pushes the elevator button and all elevators open.</td>
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<td></td>
<td></td>
<td>Two women approach the elevator, push the button, wait and enter.</td>
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<tr>
<td></td>
<td></td>
<td>A manager approaches the elevator, pushes the button, waits and enters.</td>
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<tr>
<td>Nonfiction</td>
<td></td>
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</table>

Narrative versus Style 35