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A Methodology for the Annotation of Narrative Structures in Films

Una metodología para la anotación de estructuras narrativas en películas

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Abstract:
In this paper we consider what aspects have to be considered in order to write down the film narrative structure and formalise it, such as the elements of the medium that can play a narrative role –sound, image, etc–, the language used by the target audience –adults– and the possibilities that thus open up, such as the different levels of enunciation, the times in which the information is given –certain, ambiguous or false–, and the constant re–elaboration that this particularity allows. We also include cultural and moral issues, which are part of the narrative. These aspects, when annotated and interrelated, play a relevant role in the elaboration of the intended formalisation. We first review the existing methodologies, focused on developing software for annotation

from different ontologies or cinematographic techniques, which mostly describe phenomena not related to the narrative structure itself. Then we list what aspects should be taken into account and we comment on them, to later develop a proposal for annotation methodology of the film narrative structure.

Keywords:
movie corpus; narrative structure; annotation vocabulary; corpus compilation methodology; annotation methodology

Resumen:
En este artículo consideramos qué aspectos han de contemplarse para anotar la estructura narrativa fílmica y formalizarla, como los elementos propios del medio que pueden jugar un papel narrativo -el sonido, la imagen, etc-, el lenguaje que maneja el público al que se dirige -adultos- y las posibilidades que así se abren, como los distintos niveles de enunciación, los tiempos en que se da la información -cierta, ambigua o falsa-, y la reelaboración constante que esta particularidad permite. También incluimos cuestiones culturales y morales, que forman parte del contenido narrativo. Estos aspectos, al ser anotados e interrelacionados, juegan un papel relevante en la elaboración de la formalización pretendida. Primero revisamos las metodologías existentes, centradas en desarrollar software para la anotación desde diferentes ontologías o técnicas cinematográficas, que en su mayoría describe fenómenos no relacionados con la estructura narrativa en sí. Luego enumeramos qué aspectos deben tenerse en cuenta y los comentamos, para después desarrollar una propuesta de metodología de anotación de la estructura narrativa fílmica.

Palabras clave:
Estructura Narrativa; Metodología; Anotación; Corpus Fílmico; Cine

1. Introduction

In a world where information that cannot be found in Google may not be considered, it becomes of paramount importance to have means for accessing narrative material such as movies, novels or TV series by means of queries that refer to their characteristics in terms of narrative structure – such as do they have more than two subplots, do they involve embedded stories, do they include flashbacks... This might be possible if such documents were annotated with rich enough tags capable of capturing this type of feature. Yet, existing tag sets and/or ontologies for annotating narrative do not capture these features at the level that would be required to achieve this.

The present paper reports on the methodology being currently applied in an ongoing project to annotate a corpus of movies with features that characterise the narrative structure of their plots. The approach involves reviewing existing options for an annotation vocabulary, identifying possible seeds for the required task, establishing the extensions required for the task, and outlining a procedure for annotation.

2. Previous Work

A very popular representation solution for describing narrative plot arises from the Morphology of the Folk Tale proposed by Vladimir Propp (Propp, 1968) nearly 100 years ago. Propp postulated a set of character functions – abstractions of plot-relevant actions by certain characters – as means of representing the structure of the plot of a story. Propp's character functions capture basic interactions between plot-relevant characters, such that the villain of the story incurs in a villainy that triggers the story, the hero of the story decides to react, or the hero confronts the villain.

Let us keep in mind the famous 5W's – who, what, when, where, why, and add how –. Propp said that all fairy tales are structurally the same, as the functions – the actions done ('what') – always occur in the same sequence ('when' and 'why', being 'why' a result of the former 'what'), characters ('who') and their attributes may be changing. The other w's only colour the story. The 'where' and 'how' were just attributes. We highlight that he said that artificially created stories do not follow such rules (Propp, 1968, pp. 33-34).

In movies -whether stories are artificially created or fairy tales- these rules differ mainly because the audience and the medium are not the same, and this alters the narrative elements at play.

We understand that the reason for the immutability of such laws is that tales were passed on orally –spoken, often dramatised– to an audience of children, who have a limited use of abstract thought and thus a limited comprehension of abstract metaphors (Ortiz de Zárate, 1992) so the conceptualization of morals grows accordingly (Kohlberg following Piaget, in Hersh, 1988). That means that the development of the plot is limited concerning:

1. **The information relevant for actions:** the causes and consequences of actions are known. The plot uses suspense but the information asymmetry –surprises– cannot play against the child; the plot does not play with what the child does not know but the character does.
2. **Timing:** actions appear in a linear time set. As Glez. Requena states (G. Requena, 2006, pp. 535-539), it is the logical succession of events in a timely order within fairy tales what establishes the temporal and causal order in the mind of the child.
3. **The categorization of the characters**. No ambiguity or irony is allowed; characters must clearly play their role.
4. **The moral categorization of the actions/story**. The consequences of the actions have an evident moralistic character, without ambiguity or irony, fairy tales end well, the hero achieves his goal, order is restored.
5. **Likelihood** is irrelevant. What the adult says becomes factual. For the child's mind, anything that happens in the story is possible and real.

An important shortcoming of Propp's morphology is that it focuses very specifically on the genre of folk tales. More recent analyses of the structure of narratives consider a broader spectrum of genres, including comedy and tragedy (Booker, 2004). Booker's analysis identifies specific properties for comedy –such as a very relevant role played by love plots that usually include a succession of romantic entanglements and often cases of impersonation or cross dressing– and for tragedy –usually focused not on a hero that complies with established morals or convention but rather defies them and often ends up badly as a result.

When narratology researchers look for a corpus of stories with features that characterise the narrative structure of their plots, the only available corpus is the aforementioned corpus of folk tales by Propp.

There is no other corpus to the moment where the scholar can query or refer to the characteristics of the narrative structure of stories –be it whether what characters do, the timeframe when actions occur, or if there are stories within stories.

If researchers look for existing tag sets and/or ontologies for annotating narrative, none of them captures the features at the level that would be required to achieve a comprehensive set of characteristics of the narrative structure. We cannot intend to compare them, as we can only point out that they do not cover the annotation of the whole of items a story comprehends. We shall refer to them in the next paragraphs as covering this or that aspect of annotation and/or narrative structure, pointing out what they lack to come close to become a corpus of stories with a comprehensive annotation.

Representations of narrative based on plot abstractions similar to character functions have been used in support of solutions for automated story generation (Gervás, 2013, Gervás, 2014). A considerably extended version of the Propp morphology (Gervás, 2015) has been used to annotate a corpus of plots for musicals (Gervás, 2016). This annotation framework contemplated more structurally complex representations that correspond to complete plots –as described by Booker (2004)– and it informed the processes of automated plot generation described in (Colton et al, 2016).

Robert McKee (McKee, 1997) proposes an analysis of stories specific to movie scripts that considers a story is made up of small units of action called beats, which are grouped into events. Events in turn can be grouped into scenes, which usually occur in sequences. The set of sequences in a movie may be grouped into a number of acts to build up a complete story. McKee's is not an annotation of stories, but a description of how to write scripts.

Closer to the building of an annotated corpus is the project by Vincenzo Lombardo and his team at the CIRMA in the University of Torino, Italy, who have been working all along the present century on a tool aimed at the 'Semantic annotation of narrative media objects' (2011). In that paper, and in others that followed it (Lombardo et al., 2015,

2018), they deal with a tool they developed, called Drammar. It is very elaborate and comes very close to our approach in its initial stages and apparently the goal is the same; create a Film Corpus –although they want to extend it to all branches of art– annotating the narrative structures. However, they make it clear that their model "does not cover the relation among the narrative content, such as characters and actions, and their physical expression in the media objects, such as sentences in text or regions in moving images, (...). So, the annotation may apply indifferently to a short movie, a novel, or a play session of a videogame." (p. 414). The problem here lies in the lack of taking into account the effects caused by the specific characteristics of the language of the tool used for the representations –how a short blurring operates after a zoom in the face of an actor, to introduce it being a memory, for example.

Guha, Kumar et al. (2015) explain how they use computer tools for the treatment of image and sound at a quantitative level, without taking into account their quality, leaving aside characters and actions as interdependent actors in the sequencing of events. Estrada et al. (2017) make an extensive review of the tools that exist to annotate moving images and especially the reasons that move them. Their review does not consider narrative structure.

González Requena (2006) has linked some of the theories on the formation of the human psyche with Propp's narrative structure formalisation; his formalisation consists in the end in summarising Propp's 31 Functions in 4 major spheres which lead the action of the hero in his way to becoming one. His merit being describing and systematising –to the point of spelling– the differences in the 3 ways in which cinema can portray what a hero can do to become or not a hero and all the plots around it, and how it can be read in a number of aspects of the film, all under the light of psychology, we cannot find a systematic annotation of items that scholars can refer to as existing in this or that film.

3. A Methodology for the Annotation of Narrative Structures in Films

The methodology that we propose for annotating the narrative structure of films is, unlike former attempts, a comprehensive one, as it aims to annotate, from a varied corpus of films, all the features that play a role to characterise the narrative structure of their plots, taking both the story –and the embedded stories it might include–, and the specifics of the media used –film, in this case–.

To do so we have designed a serious of stages, and in the following we present the result of the first stage, which was meant to help us design the methodology to make the annotation a comprehensive one. In this first stage, after researching the previous work, we have been designing a database to annotate some films, adapting it as the process went along, and we have analysed the results.

We describe the methodology that we have designed as a result, which involves five different aspects: a proposal of what elements need to be annotated, a selection of which

movie to include in the corpus to be annotated, selection of a tool to employ to register the annotation, definition of a set of protocols for annotation process and explanation of the procedures for accessing the annotation once it has been finished.

3.1. Description of elements to be annotated

When extending an annotation like the one Propp proposed to movies, one needs to take into account the specific characteristics of the media. With respect to the analysis presented above for Propp's annotation schema, movies differ in the following aspects:

1. **The information relevant for actions:** the causes and consequences of actions are not always explicitly presented. The plot uses suspense and surprises are contrived by with what the audience does not know but the character does (or vice versa)
2. **Timing:** actions are often presented out of chronological order.
3. **The categorization of the characters**. characters evolve over the duration of the film and their role in the story may change accordingly.
4. **The moral categorization of the actions/story**. morals can be questioned, and the codes to show them must be known.
5. **Likelihood** –inner coherence and consistency– is relevant in most of the stories. Sometimes it is broken on purpose as a stylistic resource related to the presentation of actions or their relative timing, and sometimes related to the categorization of characters, or all of them.
6. **The language of image in motion** with specific elements –framing, sound, cutting, etc.

Following this line of reasoning, the elements that we consider relevant for the annotation of the narrative structure of movies are presented in Table 1.

Table 1
Elements relevant to the narrative structure of movies.

Actions and Time	Information provided on each action
	Time where actions occur
	Mode of presentations (shown, suggested or otherwise)
Characters	Identity

	Roles
Morals and motivations	Instances portrayed
	Codes employed to show them
Likelihood	Spectator reading
	Continuous elaboration
Enunciation	Filmic language; image, sound, dialogues
	Narrative levels and embedded stories

Then we annotate the timing and the action, annotating as different elements the identities of the characters from the role they play. We also annotate and comment about the information provided, being aware that often there are asymmetries. We then comment when needed if there are moral codes and the motivations whether evident or hidden, and the codes needed to understand them –for example, in 'The rule of the game' the servitude does not have meals with the lords and ladies, nor can they get involved consistently. In this key it is important to annotate if logical codes are being broken and/or how the spectator is demanded to re-elaborate the purported meaning of the plot and its changes. We also distinguish the levels of enunciation In this fashion we annotate relevant elements specific to film language. A final point is considering the tool to use. The most relevant methodological decision is that all these elements must be available for each instance of the divisions.

3.1.1. Segmentation of movies into annotatable units

An important decision for an annotation methodology is what to consider units susceptible of annotation. The division of the units of action needs to be addressed by a standard and accepted naming, so we select McKee's proposal (McKee, 1997) and adapt it to our purpose. Because the story we deal with is always a film, thus for operative reasons we shall call "Movie" what he calls 'Story'. His concept of "Act" we consider too broad for the kind of annotation that we require, and the concept of "Beat" too detailed. The concept of "Event" we relabel as "Action". This leaves a hierarchy of Action-Scene-Sequence-Movie.

3.1.2. Temporal ordering of the actions

The actions that are narrated in a movie are not always presented in a chronological order. This may happen because of multiple narratives being packed into a single span of film – as described above – or simply because the narrative is presented in a non-linear way, using different forms of anachrony, such as flashbacks or flashforwards (Grabes, 2022). This is a particular problem that is complicated by the interaction between the timing shown in the film, and how the spectator rebuilds the many possible narratives pertaining at each stage as the film advances. A simple example of this is found in Hitchcok's 'Vertigo', where the spectator rebuilds the whole plot when the letter is read, and an extreme example is 'Memento', which plot is based in looping these effects. The way in which we are solving the annotation for the timing as related to the rest of elements will surely help to later analysis of this sort of structures.

3.1.3. Filmic categories

There are a number of categories specific to movies that play a relevant role in the rendering of each action featured in a movie. These range over the various media involved and describe specific details that have impact on the perception of the narrative by the viewer: sound, colour, cutting, axis, camera angle or camera shot. These can be extended to include newer features like multiscreen, virtual realities and the like.

3.1.4. Mode of enunciation of action

Because a movie as a medium involves several channels of communication with the audience, they allow a particular phenomenon that affects the narrative structures that can be identified in a movie. The narrative actions in a movie may be presented –enunciated– in different modes: what is narrated, what is seen in the image, what the viewer infers… Our annotation system annotates the enunciation levels, linking them with the information provided by film techniques –music, image, cutting–, and marks the narrative qualities affected and whether it affects other items –the action itself, the timeline, characters, and even specific codes needed for the comprehension, like moral codes which are not always explicitly stated, or cultural or other textual instances, which are only readable and updated if the spectator has the reference at hand.

3.1.5. Parallel narration

The availability of several possible modes of enunciation is sometimes exploited to have the audio of the film conveying one story while the image follows another. This happens when a character narrates an anecdote which affects the ongoing story, or a story that is told as a voice over by a narrator who may –or may not– be present in the image that unfolds in the meantime (like in 'Alexander', or in 'The name of the Rose'), or by means of the cross-cutting technique in 'Cloud Atlas'. These situations may ultimately lead to multilevel 'embedded stories'. We are addressing this problem and

solving it from a many-fold perspective, marking the event in the timeline, in the action, in the character and in the information level as it affects the plot.

3.1.6. Modality of enunciation of action

Actions that appear in the context of a movie are not always enunciated as clearly having taken place. Sometimes actions are mentioned in passing, or they are only suggested in such a way that the spectator infers that they have taken place. If the annotation is to convey the full range of possibilities that the movie is creating in the spectator's mind, it is important that it include means for capturing each of these options, and for representing the differences between them in each case. In many actions, two or more characters intervene, one or many actively doing, and one or many being subject of the action, or both characters both doing and being done -if A loves B, B is loved by A, but it can be that they love each other, for example-. Simplicity is needed to prevent duplications, so sticking to grammatical categories help in this matter -annotating only the Active Voice, for example-.

3.1.7. Identity and narrative role of characters

The identity of characters needs to be annotated explicitly because –as identified by Booker (2004)– in genres beyond the most basic stories the use of disguise, impersonation and cross-dressing is very common in movie plots. Examples of this in well-known movies is the Pirate Roberts/Wesley duality in 'The Princess Bride', where a hero believed lost reappears in the guise of a famous villain. This type of situation involves complexities at two different levels, because a single character appears with two identities and at the same time features under radically opposed narrative roles. Other instance of ambiguity may arise in more subtle ways, as in the case of the characters Inigo and Fezzik –also from 'The Princess Bride'– who first seem to be helping the antihero but portray themselves as opposing his thoughts and, thus, as siding with the kidnapped princess. Other examples of confusing identity may be the character Kikuchiyo in Kurosawa's 'The 7 Samurai'. At the start of the film he pretends to be samurai and is accepted by the others as one of them. At a later point the spectator learns he never was, but he keeps being considered as one, and paradoxically ends up being recognized as both a samurai and a one of the villagers.

Most films portray an evolution of many of their characters, which poses a problem in itself. This is particularly complex in movies where alternative realities are portrayed, as is the case of many characters in 'The Matrix' or 'Avatar', because each character may have a different identity in each of the realities in question. Another aspect that may confuse the question of identity even further is the frequent representation of communities of people as characters, such as 'The 7 Samurai' is a neat sample of this, where many villagers play a role but all of them are meant to be part of the main character which is the Village itself.

3.1.8. Asymmetries of information

Most of the intrigue and suspense games played by film directors with their audience rely on the exploitation of asymmetries in the information about the story that is available to the different participants –sometimes between different characters of the film and sometimes between the characters and the viewer. For this reason, we decided to annotate whether the action that was happening was indeed happening, and the nature of the information –incomplete, false or wrong– and if it was available to the character(s) and to the spectator. Their annotation is linked to the timeline and other topics already mentioned, as we expect them to be in close relationship to the final interdependencies.

3.1.9. Occurrence of subplots

Another element that is important for narrative structure is the existence of subplots. The narrative threads in a given story can often be grouped into subplots that affect particular characters or involve different aspects of the story. These are annotated as subplots. These are not the same as parallel narrations or parallel plots nor are they embedded stories either (see 3.1.5. above).

3.2. Selection of Movie Corpus

Our goal is to annotate a number films to test the existence of narrative structures at work. The selection of which movies to include in the corpus is a fundamental question requiring several levels of consideration. The process and the decisions that have been taken on that behalf to date are dealt with in another paper (Fernández Muñoz, Gervás, López Calle, In Press).

3.3. Tool to employ

A particularly important aspect is the tool to be used to create the annotation and to visualize the resulting documents. We have opted to create the record for each annotated movie as a set of entries in an MS Access database. This solution allows both explicit interlinking between the different elements in a given movie and the possibility of extending the amount of information stored for each element in an unlimited fashion.

This solution has been preferred over more elaborate software developments for practical reasons such as purchase price, development time, learning curve for both annotators and users, and copyright issues. Our preferred solution is an already known software which is available to a majority, as it is included in usual office packs, and needs no training when queries are designed appropriately. At need, subsequent queries may be customised by scholars for any user.

The development of the database goes parallel with the development of the research itself, and the annotation of new items could add up to data already gathered. The

database allows to cross and intermingle queries so any sort of data can be measured. In truth, the database will never be closed, as new features can be implemented depending on the need of the research. Our final version will be made available for scholars in due time.

The database has been divided into tables, which all together contain well above 100 fields per record. Each record holds the information for an Action, which is the smallest division we have found useful, as explained above. Whatever is annotated on a given Action applies to it as a whole. The annotation is typically a yes/no label. There are a number of fields that are selected from a closed list – for example, Propp's Functions. Some elements need a longer textual description –e.g. when a moral code is broken it demands an explanation for the researcher.

The tables are interrelated and are accessed in a friendly way by the user via forms, which allow introducing data for new records, and query the database selecting and linking most of the fields.

3.4. Protocols for the annotation process

We have followed a strict process for the annotation, which is stated below.

3.4.1. Selection of annotators

Following our experience with the annotation of musicals (Gervás 2016), we are aware that hiring non-trained personnel – whether alumni or colleagues – for the annotation process leads to divergences along the process, which ultimately reduces accuracy and the validity of the results can be seriously affected. A training process, or asking other professors to help in the task, can become as expensive as endless, and a row of inoperative administrative tasks. We have thus decided that keeping the building of the first Corpus under our scope easies the process and assures the accuracy of the outcome. In this event, we have been the annotators of the Corpus so far.

3.4.1. Annotators' Training

A fundamental step in the training of annotators is to ensure that they are aware of the annotation vocabulary they need to use. Concerning cinema and its vocabulary, we have followed the usual standard terminology, but nevertheless there is a specific table which contains each field name and a description. There are certain aspects where we have duplicated some information due to the possibility that terminology could affect the annotation procedure; case in point, if we stuck to naming any character as 'hero' it could turn out that the character changed along the story. We have thus solved this issue by naming characters with a number; the aim is that structures are to be found at the end, not while the annotation process is going on. We have made a parallel process concerning Propp for secondary test purposes, so we have kept a table with Propp's standard naming conventions.

The process we have followed to build the database is in itself a training process, specifically a trial and error procedure by which every decision was annotated, consulted, tried, tested, checked again and again in other films… The rules that are being applied at every moment of the annotation process or that need to be tested are being written down, so that any other researcher can redo the same process or apply it to any other film, in order for the Corpus to be expanded. Annotators have to spend some effort to understand how the categories are used to annotate work, and how to decide between the edge cases. This will of course depend on the individual, as many of the features that eventually occur have to do with the linking of the many elements that are at play interacting in each film – which will no doubt affect the quality of the annotation; if the researcher annotation 'V for Vendetta' has not a sense for music, or has not watched (recently?!!) 'Vertigo', it would be impossible to link them as we have done (see 3.5). This sort of problem will always be present and can only be 'solved' when a wide number of researchers have reviewed the Corpus and added their own to the database.

3.4.3. Presentation of media to be annotated

In the process of annotation, it is of the main importance deciding how and when to write down the elements. Our experience shows that the result differs when the annotator has already watched the film than when he has not watched the entire film and annotates the story 'on the go'. This happens because in the latter system – we call it Hot Annotation – the viewer ignores the importance each element plays in the whole of the plot, and is thus likely to annotate elements that at first seem important, but are later irrelevant to the story. The opposite also happens, as an annotator that writes down on a film that is known to him is likely to discard elements that do actually play a role but are not so important when the researcher is thinking of what comes next. For example, the lighthouse in Casablanca appears twice and acts like a parenthesis, dividing the action in 3 Acts –by the way, there is an evident call to it in 'La La Land', yet another example of how a film recalls another, updating the spectator's expectations, as it is likely that the viewer of this film is expecting that this films has a similar plot ending as the former which an element present in another has called on to. In this key we have assumed a working process by which the film must be seen completely, in a row, if possible in cinema-like watching conditions, meaning that the researcher should try to participate in the story as an spectator, not a researcher, to let the narrative interact with him and experience it as it should. Later on, the film must be annotated scene per scene, in units as small as possible, paying attention to the elements as though each of them was relevant to the plot unless proven otherwise, in an exercise of spelling. Working with scripts as a tool is also helpful when it comes to annotating main changes in a plot that had been written otherwise, which happens often in suspense films, or in films where the director wants to leave his impromptu – Hitchcock's 'Vertigo' is again a valid example, as he changed the end to leave it unfinished, which will then not fulfil the expectations that would comply with a 'classic ending', i.e., punishing the wrongdoer.

3.4.4. Dynamics of annotation

The Hot Annotation is a methodology to be avoided, both for the first vision of the film, but also while annotating. We have proved that a useful way to annotate is, after having had a first contact with the film – either for the first time, either for a revision with the purpose of getting acquainted with it –, dividing the story in smaller action units in a recursive way, and when the structure is delimited, start with the annotation of the sequences in a timely linear way. Would the annotator notice anything that needs to be stated from a fragment that has already been finished, there is no problem in getting back to it and annotating it. We have been saving the story of the building of the database, but we think it is useless saving every version of the changes done to the writing process of each film. After the annotation of every film there ensues a reading of the records, in order to check the consistency of the records. But there are also series of queries built in the database that prevent time gaps or inconsistencies – for example, if a character is said to have died, an alarm calls for coherence if he would appear in a later fragment, whenever the fragment is said to have occurred in a later time.

3.5. Querying functionality

An important point of the approach is the fact that once a movie has been processed, the resulting annotation can be accessed by means of simple MS Access queries. The range of possible queries that may provide intelligent insights on the annotated material is being constantly enlarged as part of the ongoing research.

Examples of possible queries are: what are the structural main actions carried out by protagonist roles after they break a rule. Examples can become as complex as required, such as for instance querying for: the gender – and its percentage – of the characters playing an active role in the first 10 minutes, adding to it if they are portrayed in a positive or negative way, and how many of them have a positive outcome in the end – wherever their end is in the film.

But we will also be able to query how many actions per film recall some other film or known text outside the film itself. An example of this may be the way in which the initial scene in ‘The Matrix’ – with characters running across the rooftops – reminds of the initial scene of ‘Vertigo’. Or cases where a similar relation may be triggered by a certain music passage, for example the tune that occurs in ‘Vertigo’ and which can be heard in ‘V for Vendetta’.

4. Results and Discussion

The methodology is currently being applied to annotate a set of movies. Table 2 shows the movies that have already been annotated.

Table 2
Movies that have already been annotated

The Seven Samurai	Kurosawa	1954
Vertigo	Hitchcock	1958
The Princess Bride	Rob Reiner	1987
Once upon a time in the West	Sergio Leone	1968
The Matrix	The Wachowski's	1999

In the process of annotating them, some difficulties have been identified as requiring further elaboration of the annotation vocabulary or the annotation methodology. These cases involve some issues already identified as problematic –such as the case of collectives acting as characters– and other that have been uncovered as new –like annotating influences across characters when they involve characters not present in the same scene, distinguishing between narrative and descriptive sequences, or annotating films intended to be part of a series, so that the story is intentionally left unfinished or with scenes left to be explained in subsequent films.

4.1. Comparison with previous work

The approach we propose for the annotation of movies goes beyond the set of features covered by the only extant corpus -that by Proppp- as we aim to include other genres and audiences, and differs from the Drammar ontology in that ours includes aspects of moral outlooks and the way they are conveyed, features specific to filmic language, and issues of consistency and coherence. Much the same can be said of the methods and tools covered by Guha et al. (2015) and Estrada et al. (2017). The systems reviewed do not include means for annotating the effects on the story of either the narrative structure or the specific filmic issues, or otherwise the different levels of the enunciation.

4.2. Possibilities of extension

While the database is being built, the developers have total access and control of the architecture, as the development of the methodology and of the Corpus demands changes. But, since our intention is that the database becomes available for further research and increasing the Corpus, but still should be consistent and coherent, changes might affect its integrity, a procedure to request changes will be provided via an open procedure.

The specific elements of film and its narrative structure evolve in time. This means that some are new when they are used for the first time, and when they are accepted, they are used extensively –e.g., the bullet time effect used in 'The Matrix'. Narrative techniques are also affected by this evolution –if 'Memento' could seem a good example of it, it indeed is, but we can then bring in the 'Rashomon effect' or simply recall how Mark Antony's speech in Shakespeare's 'Julius Caesar' changes the mind of the spectator–. Extreme usage of such elements, as well as experiments and unusual plots that are hardly understood by a relevant number of viewers, have been avoided. But also we have to say that we find that some film elements used are not found in many mainstream films, and intending to find narrative patterns in such unusual films or resources is useless per definition. In this light, when one such feature is found, other known films should have it, and we will annotate it in order to incorporate it to the Corpus, as a meaningful narrative element. But when it is not the case –'Memento' is again a good example–, there is no use in including it in the Corpus at first, as some are but an exercise in style hardly to be found again.

5. Conclusions and future work

Our ongoing methodological approach at annotating narrative structures in films covers aspects which have not been yet dealt with by the very few attempts that have been done for such a task; the time order, how the action is finally elaborated by the spectator, the levels of enunciation, the asymmetries of information and the role that some filmic categories play.

We understand that the development of our research is not fixed yet, as scholarly research should be. We are sure that, although we are including and allowing links between elements that had not been expressed in former research, there will come more scholars that will increase the effort by adding elements we are inadvertently missing.

Existing tools for image and sound treatment as those described above in Section 2 might prove helpful in a later stage, and further increase the operability of the database, when it can be applied on a bigger corpus, as image and sound patterns can be detected easily with AI. In this key we specially point out that the possibility to find a common ground and somehow integrate the corpora of films already annotated with Drammar or Elan and our approach ought to be explored.

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