Toward a definition of the Fuldome Documentary Film through Film Aesthetics

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ABSTRACT

The Fulldome projection is shaping up as a major cultural and educational act as social and economically mature actor, it starts to become a multimedia industry and a correlation to the benefit of global popularization of scientific and to the immersive edutainment (education through entertainment), multimedia and interdisciplinary. I believe one must go beyond the stage of technological and commercial competition arena, for the benefit of crystallization procedures altogether, and the techniques of making live Planetarium shows, ensuring intermodal optimal operation of planetariums, in fact, to present aesthetic and technical challenges of fulldome documentary film. (95 words)
Introduction. Long time after painting, sculpture, photography and film developed along with their medium, a new generation of art has emerged in which digital, electronic, architectural and performative materials have offered new forms for creative expression and experience. One can call that this new spark in film art, the fulldome projection and it medium - now embraces and challenges viewers to work as co-creators of aesthetic experience. This is the reason one can search for a definition of the Fulldome Documentary Film through Film Aesthetics.

Section 1

I.1 Why Film Aesthetics is useful for us? Most of the consideration on aesthetics itself poses difficulties because of the ways the term has been used to designate particular objects, judgments, experiences, and values. This difficulty becomes perhaps especially acute with regard to film, where aesthetics is used both in highly polemical and specific contexts but also as a way to more simply denote something with an artistic element. First, any assessment of film aesthetics must contend with the precarious position of aesthetics itself more broadly. Second, and considering this contested relation between aesthetics, beauty, and art, the complex and often conflicting relation of film to art must also be noted.

Of course, the differentiation of an aesthetic of film from film theory or film philosophy is complicated and often well contested. What might be understood as an aesthetic of film extends back almost to the origins of the medium, and much of what we identify as film theory could be understood as having some aesthetic concern, either as a consideration of film as an art or as a part of the realm of the life.

And if considerations of the aesthetics of film confront the novelty of the medium in its early years, then the recent reemergence of the aesthetic in film studies must be seen as an attempt to confront the seeming obsolescence of the medium. In many ways, the consideration of a film aesthetics demonstrates the fissures within the various critical discourses on film, especially, in the present days. The divisions appear between those accounts influenced by figures of recent continental philosophy, those associated with what is often called the “screen” or the “apparatus” theory, and finally those who follow the tradition of analytic philosophy.

I.2 The Realism in Cinematography. In planetarium we advocate we present the universe as real as it is seen, drawn, photographed and mainly, filmed. The film was not realistic born in the aesthetic sense of the term. Originally, the film it is just a realistic technique. The first films were, of course, designed as reportages, a form of recording the world as this world could be seen then. We can quote Andre Bazin, who distinguished between "trompe-l'oeil pseudo-realism" and "the real realism we need to express the concrete and essential meaning of the world"(1). At this diegetic level, the realism is essentially a technique, a perceptive realism; meaning, the technique itself must be invisible, in order to permit to objects to be seen and understand, as if they were perceived directly, without cinematic mediation. One can think about a cloning of reality, or, at least, even a true story about reality.

The Diegetic Realism is an aesthetical one only in case of Naturalism. The feature of naturalism is to precisely reduce all aesthetics to a figurative technique. In the case of Realism aesthetics, actually, diegetic Realism is only a necessary but not sufficient condition. We may conclude and say that the evolution of cinema in the digital era could send all the aesthetic concepts of the Basin era to a reconsideration process. The critical approach to the Authors' Program will be able to preside over the new waves in the cinema. As always, Each wave will criticize the previous one.

So far, we can find, wave after wave, and we can quote a "wrong", but understandable trend, in the 60s, namely that of continuing to practice the Author cinema/film production. The birth of cinema as an autonomous art is very difficult to specify as a date. Andre Malraux considers it synchronic with the discovery of the cut-out/decoupage itself, both as a technique and as aesthetic value, which brings him a significant function in the history of aesthetics: the Realism. (2).

For now, the production of fulldome documentary films is rather artisanal, exploratory, always dependent on the evolution of the technical means of expression of the fulldome projection (for example, the resolution of the full-length documentaries distributed in 2018 exceeds constantly 4K pixels, 6K and 8K , already). These films, however, are the best possible technical replicas of reality. Now, there is only the problem of crystallizing the concept of fulldome documentary film. Surely, the transfer of fulldome technologies to classical extraction cinema will cause an aesthetic reflux to those who are now practicing the art of the film under digital planetarium or even under iMax installations.
I.3 The compass for the Search. Imagine we can define the four cardinal points of the compass needed to search for optimal digital fulldome production and system. The first cardinal point is, of course, the human factor. Even if we use a digital fulldome system optimally, very affordable and able to deliver better performance in the field, the human factor remains decisive long after major technological problems were resolved. This solution brings into question already, two other points of the Compass: the price and performance of fulldome projection. Therefore, we could say that the fourth cardinal point of the compass imagined would be the multimedia fulldome production industry itself, speaking in plain English: the fulldome films.

With regard to the choice of one of these four cardinal points as North, this is still an open question. I chose the human factor as North of compass in search of a fulldome digital educational system portrait-robot at the beginning of the digital age. A definition of documentary film of this solution will facilitate understanding the fulldome new educational and scientific equipment, namely digital fulldome system optimally. Of course, the justification and promotion of digital fulldome systems, in particular, is related to the production of the fulldome documentary, because these scientific multimedia products are the most sought after vehicles in astronomy and Astronautics.

One of the conclusions of the survey undertaken in 2014 by Maciej Ligowski, in anticipation and preparation of biennial programme of the International Conference of the International Society of Planetariums/International Planetarium Society (IPS) which was hosted during the period 19-25 June 2016 in Warsaw, is confirming our hypothesis and that the projection of the fulldome is technically and aesthetically, in an era of hybrid and that it is quality oriented towards interdisciplinary and attractive content to several audiences.

II. SECTION II.

II.1 The Fulldome Documentary – Starter of a New Film Aesthetics. The Fulldome projection is a result of the information and communication technology (ICT) applied as new media, especially in the educational and entertainment institutions (see the OMNIMAX and Imax). It is often found as a way to open museums towards the digital world via the real world and the fulldome projection is a recurring topic of discussion about contemporary role of museum in informing the audience, an audience consisted mainly in visitors interested in media experiences and experiments. After the web 2.0 and social media boom, along with almost permanent access to digital information via portable devices, it appears that we are approaching a new phase of mediated relationships: immersive projection for masses.

The Technologies for entertainment and popularization of science are designed to "deliver" memorable experiences, accessible to more and more audiences. Already historic, some of the advances made to the cinema technology to serve this purpose were centered on designing a larger, brighter and more informative/data full image, meaning, higher resolution in digital slang. Greater brilliance and the resolution bring more realism to the image, while increasing the size of the image means greater visual impact and an increase in the impression of presence, immersion level, on the subjective and emotional level.

The latest technical advances in the field of cinematographic technologies are related to digital cinema, computed & computerized, using digital video projectors, complex graphics tools and virtual / projected animated images, equipments that tends to replace movie-based projection technologies, but fully experienced and used in the last hundred years. Virtuarium ... a package of hybrid, digital and analog technologies for wide-screen and semi-spherical screen projection is presented in Osaka as World premiere in 1996 and it was conceived primarily for educational astronomy. (3).

The dream of those who develop digital viewing and projection technologies is a future picture characterized of a resolution similar to that of the human eye searching the human reality and a field of vision instantly so that all retinal receptors could be used to receive visual information. The name fulldome could be the generic, general-purpose designation of this type of projection, but for reasons of diversification and distinction in the commercial environment of digital projection systems, fulldome remained only as a general designation of digital planetary projections, experienced since 1983. (4). The digital video systems made to possibly achieve these viewing and projection performances are very diverse, from personal digital viewers (5), to image walls (see CAVE systems) (6), semispheres and digital projection volumes- domes (7). Simbiotic, since 1995, we add the sound as information and the equipment, from gadgets to serious, professional installations and to those used in the scientific research world, becomes multimedia systems. (8).
Under the pressure of emerging digital technologies, cinema-planetarium fusion began in the eighth decade of the twentieth century a profound transition that had the purpose of diversifying planetary programs beyond astronomy-related topics. In a classic planetarium, you only have to wait until the eyes adjust to the crepuscular light and even in the dark because it is known that only the constellations will be present. The dramatic effect achieved during the natural eye adaptation is immediately rewarded with the association of the second fractions of the media that make up the duration of any surprising event reappeared in many other genres of documentary and artistic films.

Recently, returning to the heavenly vault, to the greatest visual spectacle in the human life, thanks to the visual stars designed by special optical fibers, adaptation to the darkness was no longer imposed on visitors at the entrance to the planetarium. The aesthetic-specific adaptation to lighting has been replaced by adaptation to projection elements of interest.

### II.2 Planetariums and the Film

Although, in the technological and media confrontation of the 70s, planetariums have been labeled as "cultural dinosaurs", the planets have recently turned from arid astronomical conference rooms into hybrid multimedia arenas, and have overcome ancient astronomy information.

The Aesthetics and the communication history can be described and rewritten as a history of grafical user interfaces that delivers information increasingly with sensorial realism to more sensory receptors physically or even virtually online. (9). From print to radio and then to video, the purpose of technological improvements inside the media was to make them more resemblance to human abilities to communicate and to receive the world around them, especially. In the case of visual technologies, the resemblance consists in the "demand for screens that is as close as possible to the whole human field of view" (10), the only constant aspect of the documentary film equation of educational astronomy, especially in the planetarium, in this case and his audience.

Returning to aesthetics, as F. Beau, P. Dubois and G. Leblanc have pointed out, "the latest technologies do not, in fact, ever represent anything other than reactivating some very old representation issues." Consequently, "it is clear that we are witnessing an examination of the images and of the devices or of forms of expressing what they feel as "new technologies", one must analyse this process using historical treatment, articulated according to the forms of representation" (11).

Indeed, as Andre Bazin, often quoted, as Vincent Pinel did, in his preface by Laurence Alfonsi, seem to regard as a natural evolution of the cinema this tendency towards a single idea, the one that lead to have on film a perfect reproduction of reality. Alfonsi, therefore, called it total cinema. This phrase is, in fact, never defined in the book, although in the case of the cinema, if this is its function, then the ideal goal would be "the total immersion of the public in the film" (12). In short, this unique, theoretically design of cinema is based mainly on its reception mode, which is retained globally and not due to its many curiosities and the reception mode that has today a correspondent in practice called the fulldome projection and the fulldome documentary film or Imax films.

The entire economy of knowledge, with all its efforts, is revealing the world in the form of a staircase on which we climb to the intelligible, from observation to the modelling, simulation, each foot would be a circumscribing, a reducibility, a didactic simulation controlled by means of a media product: fulldome documentary film. The challenges and solutions in search of exploring fulldome systems must always be reported to the human perception and the Visual information,-in theory, film aesthetics-, resolution beyond the temptations to facilitate the marketing and technical compromises made to the always fashionable. This definition will be adapted to the state of the course, you will learn the market of producers of equipment, all dependent on Planetarium, looking for optimal Planetarium, called left-handed by commercials, cutting-edge Planetarium.

### III. Conclusion

The sense of presence, of immersiveness, it would be the first form of audience impact fulldome film and first form of information that one can transmit through this new kind of film, therefore, we can consider the sensation of presence in immersive as an idea-main batter of fulldome film sequence. It seems that everything in the Planetarium is seeking after the applied fulldome type technical and cinematic production solutions. The Cinema specialists can use these analyses for 'weighing' the use of cinematographic means in the context of specific challenge brought about by the application of immersive fulldome multimedia productions. These productions excels in audience virtual transportation through the temporary recalibration of presence sensation, insisting on telepresence as a form of attention getting process towards content of information contained in the multimedia products.

Given the novelty of the concept, we dare to say that the cinema people are somewhat familiar with the film and fulldome paradigms even less with artistic, cultural exploitation of this new film, with fulldome documentary film. Without informed filmmakers, the audiences and the scientific mediators of the Planetarium would be a mere prey to the
producers of multimedia content open to compromises in favour of trade handling than informing using fulldome documentaries.

The main concern for the demonstration study exploring digital fulldome projector systems, and for the most suitable means for research of this task with all the interdisciplinary implications takes place in a live manner, atypically, even during the evolution of these digital projection systems, and in conjunction with an operating procedure which looks more like a process of testing on a sample than with a service in the sense of using a good professional technical user guide.

REFERENCES

8. http://dev.twinisles.com/research/bsvr.htm#vd