

Analysing Communication Theory through the Use of Virtual Reality as a Tool

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Abstract: *There is an attempt to integrate Eastern communication theories into the dominantly Western education of communication that has been followed in India as well as around the world, in practice. Throughout the 20th century, the field of communication studies has been one-sidedly dominated by U.S. Eurocentric anthropocentric, individualistic, efficiency-oriented, positivistic theory and research (Ishii, 2001). It remains a question to be answered as to how will Indian models, the likes of Sahridaya and Sadharanikaran Model of Communication, be accepted in academia and if they will leave any footprints on the minds of young communicators learning the complex system of communication. More than anything, the language of the West is technology which has not been evolved enough to quite comprehend the Indian ways of life. Thus, an appropriate technological tool acts like a language capable of incorporating the complexities of Indian systems, allowing for a much more efficient translation of knowledge. Virtual Reality is the next best tool electric technology has to offer. This paper aims at analyzing the parallels between this technology as a language and its capabilities to incorporate the complexities of the Eastern communication systems, focusing on the Indian model of Sahridaya and Sadharanikaran. The first part will critically look at the researches done on both Virtual Reality and Sahridaya and Sadharanikaran Model of Communication to connect them at a more fundamental level. Certain characteristics of Virtual Reality will be established based on which variables will be set for an ethnographic research of 7 media students and 3 media professors, to gauge the relevance of this tool in mass media education system in special reference to understanding Eastern theories.*

Keywords: Sadharanikaran, Virtual Reality, Eurocentric, Asia-centric Ethnographic

1. Introduction

A largely disproportionate part of communication research that is academically followed in the world today, comes from the West. Throughout the 20th century, the field of communication studies has been one-sidedly dominated by U.S. Eurocentric anthropocentric, individualistic, efficiency-oriented, positivistic theory and research (Ishii, 2001).

It remains a question to be answered as to how will these Indian models, the likes of Sahridaya and Sadharanikaran Model of Communication, be accepted in academia and if they will leave any footprints on the minds of young communicators learning the complex system of communication.

In his 2003 paper on outlining an alternative metatheory of human communication with an Asiatic perspective, Yoshitaka Miike has outlined the various requirements from an Asiatic scholar introducing an Asian concept in the West-dominated academia. He has warned that with the lack of focused research objectives, appropriate content dimensions and proper methodologies, the Asiatic models will fail to place themselves of any implications in the academic sphere; failing to unravel the elusive nature of what is the Asian world.

A study of Marshall McLuhan's theories about the Western way of life in his collection of essays Understanding Media has revealed the problem of the East-West divide to be of greater depth. The study helped the researcher in establishing a better understanding of what prevents the Western system

from accepting or even incorporating the Eastern ways of thought and life.

McLuhan placed great emphasis on the impact of various technologies on the psyche of humans. He saw the 20th century Westernization as a direct consequence of onset of the spoken word, which he called the 'first technology'. Analyzing the situation at its root, he said –

“The spoken word was the first technology by which man was able to let go of his environment and experience at high speed. (pg. 63) The breaking up of every kind of experience into uniform units in order to produce faster action and change of form has been the secret of Western power over man and nature alike... Phonetic culture endows men with the means of repressing their feelings and emotions when engaged in action. To act without reacting, without involvement, is the peculiar advantage of Western literate man. (pg. 93)” (Understanding Media, Marshall McLuhan)

According to McLuhan, it is this specialization that creates an indifference to complex systems by the literate, Western man that is at the core of Western way of life. The Western literate man can thus, never fully comprehend the complex nature of Eastern societies and social systems, nor can his researches into the Eastern communication systems.

This proved to the researcher that by simply assembling the age-old complexities of Eastern ways of life in simplistic, logical and efficient Western templates of scientific modelling would not go very far in comprehending the essence of these

models. Miike (2003) calls these questions of consequence for the Eastern researchers about analyzing the consequence of their research in the academia after publishing.

More than anything, the language of the West is technology which has not been evolved enough to quite comprehend the Eastern ways of life. Thus, an appropriate technological tool acts like a language capable of incorporating the complexities of Eastern systems, allowing for a much more efficient translation of knowledge.

McLuhan places his faith in the so-called electric technologies of the internet and automation, which he find do not require 'breaking up of every kind of experience into uniform units' but can enable us to 'react to the world as a whole', because of the instantaneous simultaneity of electricity itself. Eurocentric social scientists have used constructs such as interdependent self-construal, collectivism, and high-context to characterize Asian individuals and cultures (Miike, 2003).

Virtual Reality is the next best tool electric technology has to offer. This paper aims at analyzing the parallels between this technology as a language and its capabilities to incorporate the complexities of the Eastern communication systems, focusing on the Indian model of Sadharanikaran. The first part will critically look at the researches done on both Virtual Reality and Sadharanikaran Model of Communication to connect them at a more fundamental level. Certain characteristics of Virtual Reality will be established based on which variables will be set for an ethnographic research of 7 media students and 3 media professors, to gauge the relevance of this tool in mass media education system in special reference to understanding Eastern theories.

2. Critical Appraisal of Virtual Reality as a Tool:-

a) Importance of technology in research

Yoshitaka Miike, a leading Asiatic communication scholar, says that a comprehensive Asiatic perspective can never be truly theorized without understanding the shortcomings of existing Western methodologies and their shortcomings (2003). It is easy to question the cultural biases of US and Eurocentric researches. But it is equally important to question the methods employed for the research.

The biggest barriers between the east and the west have been of technology. The effects of technology do not appear at the level of opinions or concepts, but alter sense ratios or patterns of perception steadily without any resistance (McLuhan, pg. 19). With the earliest technological advancement of industrialized mechanization came the history of colonization and eventually the dispersion of this culture of mechanization around the world.

Mechanization employs the technique of breaking up any event or object into smaller more manageable parts in order to have greater means of control (McLuhan, pg. 7). In a

mechanized society, there are specialists of varied activities that work in coherence for a greater project. This technique extended itself to Western psyche when it came to scholarly ambitions like science and research. These researches and theoretical findings began to have negative impacts on the researched communities, then termed the 'natives', in whose relativistic cultures the idea of separate or specialist citizenry was almost impossible to be entertained. Such subliminally biased researches then resulted in misrepresentation of the theorized people (Miike, 2003).

With further development and the onset of electric or electronic technologies like automation, there was a change in perception. The nature of automation is integral and decentralist in depth because of the simultaneity of events provided by the high speed of electricity. This was in direct opposition to the nature of mechanization which was fragmentary, centralist and superficial in its patterning of human relationships (McLuhan, pg. 8).

The effect of this change in the technological realms was immediately observed in the research world as well. Towards the end of 20th century, this European intellectual imperialism was increasingly problematized and challenged across disciplines (Asante, 1992, 1998, 2002, 2003). But even today the value of specialists and segmented way doing tasks remains the most widely practiced method of excellence. The root lies in the education systems we have inherited from the West.

Our education has long acquired the fragmentary and piecemeal character of mechanism. It is now under increasing pressure to acquire the depth and interrelation that are indispensable in the all-at-once world of electric organization (McLuhan pg. 390). The education world needs to undergo an urgent revamp in order to prepare for the incoming world of re-tribalization caused by the electric technology in the words of McLuhan, where the lines between different subjects will not be clear; and in order to succeed greater autonomy and creativity will be required.

In this part, the researcher will aim to understand the needs of Sadharanikaran Theory as an Eastern communication theory in order to be comprehended well. Parallels will then be drawn between the provisions made available in using Virtual Reality as a tool.

The rationale has been derived from Miike's 2003 paper titled 'Toward an Alternative Metatheory of Communication: An Asiatic Vision'. In the paper, Miike has particularly outlined the requirements from the methodologies Asiatic researchers apply when developing an Asiatic knowledge base.

For understanding characteristics of Virtual Reality, a multitude of papers and studies by media houses, journalism scholars, new media scholars and tech-giants like Google have been employed. For understanding needs of Sadharanikaran Model of Communication, the original works of its developer

Dr. Nirmala Mani Adhikary will be studied in depth. One derivative study about using the model to generate a social behavioural change has also been incorporated.

b) Issue of Validity an Utility

The next issue in US Eurocentric methodologies when studying Asian systems is of demanding external validation, whether quantitatively or qualitatively. It is presumed that every theory should be statistically testable or directly observable. Miike says the Eurocentric empirical worldview follows that external validity is more important than internal utility.

The 1994 research done by Nandita Kapadia-Kundu in analyzing Sadharanikaran as a theory of social and health behavior change found that Sadharanikaran provided communication interventions that are both socio-culturally meaningful and persuasively powerful. An empirical test was carried out within innovative child-led community intervention to promote hand washing with soap after defecation among women in rural Maharashtra. (Kapadia-Kundu, 2015). Previous efforts employing conventional communication approaches delivered by adults in these communities had failed to produce substantial change in hand washing behavior (Kapadia-Kundu, 1994).

The three-year intervention had trained child change agents (*BalSevaks*, 9-14 years), visit 20 households once a month to promote hand washing with soap. Based on the *Sadharanikaran* framework, intervention activities introduced non-cognitive elements into the *BalSevaks'* interactions with the community women. Children readily evoke positive emotions. The children used colorful posters to persuade women and these posters further enhanced their emotional appeal.

Constructs like *rasa* (emotion), as introduced in the *Sadharanikaran* theory, are universal. (Kapadia-Kundu, 2015). However, there is a much smaller body of research dedicated to emotional constructs in the western context compared to cognitive constructs (Zajonc 1980; Zajonc, 1984). In the US Eurocentric research, experimental studies cannot value experiential knowledge, however useful they may be, without any external proof or validation. In other words, theories are deemed as "just ideas" unless they are "experimentally verifiable," no matter how "experientially verifiable" they are (Sinha & Sinha, 1997). *Sadharanikaran* provides a framework for understanding the role of positive emotions and Kapadia-Kundu is able to verify it with empirical models based in behavioral studies because of the variables introduced by *Sadharanikaran* theory.

With VR we can finally communicate in experiences, shared environments, where with even greater receiver agency, the context upholds the narrative uniquely for each receiver¹. In mass media, this makes for a mass communicated experience. The experimental proof then comes from the behavior change observed in the audiences after receiving the message of VR. The VR documentary 'Clouds Over Sidra' raised \$3.8 billion

in audience donation for the welfare of Syrian refugees at UNICEF fundraising program. It was found that one in six people pledged donations after watching the video, twice the normal rate (Robertson, 2016). Hardened editors on the international desk would take off the headset and say, 'Listen, I've edited hundreds of stories about refugees, and I've never had an experience like this one' (Doyle, Gelman and Gill, 2016). Its creator Chris Milk went on to coin the term Empathy Machine for VR in his 2015 TED talk 'How virtual reality can create the ultimate empathy machine'.

In clinical psychology, empathy has been defined as any process where the attended perception of the object's state generates a state in the subject that is more applicable to the object's state or situation than to the subject's own prior state or situation (Preston, 2001). Drawing parallels to the *Sadharanikaran* theory, it is a state of *Sahridayata* where the sender and the receiver are in the same or similar state of mind.

There are two kinds of empathy based on its outcome, namely, affective empathy and cognitive empathy. Further two kinds of empathy based on the empathic process are situation mediated empathy and expression mediated empathy. The third kind of empathy is based on the ideomotoric principle (James, 1890). It says that each imagination of a movement inherits the tendency to perform this movement. The concept was further developed by Prinz (1987) who found that not only imagination, but also visual perception of a movement can trigger the tendency to perform the same movement.

Multiple cross-cultural studies (Emigh, 1996; Gell, 1975) have identified social practices of people enacting or performing as mythical or spiritual figures to bring about perceptual transformations. In ancient India, the classical dances like *Bharatnatyam* followed similar practices. Central to this process is a sense of *dual unity* (Keeler, 2017; Emigh, 1996; Leenhardt, 1979) in which the performer identifies with mythical entities while still retaining a sense of their own identity.

Google's 2016 study on VR as a new age storytelling medium found that this dual unity presents a number of specific effects for audiences. They may feel a sense of agency but do not feel total control. They feel heightened vulnerability of their bodies to both the virtual experience and the real world, while not feeling entirely divorced from their surroundings. There is a cognitive dissonance in which audiences are still aware of their bodies in the present space, while fully participating in the virtual. Their body exists in a *liminal* space between two worlds (Turner, 1966/1995). The viewer is neither fully there nor fully here, but straddling the divide through perceptual gymnastics between the two spaces.

The dramatic impact of this experience, the striking moment of feeling oneself inhabiting something entirely alien, can "shock" the mind out of complacency and prepare it to begin absorbing a new perspective. Whether it's the shifting perspective of 360 drone footage or extreme angles, VR

presents alternative embodied viewpoints of the world, further nurturing the process of empathy generation.

The possibility of such a synchronicity of experience in VR is like a mass translated version of the *rasawadana* concept, followed by the concept of becoming *Sahridaya* or empathic entities by the communicator and receiver, in *Sadharanikaran* theory. Drawing on the similarities between mass media of the electric age and automation, McLuhan said that automation has brought the real ‘mass production’ not in terms of size but in terms of an instant inclusive embrace. The mass media, being of similar nature, indicate not of the size of the audience but of the fact that everybody becomes involved in them at the same time (McLuhan, pg. 382).

The core purpose of 360 video is to bring viewers to places they physically cannot go to otherwise. The ability to place someone in another “spatial space” is what makes the medium special. The 360 video, however, is not exactly VR. It’s just a “flat ultra-fisheye video” that, projected onto a flat surface such as a headset or phone, enables viewers to swivel left and right and up and down from one position (Coyne, 2016). Unlike VR, you can’t move through a 360 degree video, such as forward and backward, you can only move in a stationary circle. The possibility of an interactive and immersive environment where the physical movement and interaction will become possible is still lurking on the horizon but its onset will only exemplify the capacity of VR to induce empathy as the immersion will simultaneously rise.

The utility of VR as a tool for social behavioral change, that is inducing empathy, makes it capable of understanding the concepts of *Sahridayata* in the *Sadharanikaran* theory. The process of behavioral change can be expanded in space and contracted in time with the use of VR technology. The VR intervention will allow for campaigns rooted in subjective theories like *Sadharanikaran* to have a much wider scale of audience. With more research into its provisions and better understanding of the strengths and weakness of the medium, Indian media theorists and practitioners have a lot to gain on the global media scale.

c) Issue of Visibility and Invisibility

Asante (1980) has characterized Afrocentric personalism, Asiatic spiritualism, and Eurocentric materialism as three “broad” views of reality. The Eurocentric empiricism as discussed above is further nurtured by its materialism. There is a tendency, especially among U.S. Eurocentric communication scholars, to exclude invisible and unobservable matters from targets of theorizing and researching. Heavy reliance on material texts in rhetorical analyses, strong faith in ethnographic notes, and literal interpretations of narrative stories represent such a materialistic methodological worldview (Miike, 2003). Miike has outlined two underlying assumptions behind this materialism in research methodology, namely, ‘what is visible is what is important in human communication’ and ‘much can be told from what is visible’.

“Some research truths will always remain intuitable more than observable, and felt more than directly observable” (Starosta & Chen, 2003, p. 20). Thus, it is highly subject to question whether or not visible phenomena are always important in human communication. Miike (2003) says what can be seen are very limited parts of communication activities. The visible can reveal a lot but it can also hide a lot.

He has further urged Asiatic communicologists to radically challenge this Eurocentric deep-seated trust in visibility. Whereas Westerners have a general propensity to be more outwardly and behaviorally active in communicative interactions, Easterners are, by and large, predisposed to be more inwardly and perceptually active in communicative interactions (Miike, 2002). Sensitivity, empathy, contemplation, enlightenment, and spiritual liberation particularly in the Asian sense are largely invisible because they take place within the communicator (Miike, 2003). In the *Sadharanikaran* theory as well, the representation of the invisible mental state is termed as *bhavas*. They do not come from outside, rather they always remain within the mind (Adhikary, 2015). In communication these *bhavas* are stirred by any external factors like stimulus or determinant such as a song, a bird, a picture, etc.

In the Asian continent, silence has been more valued than speaking in many of its traditions. Given the highly-contextual and highly-perceptual nature of the interactions, silence becomes an important mode of communication. This silence is often termed as passivity of the Asians just because a major portion of communication is not sensorial.

To this day, most 360 videos in VR don’t have a narrative at all. The Daily 360, for example—which over the course of a year has published a 360 video everyday—is normally just a scene or a single moment of something visually stimulating. “We’re looking at an experience that we jokingly call ‘meditative VR,’” editor Sam Dolnick said in a *Nieman Lab* article describing the project. “These are single-shot, no-cuts videos of some beautiful place... you’re just there. And you look around. There’s no story, there’s nothing happening” (Bilton, 2016).

Guided meditation in VR is now a thing in the popular media trends. Smartphone apps, YouTube videos and websites are engaging audiences in what is a positively soothing experience of virtual worlds. The introduction of silence in this medium is relatively nascent and is being done also to make people adjusted to the medium. But it is undeniable that VR with its immersive 360 environment has brought the concept of silence as a medium of communication back in the dialogue.

A National Geographic documentary of an elusive Apatani tribe of Northeast India attempted to share the story of this fast disappearing tribe of the Indian sub-continent. However, the video documentary turned out to be quite dry in that most of the content of the interviewee tribal woman was repetitive. It may be concluded that there is not much to know about this tribe. Had there been a whole 360 video of the setting in which

the old tribal woman lived and the house she had been inhabiting for the seven decades, the experience would have been quite different.

The experience of being in that setting, sitting with her as she cooked her evening meal, would have made her visible to the world in a way that could have been perceptually understood even if not in verbal language. The tattoos on her face, the myriad piercings, her attire and traditional utensils of daily use – each of those things could have formed a unique perceptual narrative for each observer. Like in the VR documentary of a Syrian refugee girl, the camera follows the young girl through her daily routine with her translated narration going on in the background. The message of the living conditions of the refugees is very efficiently received by the audiences, as was seen in the ethnographic research by the researcher as well.

VR as a medium will evolve with time and it is already bringing the dialogue of silence in storytelling with its nature of storyliving, as Google News Lab coined for its experience in its 2016 report. The apparent visible modes of communication will then be expected to be fused with the Eastern perceptual communication techniques further enriching the experience of sharing stories.

d) Issue of Data and Evidence

The first methodology requirement of Asiatic theories is of data and evidence. US Eurocentric researches tend to qualify data as original, based on the degree of objectivity of the data at hand. There is what Miike (2003) terms a hierarchical consciousness of data and evidence. Miike (2003) believes many U.S. Eurocentric scholars assume that obtaining and analyzing “first-hand” data and evidence guarantees the originality and advancement of scholarship, whether or not topics are repetitive, theories are mundane, and methods are ethical. Articles and advertisements from newspapers and magazines and, most recently, movies and such popular texts also qualify, even if for ‘second hand’ data for their public nature. So the characteristics of a legitimate data and evidence in US Eurocentric research methodologies may be summed up as objective and publicity.

However, Asia has a rich “subjective” data that is “public” to Asians. Allegories, autobiographies, calligraphy, corporate histories, diaries, etymological origins, fables, idiomatic expressions, imageries, legends, metaphors, myths, novels, poems, preaches, proverbs, paradoxes, and songs as data and evidence despite the fact that some of them have survived for centuries. The Sadharanikaran model itself is based on a classical Indian text on dance, drama and aesthetic theory, the “Natyashastra”, rooted in the ancient dance form of Bharatnatyam.

The concept of simplification has been used to explain the extraordinary connection between the ancient Hindu texts, “the Great Traditions”, and the myriad “Little Traditions” which bring the essence of the classics to the common people in the form of folklore, tales and myths (Lannoy, 1971).

Sadharanikaran is based on the “rasa” (emotion) theory of Indian poetics formulated by Bharat Muni. In the tenth century AD, two young critics, Bhattanayaka and Abhinavagupta further refined the theory (Kapadia-Kundu, 2015).

The model derived may be objective but since the source pool is subjective, a true comprehension requires to touch upon the subjectivity in order to fully imbibe the model in practice.

Subjectivity as a philosophical concept has been defined as something being a subject, broadly meaning an entity that has *agency*, meaning that it acts upon or wields power over some other entity. In the realm of communication, the ‘something’ is the audience or listener or receiver. In traditional communication, receiver agency is inversely proportional to the efficiency of communication. The reason being logical in that the more the agency of the receiver in interpreting the message, the greater the chance of misinterpretation. In mass communication this problem enlarges itself beyond proportion and is not considered a practicable concept. Thus, for mass media students rooted in the US Eurocentric philosophies, such a theory creates cognitive dissonance or a state of disharmony.

The role Virtual Reality as a tool of learning can play is demonstrate efficient communication despite greater user agency. In all traditional mainstream media – print, audio or video – the curator gets to decide the point of view for the receiver. The receiver is bound by the specialist view of written/spoken word or the rectangle of a video when absorbing any message. The choice of direction to be given to the viewer through the word or the frame is made by the writer or the director. In VR the audience chooses to much greater extent which part of the 360 environment made available, they wish to focus on.

The MIT Open Documentary Lab calls this as the greater user agency of VR and finds that the more restricted a user's actions, less immersive the experience. Jessica Brillhart, Principal Filmmaker for VR at Google, emphasized the importance of thinking about a world, rather than a (film) frame, and thinking about a visitor in a space, rather than a viewer. This user agency is the key to immersion in the VR world.

This reduced control allows for multiple narratives to exist in the same VR documentary. Each individual can choose their own set of elements to focus on, thus expanding the scope of narrative for the VR director. This ability to handle multidimensional and much more complex systems by VR allows for existence of harmony. Harmony is one of the cardinal themes in the Asian worldview (Chen, 1993, 2002b; Dissanayake, 1983, 1989; Yum, 1993, 1987). It is the ultimate Asiatic goal of communication. (Miike, 2003)

The Sadharanikaran model tackles the question of inefficient communication with such an increased user agency by describing a Sandarbha or context. The context is an established as some sacred text that is made authentic, and a

settled stand point is established. In VR the context is the virtual environment the receiver is immersed in, like a real life conversation. In personal conversations, the user agency is the highest, yet the communication is acceptably the most efficient. Feedback is given as the reason for this efficiency. The continued feedback between the sender and receiver does not allow discrepancies to creep in or keeps it minimized.

In VR the feedback is not yet imbibed. But the context set by wrapping up into an environment and being locked into it till the head gear is taken off, allows for reduced discrepancies.

3. Studying the effects of VR on Indian media students and teachers

a) Research Methodology

In this part, the researcher attempts to analyze the effects of VR on media students and teachers of Indian Institute of Mass Communication, Northeast Regional Campus, Aizawl. The team has been working and learning together. The researcher relies on close proximities with the researched subjects for the last seven months to analyze and observe their behavioral and cognitive responses to a VR documentary.

This is why ethnographic research is employed as a research tool to have greater mandate over the observation process. Ethnographic research is a qualitative method where researchers observe and/or interact with a study's participants in their real-life environment. Ethnography was popularized by anthropology, but is used across a wide range of social sciences. It is often employed when studying a current technological user oriented tool, in order to establish an in depth understanding of the usage patterns.

Based on the findings of the critical study establishing which characteristics of VR make it capable of developing a better understanding of the Eastern way of life, an ethnographic research of 7 Indian media students was done. The participants were shown the VR documentary *Clouds Over Sidra*, based on the story of a refugee girl Sidra living in a refugee camp in Jordan. The documentary has been conceived and produced by VR pioneer Chris Milk's VR production company Here Be Dragons for the United Nations in partnership with Samsung.

Care was taken to minimize errors in the VR video. The video was played at 1080p for best possible experience. The interviews were carried out immediately after showing the documentary. A background was given about the documentary and a basic idea of 360 video experiences to those new to the medium.

b) Variables

There are two kinds empathy based on its outcome, namely, affective empathy and cognitive empathy. Two kinds of empathy based on the empathic process are situation mediated empathy and expression mediated empathy. In the VR that is employed in this paper, that is 360 virtual environments of real

time situations of a refugee camp in Syria, the empathic process employed is situation mediated empathy.

There are four kinds of measures for empathy in psychology, namely, self-description, somatic and psychophysiological, empathy as an ability and behavioural measures. Another highly salient body of literature emerging from the relatively new field of social cognitive neuroscience, which uses brain imaging to help identify the physiological components of emotional and cognitive processes (Gerdes, 2010).

Due to lack of appropriate availability of technological equipment the somatic and psychophysiological measure and cognitive neuroscience measures are rejected by-default. Further, the method of empathy as an ability is rejected since VR acts as the ability inducer with its immersive environment. So there is no external ability tested. For this paper the method of self-description and behavioural measures of empathy have been selected for their relatively easier execution. Self-descriptive measures employ statements which the responders are asked if they are appropriate for them.

The participants will be observed on the basis of non-verbal parameters such as

- Tone of voice
- Body language
- Facial expressions
- Details described about the video in the interview to be conducted after watching the documentary.

They will also be asked about the Sadharanikaran theory as covered in their syllabus and its relevance in increasing their understanding of communication systems. This will be done to establish their present understanding of the theory from classroom learning. They will also be asked about their favourite theory of communication to gauge which theory impacted them the most.

The respondents will be filmed during the process of watching the documentary where they will be analysed in real time for the changes in body language as they continue to watch the VR film. The behavior with the generally termed awkward headset will be analysed to check the connect with their real time bodily selves. If they remain relaxed and let go of the headset, it will be considered that they are moving towards greater immersion into the VR film. Further, the orientation of the body will be analysed on the basis of past experience of the subject, to gauge whether they are in a relaxed state of mind, perceiving themselves to be standing in the setting of the VR film or standing in their real time body setting.

c) Questionnaire

- 1) What are your career interests after completing this media course?
- 2) Have you studied the Sadharanikaran Theory of Communication?
- 3) How relevant do you find the theory in your understanding of media and communication?

- 4) What is your favorite communication theory, in that, which helped you develop the best understanding of the process of communication?
- 5) Have you ever watched a VR documentary before? If yes, which was it?
- 6) Describe the experience of the VR documentary you just watched in a few sentences?
- 7) How did it begin? What kept you hooked through the movie?
- 8) Name a character in the story and the place where the documentary was shot.

4. Experiment and Result

a) VR Experience Analysis

1) Empathy

One female respondent had a change of tone in her voice when remembering the living conditions of the young refugee girl. She was surprised at the neat surroundings, which were apparently unexpected to her from a refugee camp. A discomfort was felt in her facial expressions about the tough conditions of the refugees, the tone of voice was heavier as she described the young boys playing the fields like everything was normal. On being asked what moved her the most in the documentary she said, "...it is how people are still trying to make their life as normal as (possible)..with all the problems..but still there is a hope that they can go back." Also, the lack of ingredients in the mother's food because of having shifted to a new country touched her the most.

A 22-year-old female respondent, an otherwise loud individual was solemn right after finishing the video. On being asked about the part that hooked her into the documentary she said, "I felt that everyone present was talking to me...their emotions felt so real." She had a longing on her face of joining the young kids playing football in the video. She said, "You feel paralysed on not being able to join the kids playing the video. They are playing football in front of you and if you want to play, you cannot. I felt irritated by that!" The part where the refugee mother is shown to not have the ingredients she used to have when she was back in Syria touches her the most.

One male respondent said he found himself more in the position of being in the setting shown in the story more than any other videos that he saw of the refugee camps in news stories. He connected with the young boys' gymming in the refugee camps while continuing to lead an otherwise normal life. He said, 'You could feel yourself in the place, not exactly in the situation but in that place. And it was better relatable than the normal videos which we see.' There was a visible change of facial expression from being defensive to that of remembering a fond, old memory as he narrated this scene to demonstrate what he felt like during the documentary.

A 21-year-old female respondent said that she could feel the situations that the young refugee girl of the story was going through as if they were happening to her own self. She says, "I felt like the small girl and me, we were going through the

same situation. Like she wants to come out from that place but she is not able to."

The same male respondent who said he found himself more in the position of being in the setting shown in the story more than any other videos was moved by the kids sitting in a tent with a UNHCR hoarding over it, eating from the same plate. He mentioned the name of UNHCR with slight apprehension in his voice but the memory of kids sharing food and bread from the same plate made his voice warmer and lowered his pitch indicating a warm memory. He also described a feeling of sadness that he felt throughout the documentary.

A 21-year-old male respondent found the frame in which young girls are playing football in the refugee camps was the most striking part of the documentary for him. He said, "In the beginning it was very different since it took me to a place where I have never been (in a refugee camp). And the freedom of roaming around in the 360 gave me a new perspective of what these little kids have to go through every single day. It gives a true picture of how they feel, which other mediums fail to provide."

The senior teacher (M, 75) found the documentary very touching and well documented. About the most striking moment in the documentary he said, "The care. The care that the mother gave to her children, which they would have missed in the (refugee) camps in contrast of a home in (Syria)."

A junior male teacher (M, 38) admired the comic timing of the narrative that helped him understand what was going on in the mind of the young refugee girl. He also said that towards the end when the narrative speaks about the mother lacking ingredients she used to have back in Syria made for a very good ending.

A junior female teacher (F, 35) found herself touched by the way the young girl in the documentary feels she is "quilted by the clouds above her on a cloudy day." She also said that the documentary did a commendable job of covering a lot of details in a very short span of time giving her a holistic view of what the young refugee girl's story was all about.

2) Narrative Memory

A junior teacher (F, 35) was able to recall the places mentioned in the documentary along with other details of duration of stay of the refugees in the camp and vaguely remember the name of the girl in the VR film.

A female respondent who was surprised at the neat surroundings was also able to remember the time duration correctly in her third attempt and clearly recalled the name of the girl, Sidra. She was also able to vaguely remember the name of the place the camp was situated in.

The senior teacher (M, 75) and junior male teacher (M, 38) were evidently unable to recall any name of place of person in the documentary. They were able to recollect exact scenes

from the documentary but could not remember names. An exasperated Junior teacher says, "What was the name of the camp? I cannot recall it! Because I was so focused looking around the scene that I cannot recall it!"

Half of respondents among students were all unable to recollect any names, either of place or person, from the narrative.

3) *Comfort with agency*

For the junior male teacher (M, 38), the overall narrative could not get through to him because of the increased agency he had in determining what to focus on during the documentary. However, on being asked if he felt confused through the documentary he said, "Not really, because the narrative was their, so you know. But since there were different ways to look at it (documentary) I felt the narrative did not come through to me as much."

A 21-year-old male respondent who found young girls playing football as the most striking part also had the opportunistic glitch of changing the mobile phone during his turn due to low battery. So he got to see the same frame in the documentary twice. But he said the frame looked different both the times due to the different details he observed in both the turns.

The 23-year-old male respondent said that he got hooked into the documentary as soon as the young girl was introduced and he turned his head around to look at the ceiling fan and a door opening on his right. The freedom to choose one's own details kept him interested throughout, he said.

The 22-year-old female respondent had an overwhelmed response after the documentary ended. In an unusually shaky voice, she confessed on wanting to play with the kids in the documentary but felt paralysed. The cognitive dissonance of being in the VR video perceptually but being conscious of the real time body physically was evident in her response.

4) *Technical glitches*

The senior teacher (M, 75) apparently found the experience was straining on the eyes as he took some time to adjust after removing the VR glasses.

The junior teacher (M, 38) had trouble with the low video quality at 480p. The details were not as clearly visible since the VR requires a greater video streaming pixels than regular videos for the same level of quality.

The 22-year-old male respondent said he did not find the medium very ecstatically immersive due to the reduced quality of the video. VR videos are difficult to view in good quality on a normal mobile data due to the high quality of content.

The 21-year-old who said the frame looked different both the times due to the different details he observed in both the turns also found the medium much more involving than any other he had experienced like visual or print. But the glitches in the stitching the VR video were found to be evident by him which reduced the immersion in the environment. The strain on the

eyes was felt which could either be because of the spectacles he wore or the heaviness of the VR glasses.

Kritika (F, 21) also felt uncomfortable in the heavy head set which made her conscious of her real time body and reduced her immersion in the VR video.

5) *Body Language*

In the initial stages of watching the documentary, the users showed a uniform discomfort with the VR glasses. Users with glasses showed continued discomfort throughout the video. Adjustments with the VR glasses in the Samsung VR Play were helpful in increasing their comfort.

Within 2-3 minutes of the documentary playing out, the user was standing in their usual comfortable standing positions. The hands were off the VR glasses. They stood in real time like they would stand observing a new place or people while watching the documentary.

The 24-year-old male respondent showed signs of remaining in the real time bodily position by continuously adjusting to sit in a comfortable position. The senior teacher (M, 75) was not easily adjustable to the 360 environment but later on showed the greatest empathy in the post-viewing interview.

b) *Understanding of Sadharanikaran*

There was a general lack of appreciation for the Sadharanikaran theory or lower understanding of the model itself. A 24-year-old male respondent found the model quite intangible. A 22-year-old male respondent was also put off by the spiritual aspects of the model which he lacked an encouragement to prod into. Another male respondent admitted to not being able to recollect the theory at all. All the female respondents agreed to a rudimentary knowledge of the model.

5. Conclusion

Every individual interviewed had a unique storyline of the same documentary. The parts described which moved them the most or the most striking part of the documentary was varied. This clearly establishes the increased user agency that VR as a medium provides to the viewers.

However, the narrative played an important role in guiding the viewers since most of them admitted to being moved by the same frame where the mother is shown to lack the ingredients she used to have back in Syria in a new country. This shows that sound can play an important role in managing the increased user agency in order to maintain the consistency of narrative.

The lack of focus on the narrative was clear from the inability of most interviewees to remember a name and a place from the documentary, right after watching it. The VR environment seems to have immersed them enough to not leave much mental bandwidth for the factual or narrative details.

In the absence of focus on the narrative, each interviewee was able to grasp the central motive of the whole documentary – to demonstrate the living conditions of the young refugee girl. This setting up of the context proves the capability of VR as a medium to handle subjectivity. Also, the absence of medium implies a kind of silence which did not deter the communication process from continuing. This proves that VR as a medium has the ability to carry out communication non-verbally in a very efficient manner.

There were troubles with complete immersion as pointed out mainly by the male participants. Glitches in the stitching of the 360 video, lack of focus, poor video quality, uncomfortably heavy headsets were pointed out which reduced the immersion. The female participants remained unaffected by these glitches and demonstrate an easily achieve empathy among the females.

Despite having lived through and explaining the very concepts of the Sadharanikaran Model of Communication in their VR experiences, the students were incapable of demonstrating an in-depth knowledge or even interest in the theory. This proves both the capacity of the students to understand the concepts and the incapacity of the current classroom learning in helping comprehend those concepts to the students.

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