CINERGIE
il cinema e le altre arti

3

n.s. marzo 2013

Art and Media Files

Shots

Our project aims at developing a new tool for the analysis and critique of audiovisual texts which will be able to work in an easy, straightforward and effective way. The need for this new tool becomes clear when taking into account the level of unsuitableness of various existing tools available to scholars and film critics nowadays. Until a few decades ago, film analysis was limited to watching the film itself in a theatre. There was no possibility of stopping the film to focus on a transition while it was running. It was impossible to watch a scene over and over again and it seemed unthinkable to focus on one shot at the time. Therefore, critical work was mainly based on subjective reactions and mnemonic skills of the scholars themselves rather than on an accurate analitical work.

It's true that these issues have been mostly overcome since images can be transferred from film itself onto a magnetic or optical device. This process has given the audience the chance to enjoy films in private mode (either in slow motion or fast-forwarding it, going backwards or freezing a certain frame of the film). At the same time, the possibilities provided by these kind of tools are not wide enough to allow an easy and precise analysis of cinematic communication codes and of the basic elements forming narrative structures of a film.

These technological tools prove to be useless if applied to Film Studies especially when we move from film analysis to the writing and the reception of a critical text – whether this is a written text or spoken presentation or a lecture. In fact, we all know how difficult it is to evolve from spoken language especially when it comes to developing a written critical text. Spoken language is substantially different from film language. Film language is often easier to explain through indirect references and evocative and visual images even if frames and pictures are restricted to fragments of the film itself.

However things are changing now, thanks to research and innovation in the field of digital technologies and its IT applications. New tools have recently appeared which can allow different languages (cinematic, spoken etc.) to be recombined into a hypertextual environment. These new tools might finally break the deadlock we have been talking about so far.

The possibility of overcoming the limits which are presently rrestricting text analysis to mere statistics or to accounts of purely taxonomic criteria (type and duration of takes, camera movements, recurrence of settings etc..) is still missing. These processes are made more easily accessible by modern IT, but at the same time they are not necessarily so interesting from a scientific point of view. We think that is necessary to develop a deeper ability to control structural elements of filmic language, especially from a qualitative (rather than from a

quantitative) point of view. The aim would be to get to the point where will be able to analyse texts in their real essence, in their fundamental, essential aspects making the analysis of a film a holistic process which goes beyond the mere sum of its parts.

This is the reason why the first step of our project will be focusing on the relationship between Film Studies and IT tools with particular reference to specific softwares which are currently in use (like Lignes de temps, or CineMetrics). We will focus on the way they work and on the way they produce results. The second part of the project will be devoted to the devicing of a new piece of software which will enable scholars to overcome the limitations of current tools. In this regard, it is worth mentioning some other pieces of existing software that we will take in account while designing the new one. Editing tools for any kind of audiovisual work and worksflows - like AVID, Apple Final Cut, Adobe Première – are programs which are able to process images and sound on a virtual level, making it possible to put together the fragmented structure of a movie after the shooting and according to a script.

Our aim is to adopt the same operational mode of tehse existing softwares as a starting point of a transformational process which will be reversing its results. Starting from a tool designed to perform editing we will result having a new tool for fragmenting and analyzing the footage: this process is not just a change of sign (from '+' to '−'), turning a sum into a substraction, but it is rather to be considered as an "inversion of chronology" (or of the so-called arrow of time) in the sense of going backwards through all different flmmakeing stages, pointing out the essential processes lying behind it.

This part of the project – which we think it will to be the most difficult one – has to be considered as an operation of "inverse engineering": i.e. not just as an analytic phase but also a phase where the critical text in itself is formed. However, this time the text will be strictly connected – i.e. on the same physical support – to the object which it is investigating upon. This is actually the most crucial point of the project: we will end up having just one tool which is producing a synthesis of several different functions dedicated to different linguistic codes. The same tool will be also devoted to producing the unifying structure which gives shape to the expression and interaction of the different functions, without them being affected in its "easy-to-use-ness".

As far as the visual part is concerned, the project will aim at enhancing existing tools which are creating new methods for editing analysis, especially in relation to duration, pace and visual transitions, elements which are creating connections between shots and scenes. All this will be made both in sequence and in parallel, on the same movie or on the comparison between different movies.

Another aspect that has been neglected so far is the inner composition of a single shot, especially in regards to its semantic aspects as connected with the inner balance and the compositional dynamic of an image. Graphic tools, like plotters or superimposable grids will be developed with the aim of drawing attention to single parts of the shot, selectively magnifying single iconographic elements. This possibility – if it will be developed further in a second time– will also allow face recognition and it will work selectively inside the movie detecting, for example, the presence of a specific actor.

As for the analysis of different direction styles, we would like to achieve the possibility of turning the tridimensional image of a scene into its planimetric representation with the aim of identifying the "decoupage" structure which is related to the position of actors and the movements of the camera. Another automatic tool we aim to develop is related to the recognition of light levels (light/shadow contrast), the arrangement of lights on the set (planimetry) and the different types of lenses used during the shooting, just to name some of the more relevant aspects. Anyway, we are aware that all the aspects related to this project will always be likely to

be improved and enhanced in a second time.

Regarding the sound, the development of this software will be more articulated and more complex, as very little has been devised in the audiovisual area so far. Then, we will have to design a tool for "de-mixing", which is the breaking down of the soundtrack into its main parts through frequency filters: speech, music and sound effects. This issue is particularly interesting from a scientific viewpoint in terms of relationship between sound and image. This relationship has so far been addressed just in an empiric and superficial way.

What we endeavour to obtain through the visualisation of the different soundtracks in parallel with the visual track is a "spatialization" of time through graphic representation of sounds. Thus, we could show that in a close relationship between sound and image, even image can considered as creating a "visual score". Moreover, in relation just to music, this tool could point out the segmentation of the soundtrack (e.g. by automatically transcribing the score from the soundtrack) which could enable users to identify the different themes and their progression, emphasizing the different music configurations throughout the movie. This aspect could be further developed by adding sketches, working notes, music scripts, and recorded material of different nature. In other words, we could come up with a structure of the soundtrack that encompasses all its implementational stages and even the possibility of comparing different versions of it.

Finally, by the end of the two-years research, we hope to succeed in devising a piece of software . This will first be designed as a prototype to then undergo a testing phase before being actively used.

Mario Brenta