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**THE FULLDOME BETWEEN HOMO VIATOR AND COSMOS  
VISUAL SIMULATION**

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**Abstract**

Nowadays, the first intended as an educational astronomy tool, the Full dome planetarium projection, especially the digital one, becomes an inter-disciplinary and trans-disciplinary entertainment and educational multimedia tool in order to be ready to understand and to be aware of Cosmos knowledge present challenge. Therefore, due to visual immersiveness and cinema editing tools, the venerable concept of Homo Viator could be easily understood and transported to become a tool that facilitates the migration of public or personal mediated knowledge understanding process from the Gutenberg perspective to the Digital multimedia one. In conclusion, changing the perspective, this old concept can represent a new philosophical & educational cue to start a critical thinking and theoretical approach regarding the Full dome film reasons of existence: open to road to travel in Cosmos, a permanent Contemporary World Issue. One can consider this transformation as a normal aspect of our life. We all already virtually travel using radio, TV just using a switch of a button. Let's star to find out why and for how long we travel just button powered.

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## **1. Introduction To Understand The Concepts Of Fulldome And Homo Viator**

Today, the means of transport people and ideas are growing even more than our past or present civilization demands or dreams of “transporting” people and ideas. The Full dome film is one of the latest achievements in means of transporting ideas, especially and virtually, regarding the immersive-ness of the Cosmos. One can use the multimedia tools of large format digital cinematography to produce the Full dome film: technically, it is a 360 degrees horizontally by 180 degrees vertically wide screen span digital film projection to fill up the whole extended human visual champ.

### **1.1. Towards a Present Understanding of Homo Viator Philosophical Concept**

In every period of documented history, in every region and almost every culture or civilization have been concerned and even shaken to the core by the repeated processes of migration and their aftermaths, too. The migration process figures as an essential form of life since beginning of the history and of the creation of myths. During this process, people are creating and recreating the social, political, religious and cultural existence by conflicts with the others, by shaping and redefining this world, the other world, their cosmos inside the universe.

The ideas, imaginations, and concepts are made visible in myths, religions and ideologies. They offer explications and interpretations about the human role as homo viator in the world. Seneca, in the first century A.C. has estimated emigration as *conditio humana*, well before the Homo Viator (Seneca, 2004, pp. 3-5) has been conventionalized as a typical figure of the Christian way of life.

Always, humanity is on the way, moving towards something. The classic theological concept for this is the Homo Viator, or Man on the Way. At least, we should be acting as follows. For life is a journey, an adventure that we are always a part of. We do not choose to be on the way, it is our existential situation. We are not at home, we are on the way hoping for home.

The Homo Viator, the itinerant man, the pilgrim – is an outstanding example of the philosophy concerned being, not with the technical problems of life, but with the urgent humankind problems of bordering and of relations between. In the book entitled *Homo Viator: Introduction to a Metaphysic of Hope*, originally published in 1951, written by Gabriel Marcel (p. 22), the author summarizes the way hope is directed: "Person-engagement-community-reality". The Engagement, it is called by Marcel (1951) as availability or as *disponibilité*. This represents the connection between the individual and the community and, finally, the connection between person and the real life within actual change occurs. Gabriel Marcel (1889-1973) is one of the Christianity's foremost French existentialist of the twentieth century. Through his work he is providing an important and contemporary insight on the 'man on the way' concept that will reinforce and commend our own pilgrimages through life in the hope of understanding our way through cosmos.

We, students, teachers or parents, we all struggle for the success of nowadays education. Less time for it, more data for this success, means we fight for understanding of the nature of knowledge, for its unity, its varieties, its limitations, and its uses and abuses.

The modern European educational system has separated the knowledge by dividing it into disciplines, sub disciplines, and sub-sub disciplines, according to the exponential increases in information, of course, brought about by technological advances.

In the system of public education, the first known science, astronomy reclaims its lost position. Mostly, astronomy has to be judged according to the trans-disciplinary methodology, meaning, through the bridges between science-religion-philosophy-arts and according to the contemporary social needs. According to Nicolescu (2002), as he consecrated a definition, reminding that the transdisciplinarity concerns what is, at the same time, between disciplines, or inside various disciplines and beyond any discipline. The transdisciplinarity aim is the understanding of the current world and the unity of knowledge (p. 232). If looking at Marcel's ideas of hope, this make us re-operate theories and practices in pedagogical realm, in, of course, more nuanced ways, especially when we have the possibility to use digital multimedia instruments to communicate and to interact.

### **1.2. The Full dome Film as cross-media and trans-disciplinary educational tool to discover the world**

The modern planetarium is a cross-media and trans-disciplinary educational tool and the full dome documentary is a specific planetarium multimedia product, a real facilitator of virtual intellectual and ontological journeys in the cosmos, the one inner or out us.

Inside the large format film classification, the full dome format represents a niche, both in public cinema perception and also in the cinematic experience. The reason of this niche position in the large screen projection systems is the real race for replicate the width and height of our full field of perception view. Right from the beginning, from the moment the spectator, the viewer enters inside the digital planetarium, the projection technologies output (screen and projectors) dominate the viewer's interactions and perception. Therefore, the dome-screen size, the projected full dome image quality, the 5.1 Dolby Surround audio fidelity and the techniques and conventions of full dome multimedia editing are all the factors that build up the visitor's perception, understanding of the full dome planetarium show content. These factors prepare the audience, hence, the visitor for a stage of interactiveness in learning-by-seeing & hearing and of interactivity processes, having the animator aside to him as next to the audience under a star shiny sky. The Presence can be defined through concepts such as those of social richness (warmth or intimacy possible via a medium), realism (perceptual and/or social), transportation (sensation of going there, it is here, or we are together), and immersion (in a mediated environment) (Grabe et al., 1999, pp. 4-11).

This access point to otherness, the so-called "tourist gaze" extends the range of the large format film as a social and cultural actor, or institution, and provides a departure point for the unknown through an appropriately narrated version of reality through the inauthenticity of the pseudo-visit, a sort of virtual Homo Viator concept driven experience. The large format images performed in the planetarium are among the means to help people to understand the astronomy lovers, the scientists and the enthusiasts, the spirit of them, so real for more than 50 years, the spirit of the man travelling in Cosmos, hopping celestial bodies and the contemporary astronomy issues.

The permanent, the expensive and the outgoing Space race is asking for everybody support and understanding because it is about finding where we are going into the space. The Cosmos is real, neither fun, nor dangerous, it is full of potentials for our society. This is now the contemporary *Ultima Thule* and the contemporary New World. Inside it, not Outside it, there is the world, our society, in fact, those types of audiences, those for whom one is working for as planetarian (Lantz, 2006, pp. 1-2). Are those publics socially aware and are they ready to receive, to admit the real Cosmos in their real life? Are they aware that travelling today is targeted more and more to become a *hagi*-state of mind, a pilgrimage to achieve and understand this Cosmos? To try to have an answer to these questions, we believe that *Homo Viator* concept safety used in planetarium can determine the real evolution of the fulldome show from present technical wonder to future human friendly multimedia virtual immersive simulation of human cosmic experience (Yu, 2005, pp. 6-10).

### 1.3. Digital age, media convergence and full dome film

The Twenty-first century analysis of the production and reception of media recognizes the convergence of both media and approaches to studying the history of media. While likely print, movies, radio, television, and new media should never have been thought of as separate histories, the insistence of context now forces media historians to note relations among and between the various sites of information and entertainment. Where are we now? What are the issues today in writing media history and histories? What have we accomplished? Where might we go? For whom and why?

In the last ten years, the broadcast newsrooms underwent fundamental changes. The multimedia genre development, as the way in which journalists relate to news genre on different media platforms in the form of convergence or genre hybrids would name the *full dome* documentary as one of the newest edutainment film format.

The planetarium, as well as a contemporary digital multimedia player and as digital sky simulator, the planetarium is the main new Digital Age of edutainment world. Using CGIs, multi-projector simultaneous image, 3D and immersive digital projection, the multimedia content runs on a set of software commands designed on a specific methodology and pedagogy (Cadler, 2008). The human factor remains decisive “long after major technological problems have been resolved” (Finney & Jones, 1985, pp. 15-25) despite the fact one can use today whole known Universe/Sky digital simulator, very affordable financially and able to provide best performances in the field of multimedia, virtual reality and immersive simulation.

Today, the Contemporary educational context cannot be defined and understood without having to explain what is new media and, in this regard, Lev Manovich (2001), first of all, is listing almost all the categories of products and environments often discussed and related to this topic in the popular press: The Internet, web sites, virtual worlds (interactive 3D environments, computer-generated), virtual reality (VR), multimedia, computer games, interactive installations-animation, computer, video, digital cinema, digital and human-computer interfaces (pp. 8-9). The maker of documentary films is a contemporary version of a storyteller. In the past, the storyteller wrote the stories down on paper, listening before to the speech of many nameless storytellers in order to reach more public.

At the beginning of the 20th century, the documentary filmmakers have 'written' these stories with their audio/visual appliances in an audio visual language (Benjamin, 1969, p. 84) to ease the outreach to public and its capacity to better understand the stories.

## **2. Purpose of this Study**

Today, the multimedia digital technology is incorporated in planetariums and the use of the digital fulldome environments have been diversified in order to include non-astronomical applications based on entertainment and on other educational purposes, i.e STEM content. The power of the large format image is then tied into the emotional connection of the viewer to the image. The arousal engendered by presence is associated with enhanced memory which is a result of the response not to the content but rather to the filmic form. Barry (1967) noted that:

As a technological invention with the capacity of altering the appearance and experience of that world, [film] ultimately represents a potential for the manipulation of that reality, particularly at the most significant point where impressions are first formed in perceptual process, through the emotions. (p. 7)

The Presence is further enhanced by the surround sound that is part of the large format technological experience. Large format films are presented with 6 channels of audio content, including dialogue, music and special effects.

The so-called 'fulldome-gate', this XXIst Century cinema curious tool set to display museum items and its issues and to facilitate experiences and expertise for future real travels into Cosmos. In response to the industry standard and price makers, the large format media products have recently been associated also in complex use with museums and science centres as maps for Modern Homo Viator, as a cultural form indebted to technology. These educational and heritage care institutions have influenced the content of large format films through their emphasis on discovery and research ways paths.

## **3. Research Methods**

Of course, first, in order to understand how something occurs in its natural setting, I am a keen observer of full dome production and products, intending to become a full dome documentary producer myself. For sure, it is a fine part of my own journey of understanding the Cosmos. Then, literature review is the method to map, to situate my research in the trends within a researching full dome, immersive media products task.

Since 2008, I am still surveying especially the Romanian market to gain quantitative data on using this new educational tools and I am preparing a TV documentary based on interviews with main European full dome documentary film producers and promoters aired on the occasion of International Planetarium Society activities, or national and regional gatherings dedicated to astronomy education using full dome documentary films.

## 4. Findings

The life of the full dome systems, especially of the immersive ones, their role in the contemporary paradigms of communication depends on our ability to creatively rethink and rewrite this new image aesthetics, in theory, not based on frames and even without physical limitation in our field of vision, as Laurentiu Damian states in his work dedicated to documentary films of today (2003, p. 13).

Being a Science Communicator, a pedagogue-in the-making of this domain of education, surely, I analyse aspects of cinema aesthetics that could be specific to full dome projection extended to the Educational Sky Simulators Cîrstea (2009).

In all the world, all kind of astronomical societies, public or private owned, housed in observatories or in planetariums, are going to literate us in order to understand the World intra Cosmos. The planetariums are a sort of alphabet of learning the Universe in case one can involve the big audiences to re-learn and to observe themselves and the world through observing the Sky using real or the educational virtual world of full dome documentary, a quite possible new road map in the hands of the modern Homo Viator.

## 5. Conclusions

This paper could be considered as a first step to understanding the proper mission of digital planetarium, a clear invitation to encourage well-regarded scientists to help forge the newly established astro-sociological community cluster, a sort of contemporary Homo Viator camp. Now, this virtual media place is populated mostly with news for Space. The Cosmos is daily broadcasted today! Our life future and hopes could depend on Space placed humans or self operated equipment! One could say we live in an almost astro-society.

As a planetarian, I can say that the preponderance of unscientific approaches to understanding astro-social phenomena definitely contributes to the problem of setting borders to the present Homo Viator more than human perception over the universe and the technology one could use to permit the Travel.

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