Animated Documentary: Technological Change and Experimentation

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In the theory of cinema, technology in audiovisual production is approached by various authors such as Jean Louis Baudry (1970), Jean Louis Comolli (1975), David Bordwel (1997) and Salt Barry (1992), but we are unable to enumerate many who do so in relation to documentary cinema. Curiously, although the documentary is a cinema anchored in the device, which legitimizes its images, such as reproduction of reality, the technological issues are hardly discussed in terms of its theory. It is exactly this relation among the means of production utilized in the making of the documentary — whether they bear this denomination or not — and the modes of representation and styles resulting from the technology of each era that we intend to delineate briefly. More precisely, the periods of the Early Cinema, the vanguards and the British school – 1900-1930, the 1960s, and 1990s (new media and the 3D documentary).

"Actualities" are considered the precursors of documentary cinema, and it is in the context of its production that we observe a certain change in style in relation to the standard of the period from 1895 to 1907. At this moment, there was still no division between fiction and documentary, but we could already perceive different forms of utilization of the cinematograph technology. In general, the films of the Early Cinema, presented an "Aesthetic of Astonishment", as much in relation to form — a single take made with a frontal camera and long shot — as to content, which used to imitate vaudeville aesthetics with decapitations, apparitions and disappearances, etc. Gunning created the concept "cinema of attractions", for explicated to presenting discontinuous visual attractions — moments of spectacle rather than narrative.

On the other hand, "Actualities" were already presenting movements, such as travellings shots performed from trains, boats (*George Town Loop*, 1903, American Mutoscope) and framings diagonal, entries and exits from the field (*San Francisco: Afterrath of Earthquake*, 1906, by Thomas Edison) that were ignored by other films of the period. Besides viabilizing the recording of real situations, the cinematograph was a reversible apparatus that operated simultaneously as a camera, copier and projector. Being light in weight and independent of electric power, it was easily transported. Louis Lumière and his operators traveled the globe recording and projecting the quotidian and historic events.

In the 1920s, we see some significant changes in relation to the cinematographic device. It is replaced by lighter cameras (Akeley, 1919, used by Flaherty in *Nanook*, 1922), but which function only for filming. The projection and printing now take place in different apparatus. Regarding the aesthetic aspects, there already exists a more structured cinematographic language based on Griffith parallel montage and the experience gathered by the Early Cinema (2nd period, 1907-1915, in the Gunning division).

In this context, alternatives to montage made in Hollywood (Russian Constructivism and Historical Vanguards) arise, but various Early Cinema resources will still be utilized: iris, animation of objects, appearance and disappearance tricks, etc. The lighter cameras were fundamental for the documentary in the same way as the new proposals for montage. As it was not tied by conventions temporal and spatial continuity, which governed the fiction film centered on one character, particularly in the classical Hollywoodian narrative (NICHOLS, 1998), the non-fiction film took advantage of the creative possibilities made viable by collage.

The works produced in this period are commonly known as vanguard, *avant-garde* in French. What will come to define the vanguard cinema are its formal and aesthetic preoccupations, and its production and diffusion conditions. As regards its formal aspects, the basic unit of syntax of the film, is no longer the shot, but the photogram, which receives every type of intervention (scratchings and paintings directly on the celluloid, collage and superimposition of materials, manipulation of the focus, fusions, speed and exposure alterations). These aspects are present in abstract cinema in greater intensity (*H2O*, 1929, by Ralph Steiner) as also in figurative and documental cinema (*O homem da câmera*, Dziga Vertov and *Chuva*, Joris Ivens, also in 1929).

The documentary in the 30s, mainly that of the British School, will be marked by attempts at definition as an autonomous genre. This process coincides with the introduction of a technology that represented the first revolution since the invention of the cinematograph: sound. The efforts of Grierson to define and popularize the documentary as an alternative to Hollywood led him to stimulate considerable experimentation with sound in the *GPO (General Post Office Film Unit)*, between 1933 and 1936.

Unlike fiction that used to seek technical domination of synchronism in the service of the dramatist, Grierson utilized sound in an expressive form in the documentary, whether fomenting the principles of collage through non-synchronic forms, or of counterpoint, as we can observe in *The Song of Ceylon* (Basil Wright 1934), *Pett y Pott* (Paul Rotha, 1934), *Industrial Britain* (Robert Flaherty, 1933), *Night Mail* (Harry Watt & Basil Wright, 1936). Grierson desired to go beyond the technical potential of sound reproduction. The final question posed by him is: "How must we use sound creatively? In what way will we go beyond mere reproduction of the reality allowed in technical terms?" (Grierson in HARDY, 1966: 157)

The invention of the cameras that capture image and sound synchronically in 1960 will be the next technological revolution. The appropriation of this technology leads to two different styles of documentary cinema: the American Direct Cinema and the French *Cinéma Vérité*. In American Direct Cinema, we have reproduction of reality without the intervention of the filmmaker at the moment of the filming, with total removal of all signs of the device and of the filmmaker (*Primary*, Drew, 1960). Obviously, the intervention in the montage is quite intense, including elimination of all vestiges of the device. In *Cinéma Vérité*, on the contrary, it is the filmmaker and the device with all their potential for creation and intervention, which are found at the center of the film: viabilizing encounters, confrontations and questioning about the very mode of representing the reality (see *Chronique d'un Eté*, by Jean Rouch, 1961).

The technological leap will reach its heyday in the 90s with computer graphics. The development of the computer graphic softwares begins back in the mid-70s, and, already, in the late 80s, it reaches a stage at which one can create almost everything with synthesized images. Every year, new techniques are developed: transparency, shadows, image mapping, bump texturing, compositing, particle systems, radiosity and ray tracing among others. (MANOVICH, 2004: 2).

Once again, we return to the question, raised by Grierson, of how to go beyond reprodution of the reality enabled by the state-of-the-art in technology? The big issue is that it already can no longer be regarded as neutral and holding an ontological truth, as was attributed to the cinematographic camera. The technology here is responsible for simulation of the same elements found in nature, but without the presence of a material device (the camera) at the place of the events. Now we feed a computer with data about objects, physical phenomena, spatial and temporal circumstances, and we have a virtual representation of an event that took place in "historic world". This is the basic principle of the animated documentary made with 3D softwares, like *Ryan*, by Chris Landreth.

Here the techniques and devices also allow reproduction of reality, and this is the option of some filmmakers who present a photorealist style (*Atmonia*, Stele Breysse and others, 2003). But it also allows more creative or psychorealist utilization, as Landreth defines the aesthetics of *Ryan*. As a beta-tester of the Maya software, by Alias Wavefront, Landreth tested all the possibilities of the software. In general, this potential is aimed at a representation that resembles the 35mm camera image, in order to fulfill the requirements of the major client, Hollywood. There is a tendency in the market that determines some paths to technology, but there is always the possibility of subverting its use. This is Chris Landreth's proposal in the animated documentary, *Ryan*. The latter was released in 2004, when he surprised the critics and spectators by his non-figurative aesthetics,

which the director himself termed "psychorealism". The discussion was accentuated precisely by the fact Landreth called his film an animated documentary. Considering that the basic presupposition of classic documentary cinema is figurative representation of the images captured *in loco* by the cinematograph camera, the animated documentary appears on the scene to cause a series of debates.

But what is animated documentary? Considering the term itself, in this coupling of two genres, not to say distinct fields, we have a difficult task ahead of us. The animated documentary may be defined as a film of real situations and facts recorded with electronic support utilized as a basis for subsequent intervention with animation that is often computer-generated. It almost always presents enhancement of subjective aspects of the situations based on the representation of the characters and scenarios.

Despite the variety of animation techniques that exist to date, we observe two types of animated documentary. The commonest, which has a certain tradition in the history of the documentary, is that which utilizes live action images along with animation. The second, and more radical, utilize animation resources throughout and present an animation as the final result. *Bicycle Messenger* (2005) is a good example of the former style, as it features images in the entire film, only the main character (the messenger) being presented in animation (digital rotoscoping). The latter style can be found in animated documentaries like: *Drawn from memory* (1995), an autobiography of animator, Paul Fierlinger; and in some films by John Canemaker, especially *The moon and the son* (2004) and in *Ryan* (2004) by Chris Landreth.

The attempt to define the animated documentary and understand its different forms of representation is valid to the extent that it legitimizes this trend in the context of documental production and strengthens the current that sees in the documentary a cinema project that enables experimentation via different technological devices.

Acknowledgements

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