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**The Diachronic Development of Consciousness and Language through
History: A Psycholinguistic Investigation of Language Use in Schizophrenia**

*A Dissertation Submitted to the Department of English as a Partial Fulfillment of the Master
Degree in Language Studies.*

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*D*edications

To the memory of a hero, my father.

To my mother, the queen, and the center of my being.

Lila



To Chakib, my brother and source of inspiration.

Imad

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Abstract

Investigating human consciousness is a viable realm of research for experts in different scientific fields including cognitive psychology, neurolinguistics, and psycholinguistics. Consequently, many theories stem from the continuous appraisal of consciousness as a human phenomenon. Considering language as a concrete manifestation of human consciousness and genetic endowment, this faculty is affected by the state of consciousness. Thus, the researcher's contribution is represented in exploring the characteristics of language used by Schizophrenic people as a representative sample of an altered state of consciousness. The exploratory study aims at providing clarifications concerning language in schizophrenia, as well as suggesting solutions that may help in the process of recovery. In this case study, the research relies on the triangulation method of data collection, by conducting interviews with three clinical therapists, an observation of three schizophrenic patients at Tlemcen's psychiatry, followed by a movie's content analysis. The collected data, then, was analyzed qualitatively and quantitatively. The results, finally, revealed that schizophrenic linguistic behaviour do correspond to the patient's consciousness, but does not necessarily mirror it. Additionally, certain schizophrenic mental processes might reflect a superior consciousness if the deteriorated ones are, theoretically, cancelled by abiding with the researcher's recommendations to moderate the altered state of consciousness characterizing schizophrenia.

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Abbreviations and Acronyms

ASC: Altered State of Consciousness:

BMT: Bicameral Mind Theory

CU: Collective Unconscious

LAD: Language Acquisition Devise

LTM: Long-Term Memory

PTSD: Post-Traumatic Stress Disorder

SCZ: Schizophrenia

SIT: Social Interaction Theory

STM: Short Term Memory

UG: Universal Grammar

ZPD: Zone of Proximal Development

General Introduction

Consciousness as a human phenomenon allows us to contemplate life and our entire existence, reflecting on the past while thinking about the future, so familiar yet so obscure and mysterious. To most of us, experiencing consciousness may appear to be a menial chore, as humans mainly comply with being unaware of what their minds are going through most of the time, hence when it comes to being conscious it is a matter of spontaneity and living in the moment rather than constant focus on inner experience, such as breathing, digesting, feelings of anger or joy, flow of thought...etc., hence Previous studies contributed by identifying different aspects of the phenomenon from multidisciplinary perspectives.

Language, on the other hand, mirrors how the human being is genetically created to incubate certain cognitive and physical skills that are inherited throughout generations; the epitome of human uniqueness, creativity and cultural transmission throughout history is his language.

The purpose of this conducted study is to discover whether the human language is an attribute to the evolution of human consciousness. Additionally, the study's process aims attention at figuring out to what extent linguistic behaviour reflects the state of consciousness. To reach such aims, the nature of each phenomenon is approximately deciphered throughout the work, both the normal and abnormal states of consciousness, and of language. The researcher's attempt is to approach individuals with atypical states of consciousness via their language choice. And this will help establish a common ground where both phenomena are mutually correlated.

Furthermore, the present investigation targets identification of the substantial of the altered state of consciousness in psychosis, mainly schizophrenia, where the patient displays a varied external verbal and non-verbal behaviours along with unique internal mental functions that are accessible through the unusual language use. It is, yet, to find out whether an appropriate language performance is significant enough to reverberate the characteristics of the speaker's consciousness, or it is just a drop that when connected with other human aspects, forms the ocean of human consciousness.

In order to provide a scrutinized understanding of language in relation to consciousness, no induction nor dereliction were applied. Likewise, to approach the objective of the study, two research questions were formulated narrowing down the research scope:

1. To what extent is human language a necessary condition for a typical display of consciousness?
2. Is schizophrenic consciousness a mere vestige of the past undeveloped human consciousness?

Accordingly, the following hypotheses were put forward to answer the questions:

1. Language possessing is not enough to develop a normal state of consciousness.
2. Schizophrenia is a step forward in the evolution of human consciousness.

For the sake of answering the previously asked questions, and to check the validity of the hypotheses, an exploratory case study was adopted by the researcher in order to cover all aspects regarding language use in an altered state of consciousness in the case of schizophrenic patients. Clearly, the target population of this study is schizophrenic patients nowadays, as they all share a continuum of

altered states of consciousness. The sample was composed of 3 patients selected purposefully to encompass different factors and outcomes. Making use of the triangulation method, a semi-structured interview was directed to clinical therapists to collect general insights, an observation of the selected sample was conducted, based on the information provided by the interviewees, along with opting for a movie whose content is approximately representative of our case. Next, the data is analyzed both quantitatively and qualitatively.

Concerning the structure of this work, the research paper is composed of three interdependent chapters. The first chapter, deals with multi-perspective definitions of consciousness and other overlapping concepts, pioneering established theories about the nature of consciousness are found as well. Whilst containing synoptic overview of the evolution of consciousness throughout history, along with stating some of its anomalies reflecting the alter state of consciousness nowadays.

Following the same nature of content, the second chapter is concerned with visiting different views on language, its emergence and development throughout history, along with its intrinsic properties, and how these latters may deviate from the usual use of language in the case of schizophrenic depicting the altered state of consciousness and the abnormal linguistic behaviour. Hence an unclouded image was established, linking between the faculty of language and the human psyche in general.

The third chapter, on the other hand, is concerned with the practical part of the research. It consists of a description of the methodology during the data collection process, including the research tools that were used. As well as stating the justification for the sample chosen by the researcher. Furthermore, this chapter provides a scrutinized analysis of this generated. As the last step, the discussion and the interpretation of the results generate findings that are linked with the above

research questions and hypotheses. Concluding the chapter, the research provides a set of suggestions, recommendations and future research hypotheses related to the topic.

Chapter One: Consciousness through History

Consciousness through History

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1.1 Introduction

Consciousness is a natural phenomenon of being aware. All species in nature show certain behaviours, and these variant behaviours determine levels of consciousness. Mankind's consciousness is by far the most evolved one amongst all earth species, this consciousness' level is the result of many eras of evolution and adaptation to external surroundings for the sake of survival. Since the dawn of humanity, philosophers and scientists are still struggling to cover all aspects of this phenomenon, along with giving an exact definition of the subject despite the huge advancement in many scientific fields.

Accordingly, this chapter approaches distinct definitions of consciousness as a concept, after dealing with consciousness history and an up-to-date account of it. It investigates how consciousness evolved, and explores the contributions made by different scholars in several disciplines, aiming to provide a better understanding of the nature and history of this phenomenon. Eventually, the investigation extrapolates the most applicable consciousness' theories within the scope of its research objectives. Finally, the chapter is concluded by referencing some anomalies that have arisen from the evolution of consciousness and how the faculty of language is influenced by these modern disorders.

1.2 Consciousness Evolution throughout History

From studying the human ability to become good at things without understanding, which then leads to our acquisition of the cognizance to comprehend, via our competence, Dennett favours the theory (first suggested by Richard Dawkins) that our social learning has given us a second information highway (in addition to the genetic highway), where the transmission of variant

cultural information memes¹ take place via differential replication. Software viruses, for example, can be understood as memes, and as memes evolve in complexity, so does human cognition.

Not all philosophers, including Cronin, agree that natural selection shapes culture. But, Dennett goes even further, describing a spectrum where, at one end, memes are authorless and free floating, and at the opposite end; they are chained to forethought, are less Darwinian and more purposeful, such as statistics, computer software and poetry. As he says in an interview:

Natural selection is not gene centrist and nor is biology all about genes, our comprehending minds are a result of our fast evolving culture. Words are memes that can be spoken and words are the best example of memes. Words have a genealogy and it's easier to trace the evolution of a single word than the evolution of a language. (Daniel Dennett, 2013)

As humankind was spreading on new areas of the planet was a great contributor for the expansion of consciousness, as there was a need to deal with new landscapes, weather, materials, animals etc... Hence, there was a necessity to perceive, memorize and coin new words (language productivity) to express the unfamiliar surroundings.

From small groups of hunters and gatherers to sophisticated modern societies living in megalopolis², humankind's consciousness kept adapting and

¹ Memes can take a variety of forms, such as an idea, a skill, a behaviour, a phrase, or a particular fashion.

² Megalopolis is a large and densely populated city or group of towns that make up an urban complex. New York City and surrounding areas including Long Island are an example of a megalopolis.

evolving to the external surroundings. During prehistory times, small human groups living a life of hunt and gathering were expressing their consciousness through basic drawings that depicted their way of life, such as Tassili drawings in Algeria (H. Lhote, *A La Découverte Des Fresques Du Tassili*, 1973). Afterwards, the agriculture era was the beginning of establishing a small-scale system, alongside constructing tools with the purpose to feed larger groups living together, as Ibn Khaldoun mentions in his (*Muqaddimah*, 1377).

In Mesopotamia³, humans started to build civilization, living in much larger groups (settlement⁴) and writing their history, which is a huge shift in human existence on many aspects, and the proof of modern consciousness rise. There was writing invention (language), art, belief systems, buildings, and laws, conforming to Bertman words (*Handbook to life in acient Mesopotamia*, 2002). Moreover establishing the tribal system throughout ages, in many areas of the planet was for the sake of survival, as it would offer shelter, unity during wars, various services for basic needs, and organization through laws, culture, and belief systems. These mentioned points were due to the fact humans were aware of the outside threats to their existence.

Nowadays, immense cities are spread across all over the globe, and humans are ruling the planet, over all existing species due, to their superior level of consciousness and genetic endowment. The knowledge accumulated over millennia, harnessed as modern science and technology, is playing a fundamental

³ Mesopotamia is a historical region of Western Asia situated within the Tigris–Euphrates river system, in the northern part of the Fertile Crescent, in modern days roughly corresponding to most of Iraq, Kuwait, the eastern parts of Syria, Southeastern Turkey, and regions along the Turkish–Syrian and Iran–Iraq borders.

⁴ In geography, statistics and archaeology, a settlement, locality or populated place is a community in which people live. The complexity of a settlement can range from a small number of dwellings grouped together to the largest of cities with surrounding urbanized areas.

factor to shape a very developed consciousness we rejoice. Therefore, human consciousness seems to be ever expanding as long as we are encountered to new stimulus and experiences, alongside gaining new knowledge.

1.3 Definitions of Consciousness

Consciousness is the sum of cognitive processes; one attributed definition is “The phenomenon of personal, subjective experience. The experience is sensory, remembered, or imagined in nature and interacts with environment and physiological states so as to produce changes in the state or aspects of subjective experience”. (Matsumoto, 2009, p. 128)

Therefore, the phenomenon is the mind’s imperfect image of its own activity, this image is built internally by our brain, from interaction with the external world through our senses, and is updated constantly, to keep up with the world’s changes, in order to react appropriately to our surroundings.

Consciousness is then, based on personal perception, which is completely subjective no matter how common things appear to be to human beings. For example, the perception of colors is thought universal, but in fact, the experience of color is unique to each individual. Such processes, which make us conscious, are not necessarily identical, and are quite different from one person to another, but it is certain that all the various cognitive processes contribute to build the experience defined as consciousness according to (Graziano,2019).

Regardless of what has been said, reaching an adequate definition of consciousness is an elusive task that must not be taken lightly, since it is used by different people in different contexts, in addition to the fact that various domains have their own views on the subject. So, in order to avoid any vagueness or

confusion when defining consciousness, the latter is regarded within different dimensions.

1.3.1 Commonsense Notions about Consciousness

The interaction of an individual with the environment, whether affecting or being affected, requires an understanding of the nature of things; this interaction relies on many cognitive processes such as attention, perception, memory, intelligence etc. ... All contributing to the state of being conscious, in accordance with Ulric Neisser, father of cognitive psychology⁵ (1967).

Non-professionals use many words that would exhibit the same meaning as the notion of consciousness in their daily conversations, which to them encompasses the state of awareness of both the external reality as well as our inner state, and hence these notions include, among others, being awake and mindful, intelligence, reasoning, perception, attention and focus, memory and thinking. These terms witness a misuse in context by non-professionals, because they overlap and are interrelated phenomena.

The reason behind stating this collection of notions is that experts started from estimating each concept used, and relating it to consciousness with the aim to get further insights, and understand its actual nature.

⁵ Cognitive psychology mentioned in the Cambridge Dictionary of Psychology as being “The interdisciplinary science of mind which includes and attempts to integrate approaches from psychology, linguistics, philosophy, anthropology, computer science, and physiology.”

1.3.1.1 Mind vs. Consciousness

Mind and consciousness are two commonly used terms in psychology and philosophy, without settling on a consensus of their actual definition. In this line of thought, Rosenthal declares that “Despite impressive and dramatic experimental findings in psychology about non-conscious cognition, many would still insist that mental states and processes, properly so called, must all be conscious” (Rosenthal, 2002, p. 227)

Thus, they are indeed terms nearing each other in meaning, yet, the mind as a philosophical and clinical physiological term is a broader term than consciousness. In fact, the mind does not only include consciousness, which is represented in the subjective state of awareness of the surroundings and inner state, but also extra processes such as language, reasoning, logic and imagination, which most of the time happen to be automatic rather than deliberate, giving rise to mindlessness, commonly defined as “*An inactive state of mind...and as a result we are insensitive to context...When mindless we are oblivious to not being in the present.*” (Matsumoto, 2009, p. 310). This view is the most agreed upon, as consciousness alone cannot achieve much things without other extra factors contributing to human cognitive abilities.

Another perspective to mention is that, consciousness and mind are interchangeably used terms, and are considered slightly different from one another in context, for Jung metaphorically expresses that:

In the child, consciousness rises out of the depths of unconscious psychic life, at first like separate islands, which gradually unite to form a 'continent,' a continuous landmass of consciousness. Progressive mental

development means, in effect, extension of consciousness. (Jung, 1954, p. 326)

To dissect Jung's statement, the development of consciousness from its mere existence "unconsciousness" is what generates the three types of minds, starting from the "sub-conscious mind", which is the depository of subjective experience, and then moving to the "conscious mind" where complex cognitive processes and analytical awareness are enabled, until "super-conscious mind" is fulfilled. All generalized in Daniel Dennett's (2013) famous interview line "The mind is the effect, not the cause".

A third perspective can be noted, which states that consciousness is on the higher form of human cognition and includes all cognitive operations, but is framed into our current limited reality through the mind. Therefore, the mind is limited, while consciousness is infinite. This perspective is not only stated by spirituals who have experienced altered states of consciousness (ASC) through meditation, psychedelics⁶, but also intriguing clinical cases who were brought back from the threshold of death due to medical development; those cases claim to be conscious when there was no biological life signs of their bodies as said by Dr Parnia⁷ (2017).

Continuing in this vein, Ramana Maharshi, endorsed the view that "You are originally unlimited and perfect. Later you take on limitations and become the mind." Consequently, to these beliefs, the faculty of consciousness goes beyond our physical mind where mental processes take place.

⁶ Psychedelics are a class of drug whose primary action is to trigger psychedelic experiences via serotonin receptor agonist, causing thought and visual/auditory changes, and altered state of consciousness.

⁷ Dr Sam Parnia : is a director of resuscitation research at the academic medical centers NYU Langone

As a conclusion to the controversy encompassing mind/consciousness, the mind is agreed to be on the higher hierarchy of what we experience as conscious beings. From a philosophical and psychological point of view, matter and any creature without cognition is not conscious, while humankind is considered mindful species. Hence, the duality of mind and matter is always the most rational to state, rather than mind and consciousness, which happen to adhere to one another.

1.3.1.2 Attention

Attention is the cognitive process of noticing someone or something as stimuli, this latter being intriguing and captivating to our consciousness. However, Ferguson revealed:

The brain's calculations do not require our conscious effort, only our attention and our openness to let the information through. Although the brain absorbs universes of information, little is admitted into normal consciousness.
(Ferguson, 1980, p. 296)

To reflect, the attention process is an optional cognitive operation, meaning the individual will not pay attention to all stimuli in the surroundings but only one filtered stimulus amongst many stimuli to be the center of attention, since processing an overwhelming amount of sensory information is narrowed by our physiological limitations. Therefore, there are no good individuals at multi-tasking but good individuals at switching focus from one thing to another. Furthermore, William James (1890), a pioneer of psychology in North America, claims attention

refers to cancelling few inputs in order to handle efficiently the situation at hand while being in a “scatterbrained state”⁸.

This would imply that many factors play a role in determining the type of attention, such as readiness, inclination, psychological state, and mental preparation; for instance, a mother would hear any faint cry of her child but might not hear the train’s sound passing nearby. Moreover, Breckenridge commented:

Evidence from multi-dimensional studies of adult attention provides mixed support for the notion of separable components, and the proposed structure comprising selective, sustained and attentional control functions. (Breckenridge, 2007, p. 25)

In other words, a simple model suggests that there are three types or structures of attention according to the factors triggering them: voluntary attention, automatic attention, and forced attention. Voluntary or selective attention is a focus on an important stimulus such as a conference, or a lecture. While automatic attention, which is random, dictated by our inclination, emotions, and nature. Finally, Forced attention is what we are obliged to focus on, and is a reaction to something, such as an attention to escape prompted by a danger.

All in all, Attention is but the first of all the cognitive operations that follow its process; paying attention to any stimulus in the external realm in order for it to be perceived, understood under in a form of a concept, and stored in the memory afterwards, which serves to be familiar to a similar interaction in the future.

⁸ Scatterbrained state: having or showing a forgetful, disorganized, or unfocused mind.

1.3.1.3 Memory

The term memory denotes the processes of storing and retrieving information, this cognitive process is fundamental for us to function, since memory connects our past to our present, and helps us to define our future. In other words, memory allows us to remember what has been done yesterday, what is done today or what is planned for tomorrow, just as Matlin (2005) pointed out “Memory is the process of maintaining information over time.”

As mentioned by Stenberg (1999), the stages of memory follow three steps, encoding, storage, and retrieval in order to store the vast amount of information in many forms such as sounds, images, shapes, concepts, meanings etc... Firstly, memory encoding is the information coming into memory system through our sensory input. During this process, the information changes into a form the system can cope with, so that it can be stored in one of the three forms visual (picture), acoustic (sound), or semantic (meaning).

Secondly, the memory storage comes as a next step to the process; it is where and how long the memory is stored, alongside how much information can be stored (capacity), this step states that the information is stored from sensory memory into short term memory or “first feeling grasp” according to Ebbinghaus, this one might become a long term memory or “secondary memory”. The last step for the process of memory is retrieval, and it is the process of getting the information out of storage. The inability to remember something means the inability to retrieve it. The act of retrieving an information is by either recalling, recognizing or relearning the information from the person’s own reality as shown in figure 1.1.

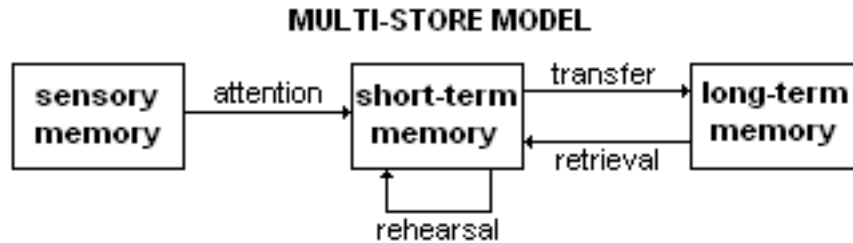


Figure 1.1 Atkinson and Siffrin’s (1968) Original Model of Memory

In addition, Dennett put forward his view that “*there is no reality of consciousness independent of the effects of various vehicles of content on subsequent action and hence, of course, on memory*” (Denette, 1999, p. 137) Thus, in many cases, the subjective experience of consciousness results from remembering an already-existing memory.

Besides Dennett’s claim, Stephen Hawking “theoretically” claimed that the human mind; including consciousness can fabricated within an artificial “neural network”, yet without the whole life memories of the person, it is then quite a troublesome process.

1.3.1.4 Perception

It is impossible to tackle the fascinating phenomenon of consciousness, without denoting a major component that is perception. In other words, this process of grasping, interpreting and reacting to what lies on the external realm requires the occurrence of “perception”.

In (Cognitive Psychology (Sixth Edition), 1994, p. 86), Sternberg et al, explain Perception as a process of the individual organizing and interpreting the outside reality (impressions), through sensory input organs that creates a personal reality; a mental image that gives meaning to the external world “depending on

your viewpoint”. Perception then can be shaped, as well as distorted by various factors.

The perception process follows steps in order to make sense of the surroundings; those steps include selection, organization and interpretation. First, the selection process is the attention on one “distal external object” at a time; we block most other stimuli and focus on the most appealing to us. Second, The selection is then followed by the organization process, starting by an arrangement of information through “informational medium” (sound, light, smell), then moving to a “proximal stimulation” that occurs on the brain’s level, where the stimuli is assimilated with a direct relation with the mental images and things we have stored previously, in order to create a “perceptual object”, hence, this step not only relies on sensory input organs but also requires the implication of memory. As stated by Gibson (1966). In addition, the last step is interpretation, concerned with giving a meaning to the stimuli of the external world on a personal frame scale, while using our past-experiences in order to make sense to us, which makes the experience biased, and subjected to straying from the true reality.

Therefore, the process of perception is a subjective personal reality and is not necessarily an objective one. And so studying this subjective phenomenon plays a fundamental role for the understanding of the individual’s behavior, and how he functions internally, by linking “personal factors”; physiological state of sensory input organs, mood, psychological preparation, emotions, cognitive biases, faith and moral ethics, as well as “external factors” such as, provoking illusions and hallucinations due to psychedelics’ experiences, to find correlations with mental illnesses such as Schizophrenia⁹ (SCZ), Hysteria¹⁰, Bipolar Disorder¹¹ etc...

⁹ Schizophrenia is a mental disorder characterized by abnormal behavior, strange speech, and a decreased ability to understand reality.

(Gibbon et al., 1984; Penney and Turret, 2005; Droit-Volet et al., 2007; Noulhiane et al., 2008)

1.3.1.5 Thinking

As a starting, it is impossible to define thinking without defining what a “concept” is. Conforming to Locke, Berkley and Hume’s ideas about “internal conceptions”, this latter is defined as the semantic substitution of contexts, things, and persons in reality; hence, a concept can be a mental image, a word, a number, a memory, a musical symbol or a mathematic. For each concept to become one, it has to undergo “internal conceptualization”, i.e. “to attach meaning to an utterance...for one or more ideas in one’s own mind” (Bennett, 1971, p. 126)

“Thinking is a problem-solving process in which we use ideas or symbols in place of overt activity.” (Gilmer, 1970, p. 326) Hence, the definition of thinking is possible to be stated, as both conscious and unconscious processes of organizing and dealing with concepts, stored in our memory as believed by Gilmer. Thus, concepts are the building blocks of the thinking process.

1.3.2 Multidisciplinary Perspective on Consciousness

Consciousness as a phenomenon is universal, however, its definition is not universally agreed upon. Its nature triggered the attention, and grabbed the imagination of both scientists and philosophers; hence attempting to define the concept of consciousness can be approached from two different positions; scientific as well as philosophical. Tremendous amount of researches within many

¹⁰ Hysteria colloquially means ungovernable emotional excess. Generally, modern medical professionals have abandoned using the term "hysteria" to denote a diagnostic category, replacing it with more precisely defined categories, such as somatization disorder.

¹¹ Bipolar disorder, previously known as manic depression, is a mental disorder that causes periods of depression and periods of abnormally elevated mood.

domains have attempted to give an exact and detailed explanation to consciousness, but the struggle still stands until present time to reach the aim. Many theologians, philosophers and scientists alike invested in consciousness' research, with so little exact knowledge outcome regarding it. In fact, there is no consensus between various fields to define this phenomenon. Thus, different theories attempting to give sense to the nature of consciousness are provided, as well as various definitions stated by some scholars from different fields who delivered insights to the subject, in order to explore how consciousness is defined under the scope of many disciplines.

1.3.2.1 Human Consciousness According to Avicenna (Theology)

The Muslim theologian and philosopher Avicenna (980-1037), influenced by the philosopher Al-Farabi, claimed a link the fact being conscious to the soul in his “floating man” thought experiment, he believed the soul to be a substance, and due to it, humans cannot doubt their own consciousness, even in a situation devoid of all sensory data input. Moreover, humans cannot be denied their consciousness and awareness in spite such settings. He suggested that “soul is not a dependent entity, despite the fact that it is connected with body and receives sensations by means of it” (Kabadayi, 2006, p. 25)

The “floating man” experiment invites the readers to imagine themselves suspended in the air, and stripped from all sensory contact including contact with their own bodies (the case of coma, meditation). Avicenna argued that, in this scenario, one would still have “self-consciousness”. Hence, the thought experiment points out the soul to be “a perfect immaterial substance”, having a reflexive knowledge of its own existence, independent of the body. In addition to the previous claims, Avicenna believed that the human “active intellect”, in other

words, the human's awareness to be "the hypostasis", i.e. a mediator, by which God communicates truth to the human mind and provides the characteristics of order and intelligibility in nature, as mentioned by Saeed Sheikh in his book (Studies in Muslim Philosophy, 1974).

1.3.2.2 Descartes' View on Human Consciousness (Philosophy)

The French philosopher Renee Descartes started to question the human consciousness, by doubting all what is believed about it, in his famous book (Meditations on First Philosophy, 1641). He pointed out in his thought experiment that even if all our physical sensations were a hallucinatory dream, our mind and thoughts would still be there. His famous quote "I think, therefore I am" clearly states that the fundamental proof of our existence is the constant thought. Therefore, the act of being conscious to Descartes was the mind and thoughts, which are the core of our identity, separate from the physical body.

Yet, Goodman criticized that though "Both the Cartesian *cogito*¹² and Avicenna Floating Man are tools of analysis, such abstractive devices can never tell us what consciousness is" (Goodman, 1992, p. 160)

Hence, though these philosophical introspections tended to explore and approach the nature of consciousness, none of them gave a detailed, rational consensus on the phenomenon.

1.3.2.3 Consciousness as a Biological Phenomenon

With modern age technological development, the phenomenon of being conscious has undergone many researches. To be precise, brain as a processing

¹² The Cartesian philosophical principle that without thought process, there is no intellectual existence.

organ is the mystery box for the human conscious. The anatomy of the human brain is composed of the reptilian brain part (balance, territoriality, hunger), the monkey brain part (social hierarchy, social adequate), alongside the pre-frontal cortex and that's the thinking brain area which differentiate humans from animals. (Mukhopadhyay, 2009)

Hameroff claims that "Consciousness is not an independent quality but arose, in terms of conventional physical processes, as a natural evolutionary consequence of the biological adaptation of brains and nervous systems." (Consciousness, Free Will and Quantum Brain Biology, p. 145). In other words, neuroscientists consider consciousness as the activity of neurons in the brain triggered from the day a human is born, the mental development is then, happening through the body's interaction with the external world. Hence, the mind/body problem¹³ does not exist when consciousness is framed into purely biophysical mechanisms resulting after billion years of evolutionary processes. (Danto, 1997, pp. 98,99).

1.3.2.4 The Quantum Nature of Consciousness

Studying consciousness under the scope of physics proved out to be very tricky, just like as Tyndall stated "the passage from the physics of the brain to the corresponding facts of consciousness is unthinkable" (Holden, 1875, p. 503) Since there is no possible way to make exact measurements and numeral scales, due to the fact neurons' network processes happening on a sub-atomic level.

The physicist Kaku defines consciousness as the following "consciousness is the process of creating multiple feedback loops, to create a model of yourself in

¹³ The causation of mental to physical processes, and vice versa. Which one has the upper hand.

space and in time in order to satisfy certain goals.” (Kaku, 2016). Since neurons network is what creates the phenomenon, quantum physics¹⁴ field is witnessing constant research, in order to provide a curing answer to the enigma. The laws governing sub-atomic processes in the brain are something we do not fully understand via our present technological experiment tools. The professor of mathematics and creator of the quantum nature of consciousness and memory at Oxford University. Sir Roger Penrose (2013) confirms there is a huge gap in our understanding of physics; that the inconsistency of quantum physics laws does not allow us to fully grasp neurons’ behavior since the two quantum mechanics’ laws, “Schrodinger’s equation” and the “making of the measurements” are strongly inconsistent. I.e. though mental states are generated by electrochemical operations in different parts of the brain, but it is near impossible to detect the part that provides ‘a basis for a conscious self and free will. (Georgiev, 2002)

1.4 Pioneering Theories on Consciousness

A merge of philosophers, neuroscientists, and cognitive psychologists embarked on their own journey to get to grips with the nature of consciousness. As it is so fundamental¹⁵ yet abstract, it is deemed that a scientific theory of consciousness does not exist, for it opposes scientific principles to deal with a subjective experience such as consciousness, but rather how we internally function and how we project behaviourally on the outside. Hence, every scientific contribution to this matter dwells in the proximity to consciousness, i.e. exploring and investigating the mental processes, the aforementioned ones in the title commonsense notions about consciousness that may shape the process of

¹⁴ Or quantum mechanics, including quantum field theory, is a fundamental theory in physics which describes nature at the smallest scales of energy levels of atoms and subatomic particles.

¹⁵ In the sense of being basic, and cannot be broken into other parts.

consciousness. Accordingly, a scientific investigation is possible if the research is empirical:

First we find correlations between brute empirical phenomena. Then we test the correlations for causality by manipulating one variable and seeing how it affects the others. Then we develop a theory of the mechanisms involved and test the theory by further experiment. (Searle, *Consciousness*, p. 26)

Furthermore, the clash engendered from the scientific and philosophical approaches is represented in attempting to solve the traditional mind-body problem, where consciousness comprises one aspect only. According to Searle “the simplest form of the mind body problem is this: what exactly is the relation of consciousness to the brain?” (*Consciousness*, p. 22). To elaborate, this problem concerns how human mental processes and brain mechanisms cause consciousness, if they are two separate entities, or dependent on one another.

1.4.1 Panpsychism

A term coined by the Italian philosopher Francesco Patrizi, meaning “the mind or the soul of all”, according to Chalmers view on the subject, panpsychism indicates that every existent thing has a mind, or a limited mental capacity of its own, or at least a proto-mental¹⁶ ability. Panpsychism shares some philosophical tendencies with some religious beliefs, which refer to the tenet that the mind of God is within everything, hence everything is conscious and aware; Rumi’s famous

¹⁶ A thing that have certain qualities that if combined with the appropriate element gives the possibility to the rise of consciousness.

quote perfectly epitomizes this belief “you are not a drop in the ocean, you are the entire ocean in a drop”

Following this line of thought, consciousness is universally “fundamental”, just like time, space, mass, energy and gravity. Its existence is inevitable during any physical process. Moreover, it is claimed to be contained within any physical substance¹⁷, however some physical substances are more complex than others, i.e. the human brain neurophysiological structures vs. any other vessel. According to Seager, the dilemma that this theory created revolves around “How can a brute or fundamental feature of the world such as consciousness appear only when associated with exceptionally complex physical structures, such as the brain?” (Theories of Consciousness, 2002, p. 216)

Otherwise, no consciousness signs would be detected without a brain, which brings to another movement of panpsychism, supported by many contemporary philosophers such as Chalmers, it is called “micropanpsychism”, a form of panpsychism that narrows down the exhibition of consciousness to a set of properties of the smallest particles that compose a substance, how they are arranged, correlate, and interact. Baggini pointed out “Darwin showed that there certainly are reasons why organisms do things, but that it isn’t necessary to attribute intention or planning for those reasons to exist” (I am, therefore I think) Daniel Dennett’s hard problem, para. 10). Simply put, though there might be a relationship between the physical aspect of a substance and its behavioural manifestation (consciousness), it

¹⁷ Any physical entity or object that survives independently of another entity throughout all the constant changes.

remains unclear if it is a relation of causation, which, along with the mind/body problem, is known in philosophy as “the hard problem”¹⁸.

1.4.2 Cartesian dualism

Renee Descartes coined the notion of dualism of mind and body, where each one of them has its specific, distinct and unrelated properties; the latter is part of the matter scattered in the universe which he referred to as “res extensa” for its property of being in constant change and extension, while the mind is the property of living creatures, linked to thinking and generating abstract ideas, thoughts, awareness, hence consciousness, termed as “res cogitans”. He rejects the idea that consciousness exists without the mind that is within the body (the brain), and vice versa, yet, since they both (consciousness and body) have polarizing properties and laws, consequently they must be two separate and independent mechanisms, undeniably related and interactive, which later came to be known as the “the body/mind problem”. (Meditations on first philosophy, 1641)

He, then, continued to differentiate between the mind acknowledging itself, and the mind acknowledging other minds; the way you perceive, comprehend and internalize feelings, thoughts, colors and your physical sensations (pain, taste, hearing) is completely independent from the surrounding minds, as declared by James that “Conscious experience is private, that is, it is always experienced from a particular point of view and cannot fully be shared” (James, 1890)

The claim is that subjective experience, including the qualitative features of conscious state cannot have a whole valid description, though Searle commented

¹⁸ “Why should physical processing give rise to a rich inner life at all?” as David Chalmers puts it.

on the idea that there may be an access to describing what others' consciousness is like by saying that:

Every conscious experience there is something that it feels like, or something that it is like to have that conscious experience. Nagel (1974) made this point over two decades ago when he pointed out that if bats are conscious, then there is something that 'it is like' to be a bat. This distinguishes consciousness from other features of the world, because in this sense, for a non-conscious entity such as a car or a brick there is nothing that 'it is like' to be that entity. (Searle, 2002, p. 40)

And in this sense, Searle indirectly objected to the principle of "micropanpsychism", which gives any matter (a car for instance) mental properties. And went further to reject the Cartesian dualism which doesn't contribute to settling the relation between the mental and the physical, but rather pushes one to pick what is famously known as "materialism" that technically dismisses the phenomenon of consciousness. Consequently, those categories reject, for to him "altogether. We know enough about how the world works to know that consciousness is a biological phenomenon caused by brain processes" (Consciousness, p. 23)

1.4.3 Functionalism and "Qualia"

Major principle of this school of psychology is that the mental state of a conscious being is dictated by an internal function. Block decrees that:

Functionalism is the doctrine that pain, for example is identical to a certain functional state, a state definable in

terms of its causal relations to inputs, outputs, and other mental states (Block, *The Philosophical Review*, 1980, p. 257)

To elucidate further, fear as a mental state is produced due to a conscious functionalist that triggers the body to run from harm or fight it off; with no regard to the body physiological changes (adrenaline rush). According to functionalists, as long as the one experiencing the mental state is alive, we all then experience the same kind of mental state (the *Missing Link*, 2000, p. 18), since the mental process requires a shared functional state to all living creatures. In contrast, “psycho-physical identity thesis” claims that the behavioural mental state humans exhibit is identical to the physical brain state i.e. having one qualia¹⁹, hence each living organism subjectively experiences awareness or any other emotions according to its internal make up. Which consequently brings us to the “collective consciousness”²⁰ shared by each specie.

As a negative attribute to functionalism, Shoemaker argued that “This theoretical view is criticized since it relies on human species as philosophical zombies²¹ who famously have no qualia” (Shoemaker, 1975, p. 291), when in reality, each human and each entity (living) perceives and processes mental states subjectively rather than commonly.

¹⁹ A loose philosophical notion, used to stand for all the aspects and properties of a mental state that contribute to what is like to be in that mental state. i.e. the subjective experience of taste, sensations, color...

²⁰ A sociological term that refers to the common set of ideologies, beliefs and behaviours that a certain individual shares with his own group, kind or specie.

²¹ A theoretical conscious being, identical to a human being for having the same set of internal mental functions, yet has no real conscious experience and awareness of what he is processing from the outside nor the inside.

1.4.4 Freud's iceberg of consciousness

According to Sigmund Freud (1917), Any individual is identified according to his “subconscious thoughts”, when dealing with his mental patients he included hypnosis and “free-association” approaches, where he uttered a word and observed the generated word after the patient’s involuntary cogitation, the utterance responded with represented the individual’s deep and subconscious thoughts. He continued to suggest that all humans have three levels of awareness that control our behaviours and personalities; the mind, then, is imagined as a visual metaphor of an “iceberg” that consists of three parts. The majority of what we are externally is dictated by smallest part of the mind, which is “the conscious” part, that is aware of the surrounding and the thinking processes. Moreover, the second part is “the preconscious mind” where we can control our mental states to a certain extent, and deliberately bring our thoughts to the surface. Finally, the largest section of our mind is “the unconscious” which is an, out of reach, independent thought processing mechanism that deals with past and present experience, this part contributes to whatever appears in the external action. In his personality theory, he includes three components, the id, “ego” and “super ego”, the first referring to as “the pleasure principle” that dictates our unconscious desires and wants, both the ego-reality principle- and the super ego- the moral principle- attempt to achieve those unconscious desires by planning while consciously conforming to social conventions and rules. (Introduction to Psychoanalysis, 1917)

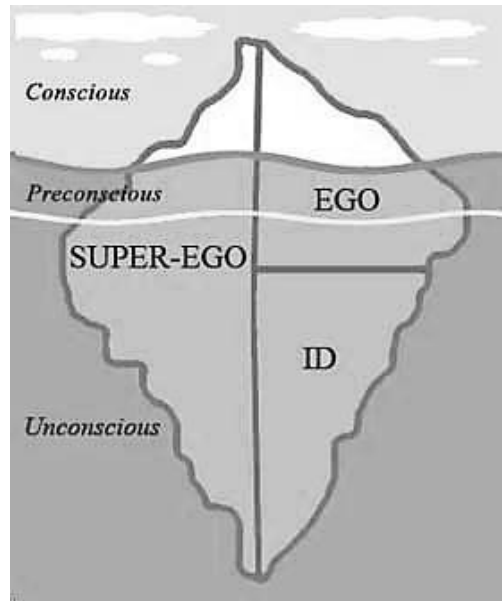


Figure 1.2 Freud's 1933 Final Illustration of the Mind

To sum up, Freud cleared that whenever the mind has trouble reconciling the needs of the aforementioned three components, psychological problems are, then, the result to unconscious 'defense mechanisms' used to cope with occurring unbalance.

1.4.5 Solipsism

Harris (2014), the author of 'Waking Up: A Guide to Spirituality without Religion'. Debated that consciousness is but a qualitative experience that no one can relate to but the person experiencing it, and while doing so, the individual feels "the self" trapped in his body, rather than connected to it, and that is what he refers to as "The Self Is an Illusion" in his interview on Big Think Youtube channel (2014).

To understand this theory, reference must be made to how children by nature are solipsistic, or "egocentric", they only start to believe that someone in the external world have the same experience as they are when they grow up "infant

solipsism”. This theory revolves around how being detached from the external world reality, and that visualized thoughts can become one’s reality, solipsistic views state that even inner thoughts are not actually one’s thoughts but, they are “illusions” that we have no control upon, one pushing the other, until one is not actually himself. But still, like Descartes claimed that the mind is easier to relate to than the body, indicating that our mental mechanisms are separate from our bodies, hence doubting even the existence of the outside world known as “the problem of the external world”.

The phenomenon referred to as solipsism had been incorporated in different movies including *The Matrix*, *The Truman Show*, *Shutter Island*, *Death Note Anime*, *Revolver*, *Being John Malkovich*, *Jim Carrey*, where according to "Solipsist" Filmmaker Andrew Thomas Huang (2019): “characters in these films are constantly merging into one another, forming a collective consciousness through unison of their minds and bodies”. In such movies, reality and illusion from the character’s perspective are mixed and interrelated, until all seems a deceptive fantasy.

1.4.6 Bicamerality of the Mind

This theory is intentionally left to conclude the section, encompassing consciousness theories for two main reasons. The first is that so far, it is considered as the most controversial, the second reason is that, its principles are acquainted with the researcher’s investigation of language in SCZ.

Julian Jaynes (1976) introduced the bicameral mind theory (BMT), in his ground breaking book entitled ‘*The Origins of Consciousness in the Breakdown of the Bicameral Mind*’ which left specialists from different disciplines in hot debate until nowadays. Though he agrees that consciousness is a subjective experience

born from the interaction of mental process with the external world like most scholars, yet his views on the evolution of human consciousness, is that it was not always in an onward progress, not until the faculty of language developed to a sophisticated level, when he suggested that:

Its (consciousness) main idea is a metaphor: Just as the property of wetness cannot be derived from the properties of hydrogen and oxygen alone, so consciousness emerged at some point in evolution in a way underivable from its constituent parts. (Jaynes, 1976, p. 12)

Jaynes (1976) points out, that since the creation started, there were definitely human beings having the same mental capacities as ours, yet they had no consciousness until they reached “a critical stage of evolutionary advance”, his argument was that, in order to study human consciousness, language should be the instrument, when he explicitly states “I wish to be very clear that consciousness is chiefly a cultural introduction, learned on the basis of language and taught to others, rather than any biological necessity.” (Jaynes, 1976, p. 220)

The BMT is a metaphoric term describing a mental state for ancient people, considering that the left side of the brain performs tasks that have to do with logic, such as in science and mathematics (practical). On the other hand, the right hemisphere performs tasks that have to do with creativity and the arts (imagination). The BMT claims the experiences and memories of the right hemisphere of the brain were transmitted to the left hemisphere via auditory hallucinations 3000 years ago. He, afterwards, delivered “literary evidences” through an “interdisciplinary approach”, drawing data from different fields. Moreover, Jaynes opted that the language of the earliest texts in history i.e. Homer’s ‘Iliad’, Greek as it is the most befitting ancient language, with which

modern human has cultural continuity. From these texts, he extrapolated that no character had a subjective experience, nor the ability to think, feel, desire or decide. (A.E. Cavanna et al, 2007)

Jaynes continued to mention that:

It is one god who makes Achilles promise not to go into battle, another who urges him to go, and another who then clothes him in a golden fire reaching up to heaven...In fact, the gods take the place of consciousness. (Jaynes, 1976, p. 72)

The gods' speech nature was of internal auditory hallucinations, and took place of consciousness (the self), the beginning of actions for bicameral mind humans were actually not in conscious plans. This psychology, far different from modern humans, was the outcome of less integrated brain hemispheres; leading to an executive part called the god, and a follower part called the man.

1.5 Anomalies of Consciousness

The human consciousness may undergo a sort of distortion in some individuals, its "clouding" is represented in a disturbance of the individual's clear mindedness and his mental activities to pay attention, perceive, memorize, hence, respond. Certain consciousness disorders are not overlooked for the sake of this research's purpose to understand the nature and catalyst of consciousness, disorders that tend to get misaddressed and misinterpreted can be categorized under three main subjects:

1.5.1 Attention Deficits

Referring to the withdrawal of attention or its mere inexistence, such deficits include the synonymous attention deficit disorders, such in (ADHD)²², Tourette syndrome²³, some deficits generated from traumatic brain injuries²⁴, and the impaired attention of autistic, as well as people with Down syndrome²⁵ or Williams's syndrome²⁶. All considered as neuro-developmental disorders effected by the individual's age and genetics, though they differ slightly in their symptoms encompassing being easily distracted, less focused and more active. According to Breckenridge "Research in atypical populations can also contribute to our understanding of the structure and function of attention in typical populations" (Breckenridge, 2007, p. 37). Thus, by understanding the factors contributing to such deficits of attention, gives insights about the attention as a cognitive process, which then generates knowledge about the causality of consciousness.

1.5.2 Memory and Illusion

Respectively to what Dennett et al, (Time and the observer : The where and when of the consciousness in the brain, 1992) coined as "Orwellian" and "Stalinesque" cognitive theory, the memory as a cognitive operation might fail to

²² ADHD stands for attention deficit hyperactivity disorder, a condition with symptoms such as inattentiveness, impulsivity, and hyperactivity. The symptoms differ from person to person.

²³ Tourette syndrome is a neurological disorder characterized by repetitive, stereotyped, involuntary movements and vocalizations called tics. The disorder is named for Dr. Georges Gilles de la Tourette.

²⁴ Traumatic brain injury is sudden damage to the brain caused by a blow or jolt to the head.

²⁵ Down syndrome, also known as trisomy 21, is a genetic disorder caused by the presence of all or part of a third copy of chromosome 21. It is typically associated with physical growth delays, mild to moderate intellectual disability, and characteristic facial features.

²⁶ Williams syndrome is a developmental disorder that affects many parts of the body. This condition is characterized by mild to moderate intellectual disability or learning problems, unique personality characteristics, distinctive facial features, and heart and blood vessel (cardiovascular) problems.

differentiate between what is real and what is imagined; either by destroying the original stored information and recreating false memories to be used externally, or by having a cognitive delay when perceiving the stimulus, that the mind captured a false distorted image, and memorized it correctly.

In both cases, the person is not aware of memory error, hence experiences the illusion that the process of memory is flawless. “So even if the Stalinesque and Orwellian scenarios are indistinguishable to consciousness itself, perhaps a reasonable theory of consciousness will show us how to tell which scenario any particular case conforms to.” (Rosenthal, 2005, p. 322)

To put it simply, it is the exploration consciousness, which envelops memory that leads to a better understanding of illusions.

1.5.3 Psychosis and Hallucination

Paranoia²⁷, schizophrenia, dissociative identity disorders²⁸, post-traumatic stress disorder²⁹(PTSD), and dementia³⁰...are all mental disorders sharing the same characteristics of psychosis, be it a failure to perceive the world as it is. In such cases, people may fall into few mental states of confusion and hallucinations played out by the complexity of the mind for different reasons; either a psychologically traumatic event, genetic inheritance, substance use, or a neurological brain damage. To make it simple, the common symptoms of such

²⁷ Paranoia is the irrational and persistent feeling that people are 'out to get you'.

²⁸ Dissociative identity disorders: a mental disorder characterized by at least two distinct and relatively enduring personality states. This is accompanied by memory gaps beyond what would be explained by ordinary forgetfulness.

²⁹ Post-traumatic stress disorder (PTSD) is an anxiety disorder caused by very stressful, frightening or distressing events. Someone with PTSD often relives the traumatic event through nightmares and flashbacks, and may experience feelings of isolation, irritability and guilt.

³⁰ Dementia is a general term for a decline in mental ability severe enough to interfere with daily life. Memory loss is an example. Alzheimer's is the most common type of dementia.

disorders are hearing voices, being delusional, loss of train of thoughts, feeling detached from the self (depersonalization), impairment of social/emotional cognition and environmental interaction, along with loss of long-term memory and attention, in line with Bentall's words (Madness explained: Psychosis and Human Nature, 2003).

In his lecture entitled 'Analytical Psychology and Education' (1946), Jung stated that the individual with mental distortion may exhibit and believe in a different world than ours, he supported his view that such individuals "begin talking of spirits, demons, witchcraft, secret magical persecutions, and so forth" (Jung, 1954, p. 116)

He proceeded by commenting that in these cases the experience of consciousness is "primitive", i.e. where the unconscious mind rules over and erases the "collective unconscious"³¹, that provides humans throughout history with a rational perception of the world.

Many researchers attempted ways to have access to the human mind, and to deal with its disorders. It was hypnotism that emerged in 18th century, when Freud penetrated through the mind to discover the tendencies of the unconscious mind and its constant endeavor to take over the conscious state of certain human beings.

1.6 Conclusion

This chapter shed the light on the development of consciousness by defining it, providing details and insights of all different processes playing a role to create this phenomenon, as well as giving views of scholars, philosophers, and scientists

³¹ The collective unconscious is a concept originally defined by psychoanalyst Carl Jung and is sometimes called the objective psyche. It refers to the idea that a segment of the deepest unconscious mind is genetically inherited and is not shaped by personal experience.

who came up with pioneering theories in the domain, aiming to dissect the phenomenon. Hence, defining the subject from a multidisciplinary perspective in order to explain why we experience things as we do, and how this experience can be disturbed and irrelevant to current reality, due to consciousness anomalies.

Chapter Two: The Human Language

The Human Language

- 2.1 Introduction.....
- 2.2 The Human Language.....
- 2.3 Evolution of language throughout History:
- 2.4 Hypotheses about the Emergence of Human Language

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- 2.7 Schizophrenic Consciousness and its Effect on Language Use
- 2.8 Conclusion

2.1 Introduction

Language, this unique human faculty allowing communication amongst individuals, has kindled the curiosity of humankind to study it under the broad field of linguistics. This field of study, overlapping with other disciplines aim to decipher the characteristics of the code allowing humans to communicate at a very proficient level. This study aims to unravel the mysteries related to the emergence of language; provide detailed definitions of its aspects.

Many scholars in the field provided plenty of theories. Those theory play a major role to depict the nature of human language, in order to establish a link between the faculty of language and the human psyche, facilitate learning of foreign languages, allow people with disorders to recover their ability to communicate etc...

2.2 The Human Language

Human language is a systematic means of communication, used to convey thoughts, ideas, emotions and desires. These latter are conveyed though specific sounds' combinations (speech), specific succession of graphic symbols (writing system), as well as gestures and signs. Human language is considered as the epitome of human uniqueness and creativity, since it is unnatural, created to achieve the human's social needs. Hence, the very existence of society depends on language.

“Language is a purely human and non- instinctive method of communicating ideas, emotions and desires by means of voluntarily produced symbols” (Sapir E. , 1921, p. 8). According to Sapir, when defining language, the emphasis is on the fact that

it is a human attribute, i.e. it is a “purely human”, “non-instinctive” (acquired) phenomenon that is “voluntarily” produced to support and express thoughts and concepts. Whereas, the animals’ system of communication is a primitive, instinctive and of a non-verbal use of gestures to express limited range of concepts.

Linguists in general considered that a language could either be natural or artificial, the first one referring to the language spoken and understood by a speech community like Arabic, English or Spanish. Artificial language (also called constructed or planned language) is a consciously and explicitly human-made for the sake of fulfilling its makers’ common interests and purposes, such languages including computer programming language like Esperanto³², Sinda, Klingon or Java, (and even some languages that were created for cinema or for literary purposes)

Natural languages converge on many common features; all natural languages are primarily a set of speech sounds combined to serve communication, and are secondarily written linguistic units that governed by a system of rules dictating the correct combination of the linguistic elements being sounds or words all produced in an unlimited distribution (creativity, open-endedness feature).

Although natural languages differ from other systems of communications including artificial languages, they still share some common features such as the fact that they both have syntax and semantics, they are both well structured (grammaticality and morphology). Oren Etzioni an American professor of computer science, and CEO³³ of the Allen Institute for Artificial Intelligence,

³² Esperanto is an artificial language that was about to be created by sociolinguists but the project was cancelled after the Second World War.

³³ A chief executive officer, the highest-ranking person in a company or other institution, ultimately responsible for taking managerial decisions.

unravels the border between natural and artificial languages saying: “Understanding of natural language is what sometimes is called 'AI complete,' meaning if you can really do that, you can probably solve artificial intelligence.”

2.3 Evolution of language throughout History:

In historical linguistics, the myriad of languages spoken today on planet earth are all traced back to few ancient languages, which themselves can be traced back to a sole language humankind spoke approximately 200000 years ago, according to fossil records. (Campbell, Historical Linguistics: An Introduction, 1998).

Language is a very sophisticated faculty and a primordial tool for the expression of thoughts and ideas, the pinnacle of human consciousness. In fact, one can never exteriorize his internal experiences without language. The process of language evolution is not a direct result to the human consciousness evolution, an answer to the physical realm changes, as well as a way to innovate according to specific needs.

“Language use is more like a litmus test³⁴ for what is happening in the wider societies. Where language use changes, there is an underlying social upheaval that may have environmental, economic, or political causes.” (Nettle et al, 2000, p. 175). Humans living in tribes long times ago, had to split searching for fertile land and watery areas for agriculture, led to two groups of people of the same tribe speaking one common language being separated and isolated from each other. Centuries of living in different conditions means coining new words regarding the different environments, the environment encountered in form of landscapes,

³⁴ A decisively indicative test.

natural phenomena, fauna and flora. Those have kindled the fire of inspiration for humans to write myths, folk stories and literature, which were a clear indicator of language expansion. These human migrations witnessed throughout history in various areas of the planet gives a solid explanation of different languages creation.

It is possible for a language to have the displacement feature or not! The linguistic researches about the Uto-Aztecan language “the Hopi language” led by Benjamin Lee Whorf, proved no notion called time, no timeline that could be cut and counted, no past, present and future tenses in the language. As he mentions:

I find it gratuitous to assume that a Hopi who knows only the Hopi language and the cultural ideas of his own society has the same notions, often supposed to be intuitions, of time and space as we have, and that are generally assumed to be universal. In particular he has no notion or intuition of “time” as a smooth flowing continuum in which everything in the universe proceeds at an equal rate, out of a future into a present and into a past After a long and careful analysis the Hopi language is seen to contain no words, grammatical forms, construction or expressions that refer directly to what we call 'time', or to past, present or future. (Whorf, 1950, p. 27)

This language spoken originally by Native Americans, through cultural transmission; clearly reflects their basic and harmonious way of life, as they were in need to farm, gather fruits, and hunt in order to live. Surely, the notion of time is here; Hopi people are aware that a cut tree will not grow, and a consumption of a fruit is an irreversible process. But their way of life did not impose the creation of

tenses in their language, as they did not need to worry about tomorrow interviews for job, neither being busy to work today and be free at 5 pm. Therefore, the Hopi language remained this feature, being a tenseless language.

Language being a manifestation of human consciousness will always be expanding as much as consciousness does, by exhibiting various features. As language and consciousness go hand in hand, i.e. any form shaping, altering consciousness will end up shaping language itself.

2.4 Hypotheses about the Emergence of Human Language

The attempt of giving an exact theory about the origins of human language emergence is a daunting task, as there are no concrete evidences nor testable hypotheses on how, when and where mankind started communicating for the very first time. In other words, provided hypotheses aim to give views with the goal to cure the curiosity of an everlasting existential question amongst many.

2.4.1 The Divine Origin Hypothesis

This hypothesis considers human language to be a divine gift. According to Ibn Duraid; a leading grammarian of Basrah³⁵, in his book 'Kitab ul-Ishtiqaq', he mentions that the language Adam spoke in heavens was taught from God, and humans by no means can make up this language. Most scholars do not take this idea seriously, but some argue that the divine gift to humankind was not a specific language, but consciousness and biological organs allowing sounds production.

³⁵ The Grammarians of Basra were grammarians and language scholars of Basra in the Islamic Golden Age.

2.4.2 The Simulation Hypothesis

Here, the human language is considered a mere simulation of the surrounding sounds in nature. Hence, the human language is a result of the human's imitation of sounds in the external world, such in the case of onomatopoeia³⁶ words. Aligning with Ibn Al Jinni's words, in his book 'Al Khasais', diving deep into Arabic lexicon and words' roots, he provides evidences on how a language is a simulation of sounds in nature. This hypothesis does not hold firm as most words in various languages have an arbitrary relationship³⁷ with their meaning.

2.4.3 The Convention Hypothesis

“It is a platitude that language is ruled by convention” (Lewis, 1998, p. 161). Humans made up conventional words in order to link the mental images to something physical in nature or linking a concept to a set of sounds of graphic representation, this process of putting conventional words is always expanding as humankind is growing in knowledge and discoveries.

2.4.4 The Evolution Hypothesis

Based on Darwin's biological evolution theory, this hypothesis states that the gradual evolution of speech organs by human trying to produce sounds, were evolved specific physical features of speech organs allowing the production of various sounds, combined to form words.

³⁶ The formation of a word from a sound associated with what is named, e.g. rain 'taps' the window.

³⁷ In linguistics, arbitrariness is the absence of any natural or necessary connection between a word's meaning and its sound or form.

2.5 Human Language Properties

Various aspects characterize human communication, which makes it above all forms of communication on the planet. Those aspects attributed to language are duality, creativity, arbitrariness, displacement, discreteness and cultural transmission.

2.5.1 Duality

Also called double articulation. This term denotes that the human language can shrink to the level of words and units; on the other hand, they can be used to build other units, as it is stated next “For instance, a sentence such as My sister’s hat is green may be segmented into words My/sister’s/new/hat/is/green. These segments or words in turn can then be split up into further units, for example into sounds so that the word that is seen to be made up.” (F.C. Stork, J.D.A. Widdowson, 1974, p. 11)

The duality system allows the production of an infinite amount of sentences from limited repertoire of speech sounds in any given language.

2.5.2 Creativity

The level of human consciousness enables to coin new words, hence, new sentences. The creativity property enables the speaker to understand and produce an unlimited number of sentences including those never heard before. As T.S. Eliot commented on the topic “For last year's words belong to last year's language, and next year's words await another voice.” (Eliot, 1943).

2.5.3 Arbitrariness

As stated by Ferdinand De Saussure; father of modern linguistics, this linguistic feature is the absence of a direct link between speech sounds and the word they represent, i.e. the sounds composing a word “signifier” denoting a concept or a physical object “signified” have no clear and direct indicator of the word’s meaning. Therefore, if we did not establish an arbitrary relationship between the sounds and words, sounds would make no meaning at all. Culler in his book ‘Saussure’ explains this property saying:

In short, neither signifier nor signified contains any essential core which time cannot touch. Because it is arbitrary, the sign is totally subject to history, and the combination at a particular moment of a given signifier and signified is a contingent result of the historical process. (Culler, 1976, p. 51).

2.5.4 Displacement

Humankind being conscious of space/time notions uses tenses to allow speech about past, present or future contexts, with different places of occurrence. Moreover, displacement allows speaking about places that are not present, as stated by Yule:

Humans can refer to past and future time. This property of human language is called displacement... Indeed, displacement allows us to talk about things and places (e.g. angels, fairies, Santa Claus, Superman, heaven, hell)

whose existence we cannot even be sure of. (Yule, 2010, p. 9)

2.5.5 Discreteness

Is a linguistic representation where language can be broken down into small discrete units that can then recombine with other small discrete units to create new linguistic representations. Such discrete units are perceived as categories, for example, the addition of the letter 's' to denote the plural form in English in most words (dog → dogs). Hockett tackles the subject by stating that discreteness is one of thirteen language design features, and says:

Exchanging such discrete units causes a change in the meaning of a signal. This is an abrupt change, rather than a continuous change of meaning. (eg. "cat" doesn't gradually change in meaning to "bat", but changes abruptly in meaning at some point. (Hockett, 1960, p. 38)

2.5.6 Cultural Transmission

Human language is transmitted from generation to generation within a speech community or culture. A child acquires his mother tongue, in cultural setting through social interaction. Cavalli-Sforza mentioned this transmission to be nongenetic, and happens in various ways “We will use the term cultural to apply to traits that are learned by any process of nongenetic transmission, whether by imprinting, conditioning, observation, imitation, or as a result of direct teaching. (Cavalli-Sforza et al, 1981, p. 7)

2.6 Psycholinguistic Views on Human Language Properties

Many researchers throughout history, aimed to specify and give concrete details about what language is as a psychological human phenomenon, this has led to the emergence of various theories regarding it, some with consensus, some without.

2.6.1 Chomsky's Views on Language

The American thinker and linguist, Noam Chomsky came up with a revolutionary theory on language; the Universal Grammar theory (UG). His ideas were a radical break to previous theories.

Chomsky's UG theory states a universality of logic in language grammar, as well as the interdependence of thought and language, just as he commented, "There are very deep and restrictive principles that determine the nature of human language and are rooted in the specific character of the human mind." (Chomsky, 1968, p. 90)

In Chomsky's view, UG does not state by any means the birth of humans speaking any specific language, but rather being hardwired with a mental template, he coined language acquisition device (LAD), helping to acquire a language; it is an innate component of the human mind, with deep biological under-pinnings. Chomsky, therefore, provided preceded views on the nature of language and mind; "He was probably the first to provide detailed arguments from the nature of language to the nature mind, rather than vice versa" (Smith & Wilson, 1979, p. 9)

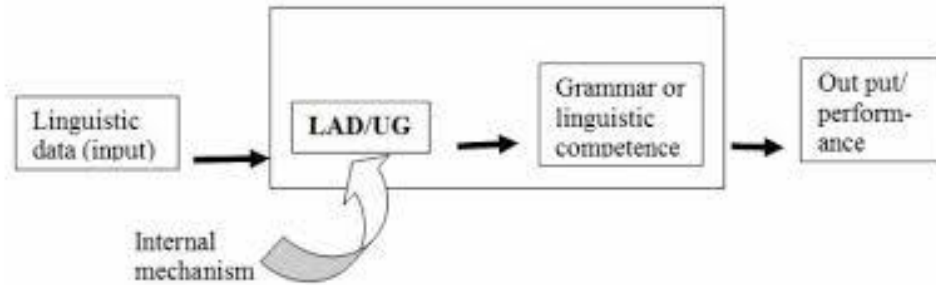


Figure 2.1 Universal Grammar’s position within Chomsky’s theory

For within his theory of UG, and the study of language and thought nature, Chomsky provided new ideas by introducing the dichotomy of “linguistic competence” and “linguistic performance”, in order to elucidate the relationship of the duality mind and language. Linguistic competence refers to an ideal grasp and understanding of the rules and construction of a given language, including the repertoire of the various sounds in the language, their combination, creation of sentences and the interpretation of a sentence. Linguistic performance, on the other hand, is the practical application of speech with the grammatical flaws and mistakes that exist among speakers, who understand each other despite grammatical flaws and different dialects. Chomsky’s theories were a valuable addition to the field of psycholinguistics, and his ideas continue to spark debates around the acquisition and use of language.

2.6.2 Pinker’s Mentalese

As a reaction to Chomsky’s views, and opposing the localization of the cognitive processes in one organ (LAD); “connectivism” emerged as a system of belief; that associations and representations are created in the learner’s brain through different external operations executed serially (Downes, 2012).

One of the most connectivism's famous theorists is Steven Pinker, the scholar who coined the term "mentalese", which is thinking given a shape through words stored in the brain (conceptualization), and for him in order to acquire a language, this mental language or language of thought is "universal and abstract" and it needs to be shaped or translated into words to be produced, as he illustrated that

Knowing a language, then, is knowing how to translate mentalese into strings of words and vice versa. People without a language would still have mentalese, and babies and many nonhuman animals presumably have simpler dialects. Indeed, if babies did not have a mentalese to translate to and from English, it is not clear how learning English could take place, or even what learning English would mean. (Pinker, 1994, p. 82)

Our brain is responsible of language processing; within it, there is internal which grammar is responsible of materializing the language before production, giving the internal language an accepted form to be understood by the listener, along with external grammar that shapes the speech using social supports.

2.6.3 Vygotsky on the Social Interaction Theory

"What a child can do with assistance today, he will be able to do by himself tomorrow." (Vygotsky, *Mind in Society*, 1978, p. 87)

To point out the shortcomings of the mentalist school of Chomsky and his followers, as well as the deficiencies in cognitive constructivism³⁸. Vygotsky "a

³⁸ A theoretical stream tracing back to the developmental psychologist Jean Piaget, with the basic that all knowledge is constructed based on personal experience

social constructivist³⁹ declared that if the learner got off on the wrong foot, he will for sure fail to develop and improve his cognition, in other words, social learning tends to precede any development.

The Social Interaction Theory (SIT) stresses on the fundamental role of social and cultural stimulation as a vigorous parameter in the development of cognition, including the faculty of language. Furthermore, mediation of a “more knowledgeable other” is an essential requirement, i.e. the process of learning includes the act of seeing/hearing (perception), i.e. ‘stimulus’, followed by the jointly doing act (cooperation) i.e. the mediator referred to as ‘x’, and finally dependently doing the act, i.e. ‘response’. (Ilhem Z. El Ouchdi, Meriem Baghoussi , 2019, p. 275)

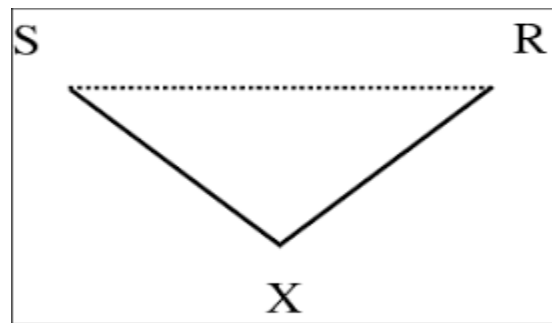


Figure 2.2 The Original Vygotsky’s Diagram of Social Mediation (1978:40)

As a solution, Vygotsky suggested the “zone of proximal development” (ZPD), the term referring to the fact that the learner needs assistance throughout his learning, and is defined as:

The distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem-

³⁹ A social constructivist’s beliefs are that all knowledge is a human construct, and all understanding is of social origin

solving under adult guidance, or in collaboration with more capable peers. (Vygotsky, 1978, p. 86)

Hence, ZPD is the gap that needs to be filled with effective instructions and emotional support to reach an appropriate efficient development. This gap will gradually fade, while the assistance fades and the private speech increases until the learner is ultimately independent, he will, then proceed to solve problems through receiving guidance from the teacher elaborating by hints, clues, real life examples, encouragement... The ZPD has become synonymous in the literature with the term “scaffolding”. However, it is important to note that Vygotsky never used this term in his writing, and it was introduced by Wood, Bruner and Ross (1976).

The result is the learner getting to develop his socialized speech and his cognitive skills (attention, memory, reasoning, language etc...) by being aware and conscious of his learning, and the way he is approaching it. The SIT has helped immensely the study of human behavior and cognitive processes development and answered to a lot of preceded ambiguity.

2.6.4 Neuroscientific Properties of Human Language and its Disorders

Many specialists such as Gardner (1969) and Presmark (1983) took on many experiments on chimpanzees, to compare the two process of language acquisition and if both animals and human have the same capacities when acquiring the language. In that event, it turned out that even though the animals could produce language (through body gestures or sounds), they still tended to generalize and use linguistic units out of their context, along with the fact that acquisition of the linguistic system features (grammar and morphology) stopped once reaching a certain age. Extrapolating that both the human language and the human physiological mechanisms (brain) are what make him genetically endowed.

Linguistics' disciplines that contribute to a better understanding of how the human mental faculties are indeed involved with language processing is "neurolinguistics", which is concerned with providing an explanation about how the brain is physically involved if not actually responsible of language processing within it, i.e. to analyze the language's constructed mental form, in addition to how the language is comprehended (through different exposures and interactions whether social, emotional or cultural ones).

In neurolinguistics, two complementary and chained activities are reckoned with, one paving the way for the other; the first one is speech production and the second is its comprehension. They were both deduced after two contributions had been made by P. Broca (1861) and C. Wernicke (1874) in the field of neuroscience, they both undertook experiments, realizing that injuries of the brain can be "selective" in their impact on language comprehension and production, two areas got displayed in "the left hemisphere" of the brain, called after each one of them. While Broca's area is responsible for articulating a coherent speech and then producing it, i.e. it's the 'home of grammar and meaning', Wernicke's area is the one accountable for the language comprehension. , due to Broca and Wernicke's efforts, mental functions related to language processing were concretely localized. As John Lyons (1982) clarifies that language is part of the process called "genetic lateralization", where each act is abided by one hemisphere of the human brain, (Language and Linguistics, 1981, p. 249).

As a conclusion, language is a complex phenomenon, which slightly got simplified scientifically in order to solve linguistic and cognitive issues and disorders like receptive (Wernicke) and expressive (Broca) aphasia⁴⁰.

⁴⁰ Aphasia is an impairment of language, affecting the production or comprehension of speech and the ability to read and write.

2.7 Schizophrenic Consciousness and its Effect on Language Use

SCZ is a mental illness, which falls under psychosis⁴¹ classification, having environmental and genetic as causes. SCZ displays many symptoms, which vary in scales, these symptoms are inability to understand reality, abnormal behaviour, disorganized thoughts, hence, a strange speech, as Mueser states:

The characteristic symptoms of schizophrenia involve dysfunctions in multiple cognitive and functional spheres that include perception, inferential thinking, language and communication, behavioral monitoring, affect, fluency and productivity of thought and speech, capacity to experience pleasure, decision making. (Mueser, 2008, p. 85)

SCZ manifests in many types according various symptoms displayed by the patient, which are fundamental for the diagnosis, as Bannister mentions, “We diagnose one person as schizophrenic he manifests characteristics A and B and diagnose a second person as schizophrenic because he manifests characteristics C, D and E.” (Bannister, 1968, p. 181).

The classification of SCZ by mental illness professionals is based on predominant symptoms, one model of classification is “DSM-IV” established by World Health Organization. The classification acknowledges five types of SCZ, which are the following, paranoid, catatonic, disorganized, cenesthopathic, and residual. Paranoid SCZ is characterized by presence of delusions and auditory hallucinations, whilst in catatonic SCZ, the patient exhibits either immobility, agitation or purposeless movements. Disorganized SCZ is characterized

⁴¹ A severe mental disorder in which thought and emotions are so impaired that contact is lost with external reality.

by disorganized behavior and speech and includes disturbance in emotional expression, hallucinations and delusions, in Cerebral SCZ on the other hand, the patient is subject to abnormal bodily sensations, and lastly, residual SCZ symptoms are a lack of interest in daily life, showing flat or blunted emotions, being unable to bathe, get dressed, or make food for one's self, and withdrawing from others.

A non-traditional perspective on SCZ has recently emerged, since there is a huge advancement in the field of neurology, the phenomenon is framed out of the box of mental illnesses; to be dealt with as a subject of ASC research, for example, Gray et al. in 1991, hypothesized that alterations in the initial stages of information processing allow items that normally remain unconscious to become conscious in patients, thus leading to abnormalities at the conscious level (The neuropsychology of schizophrenia, 1991). Moreover, people who have experienced psychedelics' experiences such as LSD⁴², i.e. altering the cognitive processes, describe their experiences of hallucinations, and delusions to be identical to mental illnesses, SCZ for instance.

Schizophrenic patients exhibit many defence mechanisms⁴³ as a result of ASC they experience, the theory of defence mechanisms was created by Anna Freud (1937), and it states that mechanisms are in the form of repression⁴⁴, projection⁴⁵, displacement⁴⁶, reaction formation⁴⁷ and denial⁴⁸.

⁴² Lysergic acid diethylamide is an hallucinogen

⁴³ Defense mechanisms imply the use of repression in protecting the ego or the self from psychic pain. It is an unconscious psychological mechanism that reduces anxiety arising from unacceptable or potentially harmful stimuli.

⁴⁴ Occurs when a threatening idea, thought or emotion enters consciousness.

⁴⁵ Happens when a person's own unacceptable and threatening feelings are repressed and attributed to someone else.

⁴⁶ When patients direct their emotions to things or animals and other people that are not the real object of their feelings.

All the previous stated contributing regarding Schizophrenic consciousness inevitably influences the language production; this consciousness is considered a vestige of evolution by Jaynes according to his BMT, as he mentions, “Being manipulated by others or by our voices in strange and frightening ways in a place we come to recognize as a hospital with a diagnosis we are told is schizophrenia. In reality, we have relapsed into the bicameral mind” (Jaynes, 1976, p. 405)

These scattered heard voices as auditory hallucinations, with no sense of the self, create some very bizarre language production to say the least. Schizophrenic people unusual speech witnesses a jump from one subject to another, neologism⁴⁹, no sense space/time notions, as well as poverty of speech; which means that a person lacks a normal ability to communicate.

Therefore, language production is a direct outcome of human consciousness, and any change in its state, SCZ for instance, seems to cause negative language production, since language is the reflection of our thoughts.

2.8 Conclusion

The chapter has dealt with the language faculty of humans; it unraveled its nature, hypothesizes about its emergence, alongside its unique properties, which contribute to make it an outstanding tool of communication compared to other existing species.

Afterwards, pioneering theories in psycholinguistics field were introduced, with the aim to clarify the link between the language faculty to human consciousness, followed by neuroscientific notions introduced in order to provide

⁴⁷ A feeling that produces unconscious anxiety is transformed to its opposite in consciousness.

⁴⁸ Occurs when people refuse to admit that something unpleasant is happening to them.

⁴⁹ The act of creating words with no meaning to a normal hearer, but meaningful to the producer.

insights regarding various biological processes contributing to language production, and how this faculty can be affected by consciousness anomalies, such in the case of schizophrenia, which is the subject of the research.

Chapter Three: Investigating Language Use in Schizophrenia

Investigating Language Use in Schizophrenia

3.1 Introduction.....

3.2 Research Methodology

 3.2.1 The Sample Population

 3.2.2 Research Instruments

 3.2.2.1 Interview Design

 3.2.2.2 Observation Process

 3.2.2.3 Method of Content Analysis

3.3 Data Analysis

 3.3.1 Semi-structured Interview Analysis.....

 3.3.2 Observation Analysis

 3.3.3 Appraisal of Content Analysis

3.4 Data Interpretation and Discussion of the Main Findings

3.5 Research Limitations

3.6 Perspectives and Suggestions.....

3.7 Conclusion

3.1 Introduction

Bluntly put, since language and consciousness are tightly related, as seen in previous theoretical chapters, the nature of this relation remains vague without questioning atypical and irregular cases, where both language and consciousness witness a certain ‘reciprocal’ distortion. Thus, the central focus of this chapter is undertaking a qualitative investigation of schizophrenia as an anomaly of consciousness as well as language.

Furthermore, this chapter aims at dissecting the linguistic features used in a schizophrenic language, while exploring the qualities of conscious states and cognitive processes in schizophrenia. To reach this aim, First, the process of this research is explained by describing the procedures of data collection, including who contributed in it, the instruments used, and the researchers’ analysis and own interpretation. Finally, a discussion of the results concludes the chapter, followed by suggestions, and limitations that impede the implications of the research findings.

3.2 Research Methodology

When approaching an academic research, a dictated set of steps and procedures are to be followed to ensure the validity of the research findings. Accordingly, research methodology is “a way to systematically solve the research problem...” (Kothari, 2004, p. 8), and hence, the researcher adopted the method of case study, which provides a detailed description and analysis of every aspect of

the studied subject, then generalizations and inferences are drawn, to generate knowledge and provide solutions for the research problem.

The researcher opted for an exploratory case study rather than a descriptive or an explanatory one. The descriptive case study identifies the characteristics of an issue and provides descriptions. While the explanatory case study focuses on the factors that cause a certain problem, without generating solutions. Unlike the exploratory case, study which is any complex case that can be explained through a social interaction theory, where the researcher and the participants communicate in order to solve a problem (R. Yin and G. Moor, 1987). Furthermore, one of the attributes of our case study is that it is “interpretive” rather than “evaluative”, for according to (J. McDonough et al, 1997) the first aims to interpret the data collected by developing conceptual categories, to confirm or reject the already-made hypotheses regarding them. As opposed to the evaluative case studies, where the researcher goes beyond the interpretation to add his/her subjective view on the phenomenon he/she studied.

Furthermore, to scrutinize the aspects surrounding the language use in SCZ, the qualitative research – associated with constructivist paradigm⁵⁰- is conducted based on the description of the phenomenon to be studied in greater levels of depth (SCZ), so that new and richer information are discovered in an objective, neutral, and autonomous setting. Especially since the researcher is not inclined towards any specific result, but is simply trying to extrapolate how language and consciousness function in schizophrenic cases, and determining the variables that may moderate a certain linguistic behaviour, likewise its pertinent conscious state.

⁵⁰ A model that attempts to approach the human behaviour to examine and discover a deeper nature to the human experience, by generating rich data in abundance without striving generalizability.

3.2.1 The Sample Population

Before choosing the appropriate instrument to collect data, the participants in this research paper must represent the sample population even though the task of the selection is not an easy one (L. Frey et al., 2000). The suitable strategy of sampling according to the nature and the purpose of this research follows an “info-rich” pattern, since the researcher’s purpose from the investigation is to provide qualified data matching the hypotheses put forward, hence focusing on specific participants that are either experiencing schizophrenia or witnessing it professionally, in order to be provided with realistic and valid information.

Since randomizing is impossible in this realm of research, the method applied is “non-probability” sampling which according to Dörnyei (2007) means that the individuals in the population are not given equal chances of being selected. This sampling is, then, used strategically to enable the results of this research to be generalizing, as one of the four types of this method -convenience sampling, purposive sampling, snowball sampling, quota sampling- is purposive sampling, or judgmental sampling, since it refers to selecting a sample that conforms to a certain criteria, which in our case is specific linguistic behaviour and atypical cognitive display in the case of schizophrenia.

To serve the purpose of this study, three professional clinical therapists, including a psychiatrist, a psychoanalyst and a psychologist, have been selected, after an inquiry of their exposure to schizophrenic patients. Along with the professionals, three patients having different stages and types of schizophrenia, ages, genders and social backgrounds were gathered and observed discreetly. The whole process took place in the Hospital psychiatry department of Tlemcen.

All in all, the aim out of selecting a sample of two categories was to allow the researcher, whose field of interest is psycholinguistics, to have a broad horizon on the phenomenon at hand by gathering information taking into account two perspectives, which though represented by a “non-homogeneous” small sample, they are still universal in terms of regarding the “illness” and in terms of “suffering” from its symptoms. Figure 3.1, presented below, shows the correlation of the sample with the research objectives.

| The Sample | description | Purposes |
|------------------------|---|---|
| Clinical therapists | <ul style="list-style-type: none"> • Psychologist | Differentiating between the different views, methods each one uses to deal with schizophrenia |
| | <ul style="list-style-type: none"> • Psychoanalyst | |
| | <ul style="list-style-type: none"> • Psychiatrist | |
| Schizophrenic Patients | - A 42 year old male who hears and interacts with voices. | <ul style="list-style-type: none"> - Deciphering the nature of the voices. - Approximately, finding the trigger to auditory hallucinations. |
| | - A 54 year old female with constant visual hallucinations. | <ul style="list-style-type: none"> - Conceptualizing the visual hallucinations. - correlating them with their psychological parallels |
| | - A 30 year old, detached from reality. | <ul style="list-style-type: none"> - Understanding the schizophrenic consciousness. |

Figure 3.1 Attributes of the Purposive Sampling

In general, the research calls for a low number of informants that exhibit the variables the researcher seeks to investigate, since these informants are representatives of the population. Consequently, this step determines the research questions that ensure appropriate selection of the data collection instruments, and later on, the techniques of data analysis.

3.2.2 Research Instruments

Any research tool used to collect data is referred to as the “backbone” to any study (Dorneyi, 2011). Thus, in order to ensure the quality and accuracy of the research, and attain reliable results from the respondents, certain tools are used to acquire information about and from the sample, while providing qualitative or quantitative data, or both. Quantitative data refers to numerical data and statistics, whilst qualitative data revolves around description of different aspects of the problematic.

Therefore, the way the researcher approached the phenomenon at hand is through rationalism, bias-free and open-ended techniques, all by staying aware of any potential sources of error. To do so, triangulation, or mixed methods are applied, i.e. comparing and corroborating different types of data to achieve validation in which the result of one method helps to give more information to the other method (Green et al, 1989, pp. 255-274). As a result, an interview is designed and directed to the three therapists, steered according to the researcher’s hypotheses, along with a carried out observation undertaken by the patients. Lastly, to enrich this work, an evaluation of our case study’s representation in the filmmaking industry is provided. As shown in the next segmented pyramid.

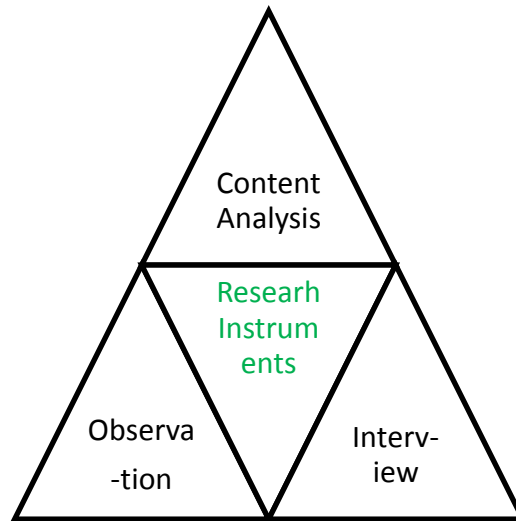


Figure 3.2 Data Collection Methods

All three methods are opted to collect qualitative data assisted with quantitative data to solve the mystery the researcher is dealing with, i.e. what the features of schizophrenic language and conscious processes are, how they differ according to certain factors that need to be explored, and why certain individuals tend to have the predisposition to schizophrenia.

3.2.2.1 Interview Design

Interviews were held using both French and Arabic, along with dialectal Arabic according to the preference of the interviewee, since the language does not affect the data needed for research aims, on the contrary, to ensure variety and include a better and a rich feedback. In addition to this, for the sake of validity, the interviewees were given total freedom to elaborate on common facts concerning the phenomenon by sharing their own opinions and personal experiences. Yet, the researcher is to steer the interview, so that the gathered data is of relevance to his the research hypotheses. Accordingly, the opted type of the interview is semi-structured one, where the majority of the questions were open-endedly developed

during the interview, following a flexible outline of what should be discussed. Furthermore, the choice of the questions was based on the research questions aiming at identifying the diverse aspects of SCZ as a phenomenon, including how the patients function cognitively and behave linguistically, along with the therapists’ own interpretation of the cases they have encountered.

To allow a consistent flow of objective point of views biased and leading questions were avoided during the process, to decrease subjectivity of the researcher, and to make the interviewee answer at ease. Central questions were posed to debrief the therapists about how schizophrenic language differs from a “typical” language, along with deciphering the irregular characteristics of schizophrenic consciousness encompassing the different cognitive functions, as it is clarified in the layout of the semi-structured interview in figure 3.3.

As a result, the interviews took form of a conversation, where both the researcher and the therapists discussed the subject in details. All done in favour of the research aims, by covering all the areas surrounding the phenomenon while constraining to the field of research. As drawbacks, the interview have taken more time compared to a questionnaire that could have been used, and though it may introduce subjectivity, hence gives unreliable information, it is still the perfect tool to collect quality to serve quantity.

| Central Question | Complementary questions | Elaborating Questions |
|--|---|---|
| How can you diagnose a patient with schizophrenia? | -Is diagnosing SCZ an easy task? - What are the symptoms | -Is there a common test used for schizophrenia diagnosis? -What are the illnesses that |

| | | |
|--|--|--|
| | that set SCZ apart? | may overlap with SCZ? -What is the percentage of SCZ among other mental illnesses? |
| What are the characteristics of schizophrenic consciousness? | <ul style="list-style-type: none"> - Do schizophrenic patients perceive a different reality than a regular person? - How do you evaluate a schizophrenic attention span? - How do you evaluate a schizophrenic memory span? - Can schizophrenic consciousness be altered to a regular one? | <ul style="list-style-type: none"> - If yes, does hypnosis help them get a grip of reality? - What are the factors that may cause schizophrenia? - What are the approaches to help a schizophrenic regain regular mental functions? |
| To what extent does schizophrenic language differs from a “typical” language ? | <ul style="list-style-type: none"> - How can you describe a schizophrenic speech? -According to your experience, do all schizophrenic patients have irregular speech patterns? | <ul style="list-style-type: none"> - Can you provide us with examples of schizophrenic speech? - What are the factors that may cause such language abnormalities? |

| | | |
|--|---|--|
| | - What do you think of brain activity in schizophrenia? | - If the brain activity is atypical, do you think that correlates to language abnormalities? |
|--|---|--|

Figure 3.3 the Layout of the Semi-structured Interview

3.2.2.2 Observation Process

Observation is a tool that helps gather rich empirical data about certain patterns of behaviour in a naturalistic setting, where all the aspects relevant to the phenomenon are displayed, recorded, or noted down by the researcher. It is, then, an instrument associated with qualitative exploratory research, and purposive sampling, which in our case is a selection of three schizophrenic patients with different symptoms, backgrounds and genders. All figured out before diving in the observation process, as the researcher collected general bio data -shown in Figure 3.1 Attributes of the Purposive Sampling- about each patient from their therapists that happened to be two of the previous interviewees. The reason behind the researcher approaching the therapists before undertaking the patients' observation, is to avoid any interaction with the schizophrenic individuals which may trigger aggressive behaviour.

Furthermore, despite the disadvantage of this homogeneous convenience sample⁵¹ in generalizability, it is deemed that:

Logic dictates that the more homogeneous a population,
the easier it is to generate a representative sample...by

⁵¹ Homogeneous convenience samples comprise a strategic selection of a group that shares specific diversity with the target population. Unlike conventional/heterogeneous convenience samples which focus on random diversity.

intentionally constraining the sampling frame to reduce the amount of sociodemographic heterogeneity, the chance of bias in sampling. (J. Jager et al, 2017, p. 7).

Hence the observed individuals, though, they differ in age, gender and past lifestyle, they still share common traits pertinent to the researcher's objective which may result in some bias data collection, i.e. specific piling of the patients' demonstration of anomalous schizophrenic language and awareness, which after analyzed, the findings are to be narrowed but clear to be generalized to all cases of schizophrenia.

The observation protocol was as follow, the researcher opted for the non-participant/ covert type to meet authenticity of the collected data. According to Liu et al, (2010), this type does not manipulate the demeanor of the subject, hence, generates effective data about the patients' authentic behaviour, despite being considered unethical for neglecting the informants' consent. For this reason, the researcher chose not to tape-record nor video-record the subject, not to violate their privacy, but instead an already-designed check list and note taking were sufficient, the former was created on the basis of the data collected from the previous interviews where therapists gave their point of views on the experiences they had with schizophrenic patients.

Moreover, to smooth the observation process, the researcher inserted himself in the corner of the room as an observer therapist with the actual therapist and a patient, to avoid any agitation from the part of the patient. Consequently, three observations were held, where the conversation between the therapist and the patient was encoded into notes and checking previously given-answers. As an outcome, this observation provided information about SCZ in terms of:

- ✓ The abnormalities of non-verbal behaviour.
- ✓ Characteristics of linguistic behaviour.
- ✓ The properties of proceeding cognitive processes.
- ✓ The nature of the case in relation to the individual factors.

3.2.2.3 Method of Content Analysis

The researcher's self-reflection is an essential part of qualitative research whatever chosen qualitative method (Bernard, 1995, p. 236), hence, engaging in the data collection process is not the only approach to study a problematic and solve it objectively. To be specific, content analysis is one method to take into consideration, so that reliable results are established. Krippendorff (2004, p. 18) defines this method of inquiry as “a research technique for making replicable and valid inferences from texts (or other meaningful matter [documentaries, movies, works of art, TV talks...]) to the contexts of their use”. In other words, any material related to the subject matter, and can put the problematic into context, can be analyzed to generate a set of findings by one researcher, so that another researcher with a different standpoint than the first one, attains the same findings from the same content analysis; “replicability” is, then, a hallmark of content analysis.

Though so many media reviews and cinematic adaptations including, for instance, the series *Legion* (2017)⁵², *Maniac* (2018)⁵³, *Westworld* (2017)⁵⁴, along

⁵² *Legion*: a fox' series handling David's journey to recovery from schizophrenia, yet as a paradox the show depicts the disorder of multiple personality disorder/ split when the character's mind is fragmented to dozens of personalities, each with a unique mutant ability.

⁵³ *Maniac*: a series exploring Owen's paranoid schizophrenia, who tries to grasp the real world, yet is constantly trapped in his own world of delusions and hallucinations, believing that the whole world is watching and recording him.

⁵⁴ *Westworld*: a show about characters 'hosts' that are programmed by a 'creator' named Arnold through 'voices' in their heads to stimulate human consciousness. Arnold's goal is for the 'hosts'

with the famous movie *A Beautiful Mind* (2001)⁵⁵, tend to dramatize and use creativity to capture the audience, they still cover so many aspects of SCZ, evincing in various scenes what is like to be schizophrenic. The researcher decided to review the movie *The Soloist* (2009)⁵⁶, for it is undoubtedly the most explicit in its narration, portraying the intricacies of SCZ in the past and present life of a homeless prodigy musician called Nathaniel Ayers. In so many scenes, signs of SCZ are interspersed going back and forth between Nathaniel's past and present life.

3.3 Data Analysis

As aforementioned, a triangulation of research methods was applied to gather both qualitative and quantitative data to adequately investigate our case study, and thus to ensure the reliability and exactness of the research results.

The researcher's priority, though, is to collect qualitative data over quantitative data. While quantitative data reveals simple linear relationships between discrete variables, by proving a numerical image of the effects upon the "impaired" population. Qualitative techniques, on the other hand, generate data that is richer and more insightful into underlying different features and patterns within the phenomenon of SCZ, such information can provide a depth of understanding of why certain individuals experience a specific language change and a given consciousness abnormality instead of another. Additionally, Opting for

to develop their own independent mind rather than relying on their programming commands. The show is a demonstration of Julian Jaynes' (1976) "Bicameral Mind Theory".

⁵⁵ *A Beautiful Mind*: a movie inspired by the biographical novel "A Beautiful Mind" by Sylvia Nasar about the Nobel prize-winning mathematician John Nash who managed to solve math's biggest puzzles while dealing with debilitating paranoid schizophrenia.

⁵⁶ An adaptation of the novel "The Soloist : A Lost Dream, An Unlikely Friendship, And The Redemptive Power of Music" (Steve Lopez: 2008).

the nature of qualitative research designs (exploratory case study) means that some useful data is always generated, whereas an unproved hypothesis in a quantitative experiment can mean that the researcher's efforts and time had been wasted.

Having that stated, the focus on gathering qualitative data did not mean the collection of quantitative data is less significant. In fact, the process of data collection was done non-sequentially in terms of data's nature, i.e. each instrument was destined to gather both qualitative and quantitative data, as it is shown in analyzing these data, both quantitatively reckoning on providing statistics, and displaying them in tables, charts, and graphs, and qualitatively by summarizing the obtained content of each used method. To say the least, the analysis of each research instrument was done separately.

3.3.1 Semi-structured Interview Analysis

During the process of the "semi-structured focused" interviews, the three therapists' (psychologist, psychoanalyst, psychiatrist) collaboration helped the researcher understand the nature of schizophrenic language and consciousness. Furthermore, after gathering the correspondents' opinions and elaborated answers and "in depth accounts of their individual experiences" (Cousin, 2009, p. 71), the data was "coded" or selected, classified, and organized into sections, transforming what was shared in the conversation into a summarizing text comprised of segments akin to the merit of the content gathered from the interviewees.

- [The Approach to the Diagnosis of Schizophrenia](#)

When it comes to diagnosing schizophrenia, few symptoms were taken into account, without considering the specialty of the three therapists. The forthcoming part is about how they all, commonly, agreed on the way of recognizing traits of

schizophrenia. The three of them deemed that it is not an easy task to differentiate between other psychotic disorders and different stages and types of SCZ; since they all form part of the psychosis illnesses’ spectrum. In their lines of thoughts, they pointed out that the first step when encountering a patient, the therapist must recognize the difference lying between neurosis and psychosis, and they continued to state their opinions on the matter, which is summarized by the researcher in the figure 3.4 below.

| Neurosis | Psychosis |
|--|--|
| <ul style="list-style-type: none"> - Abnormal in quantity. - Awareness of the abnormality is present. - In contact with reality. - Insight is present. - Cognitively intact. - Slight change in personality. - Coherent language. - Episodic social dysfunction. | <ul style="list-style-type: none"> - Abnormal in quality. - Denial of any atypical state. - Delusions, paranoia, and Reality impairment. - Insight is distorted, and may be lost. - Degraded cognitive processes. - Personality dissociation. - Disorganized discourse. - Failure of social functioning. |

Figure 3.4 Symptoms of Neurosis versus Symptoms of Psychosis

To make it clear, an anxious or traumatized patient, for example, has higher frequency in brain activities, which would result in over dramatization of his own experiences, while preserving touch with the actual surrounding, and realizing he/she has unusual characteristics compared to others. Whereas, a psychotic patient

with SCZ, for instance, has altered states of perception, i.e. facing hallucinations and hearing voices, hence his experience of the real world is distorted. As a result, the patient undergoes detachment from both reality and the self, without the capacity to rationalize what they perceive as well as their thoughts, and unable to put them into a meaningful speech. Finally yet importantly, the ultimate hallmark of a schizophrenic patient is the constant and firm denial that he/she has any abnormal behaviour. All in all, Mr. S. Elouchdi (psychologist), Dr. M. Benmokhtar (psychoanalyst), and Dr. F. Benyettou (psychiatrist) confirmed that throughout their studies and carriers, their diagnoses of different types of schizophrenia were based on studying the different editions of ‘the Diagnostic and Statistical Manual of Mental Disorders’ (DSM). Moreover, when asked to give an approximate number to the different cases of schizophrenia in relation to other psychotic illnesses, the three of them stated that it is between 60%- 70%. However, it may go hand in hand with bipolar personality, as shown in a 2018 research study (A.G. Canales et al, 2018)

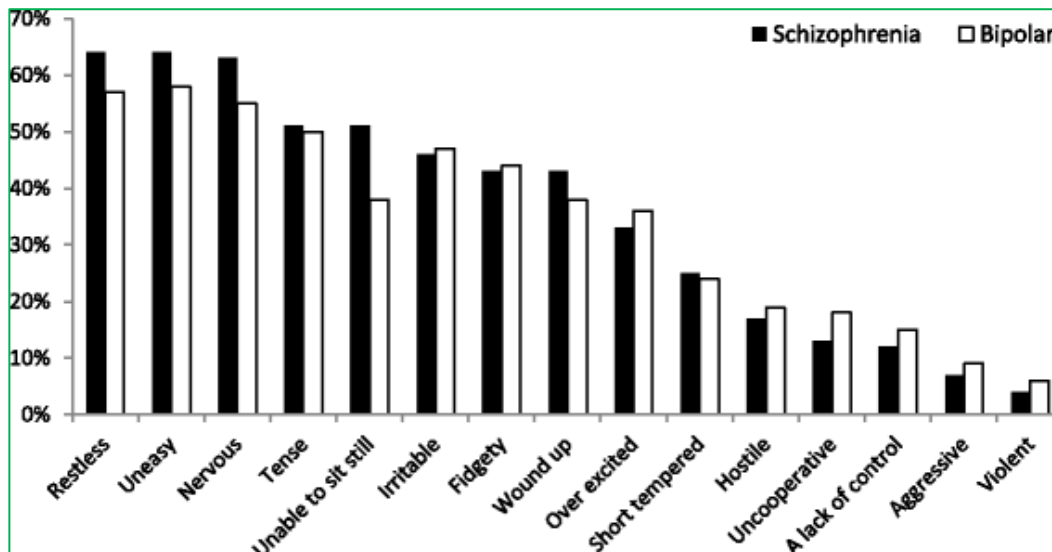


Figure 3.5 Symptoms Experienced in Schizophrenia & Bipolar Disorder (2018)

- [Consciousness Description in Schizophrenia](#)

During the three separate interviews, when the correspondents first heard the word consciousness in relation to SCZ, they directly mentioned the notion “ASC” or “mind alteration” – defined in 2.7 Schizophrenic consciousness and its effect on language use– which in their own words is a multidimensional phenomenon, where all cognitive functions are failing to perceive and interpret a stimulus.

Dr. Benmokhtar, the psychoanalyst, commented that these deviations in the patients’ mental processes are “nuanced” by the different stages or types of SCZ and its effect on each individual exclusively. He demonstrated that throughout his practice, each individual displayed a certain dysfunction in terms of attention, memory, perception, thinking...etc. In the following table, the properties of some schizophrenic mental dysfunctions are elucidated:

| | Paranoid SCZ | Disorganized SCZ | Catatonic SCZ | Cenesthopathic SCZ | Residual SCZ |
|------------------|--|--|--|---|---------------------|
| Attention | Avoiding eye contact. And having delusional vision. | Triggered by different stimulus simultaneously. | Fixed on one object while having a tunnel vision. | Oversensitivity and overreaction to certain stimuli. | Average |
| Memory | Very good memory, but the memories are falsified. | Creating inexistent memories and getting emotional about | Average memory, showing no signs of distortion, it | Very strong memory, it deteriorates by time when untreated. | Average |

| | | | | | |
|-------------------|--|--|--|--|---|
| | | them. Though personal significant memories are constantly retrieved. | may be increased for the purpose of imitating others. | | |
| Perception | Distorted perception due to persecution. | Misperception of meaning and situations. | Loss of awareness; absence of motor-sensory input. | Delusional somatosensory beliefs are prominent. | Episodic agitation and mild loss of awareness in public places. |
| Thinking | Suspicious emotions of superiority overrule reasoning. | Incoherent flow of thoughts. Unstable sense of one-ness. | Illogical beliefs as the cause of their motor behaviour. | Unreasonable fears and overdramatized conceptualization. | Reasoning of an average person. |

Figure 3.6 Description of Mental Processes in Schizophrenia

Each type of schizophrenia manifests differently in each individual, causing an exhibition of abnormal internal processing of the surrounding, as well as behaving accordingly to the distorted interpretations, though what is agreed upon by all therapists is that all schizophrenic patients, commonly, have their own version of reality; whether they are extremely conscious in certain cases where delirium and persecution are prevalent (paranoid SCZ, and sometimes disorganized SCZ), or poorly aware of the surrounding (catatonic SCZ and residual SCZ), still the common trait of their consciousness is its alteration and deviation from what is real, including the place, time and identity.

According to the psychologist, the new diverging awareness is a form of defence mechanism to:

- ✓ Cope with a traumatizing event in past life.
- ✓ Obliterate a past disappointment.
- ✓ Reject the current life the patient is enduring.

Although psychoanalyst endorsed the psychologist's social and emotional reasons to alter one's consciousness, he along with the psychiatrist added, explicitly, that schizophrenia is probably induced by unbalanced brain substances, mainly "dopamine" as declared by National Institute of Mental Health, as well as the contributing genetic factor, crutching on how exploring the patient's psychological state through therapy is not enough to help recover his consciousness, but rather putting him under treatment for at least a year to change his brain chemistry, backed up with the results of a study done in 1968.

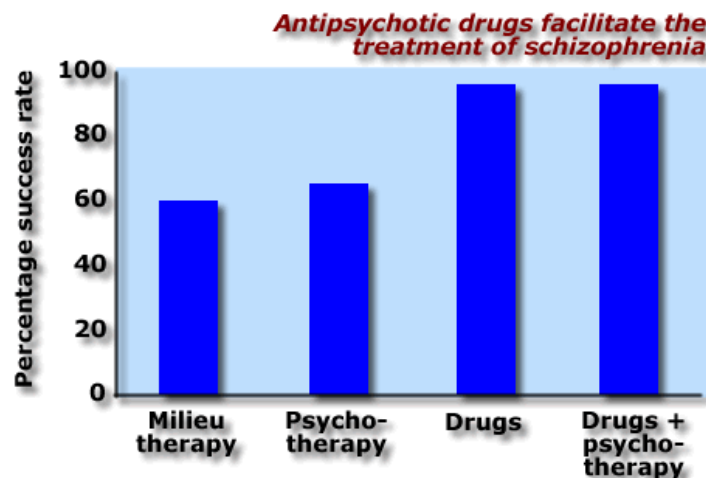


Figure 3.7 Paul Kenyon's (1968) Drug's Trial Success

Yet, the three therapist commented that it is crystal clear if the drugs were not accompanied by therapy sessions, family and friends' support, as well as

undergoing social interaction, an inevitable relapse into the ASC is bound to happen, as it is estimated in the next graph.



Figure 3.8 Hogarty et al's (1986) Drug's Trial Failure

Last but not least, the therapists were asked if among therapy sessions, hypnosis was helpful to reach out to the patients, whom when asked about their past life, could not answer rationally or even remember who they actually were in some cases. To the researcher's surprise, hypnosis was never used to diagnose or help the patient recover right state of mind, for hypnosis is a technique used to bring out the hidden unconscious in patients, which in the case of schizophrenic patients is displayed by the unusual perception and behaviour or the manifested "uncommon unconscious", alongside defence mechanisms; a clear indicator to the unconscious processing. Which according to the therapists explain the high percentage (approximately 80%) of visual and auditory hallucinations that people with common unconscious do not experience.

| Altered reality in schizophrenia | Frequency of symptoms in schizophrenic patients(%) |
|-----------------------------------|--|
| Lack of insight | 97 |
| Auditory or visual hallucinations | 75 |
| flatness to stimuli | 66 |

Figure 3.9 Altered Reality Symptoms in Schizophrenia (WHO, 1973)

The formal percentages supporting the therapists enlightened the researcher about how altered perception, distorted thinking, hence interpretation, as well as inappropriate response to schizophrenic reality are the most conquering symptoms amongst the other mild ones. Thus, the researcher can, utterly report that the higher inclinations to schizophrenic consciousness is mutating its natural state according to each patient's choice of defense mechanism. Hence, he either chooses to obey and go along the unnatural voices and act accordingly; which our therapists referred to as "the influence symptom".

In a nutshell, what the researcher realized after the interviews is that the psychologist along with the psychoanalyst - most of the time - preferred counseling, listening to the patients and identifying their triggers, to help them develop ways to recognize and handle their behaviors and thoughts, and improve how their control over the delusions and seek to relate to others. All done through "cognitive behavioral therapy", where the patients learn to test the reality of their thoughts and better manage the symptoms.

On the other hand, our correspondent psychiatrist stated overtly that SCZ is only treated with the right medicine and treatment, about 1/4 of the patients will recover completely. While 2/4 see some improvement in their symptoms, and continue to live as functional members of society. Though as paradoxical outcome of the treatment, the recovering patient may undergo severe depression when he gets conscious of his mental illness.

- [The properties of language use in schizophrenia](#)

When asked about any specific traits characterizing the language used by schizophrenic patients, the next elaborated descriptions were given:

According to the psychoanalyst, all schizophrenic patients exhibit disorganized speech, if not all the time, then at least 80% of the time. Along the use of mixed lexis, frequent derailment and incoherence in the flow of ideas is displayed as well. The next example was given by the psychologist in the dialectal form of Arabic; it was then, translated to English.

E.g. -The psychologist asked the patient what he had for dinner last night. The patient directly replied in dialectal Arabic:

/ rani nakul lbereḥ ki nəmʃiw ʕənd Xti mha klet zu dərərḥz fəsXana ntəy əsef ntəy əlyem lmezi ki ken rasi jəwzaʕni naʃrəb əlma w gʕət fəlkursi/

- I am eating yesterday, when we go visit my sister, her mother ate an orange juice in the upcoming warm summer when my head hurt, I drink water and set in the chair.

What is extrapolated is the patients' tendency to jump from past to present to future tenses when expressing his thoughts, all while being in different places

simultaneously, or being in unreasonable places irrelevant to the context used. In addition to this time and space unawareness, jumping from one thematic idea to another, without a relevant comprehensive link between them seems to characterize the schizophrenic discourse, this is termed what all of the three of therapists referred to as “saute du coq à l'âne”⁵⁷. On the other hand, some patients would approach their poverty of speech or as the psychoanalyst referred to as “alogia”⁵⁸. Thus, schizophrenic patients tend to crutch on another speech abnormality which occurs at the level of single words; creating “neologisms” or non-words, that suit their way of comprehending, for instance, TV is referred to as the shower [el wərrei], pen is indicated as the writer [el kettab]. Plus, in some cases, some individuals may use a common word with idiosyncratic features, such as yellow is modulated to solar [ʃəmsi:] or soap to skater [zəlleg].

Moreover, “loosening of associations” is demonstrated when a schizophrenic is conversing uses associated words within discourse that are unrelated to the overall meaning of sentence or discourse, e.g. “I am 20 years old, 2010 my grandpa died in his bed, when the cat is playing with the pillow on the bed, I sleep a lot till the morning, and then the sun is bright, light is so blinding and I hate light when I wake up and wash my face”. On the other hand, the psychiatrist pointed out that one of the most common linguistic behaviour of schizophrenic patients is “word salad” or schizophasia⁵⁹, where uttered words are not related not in meaning, not in grammar, and make no sense to the speaker or the hearer, e.g.

⁵⁷ When talking, the person may jump from subject to subject, hence may have trouble communicating in a way that is clear and logical.

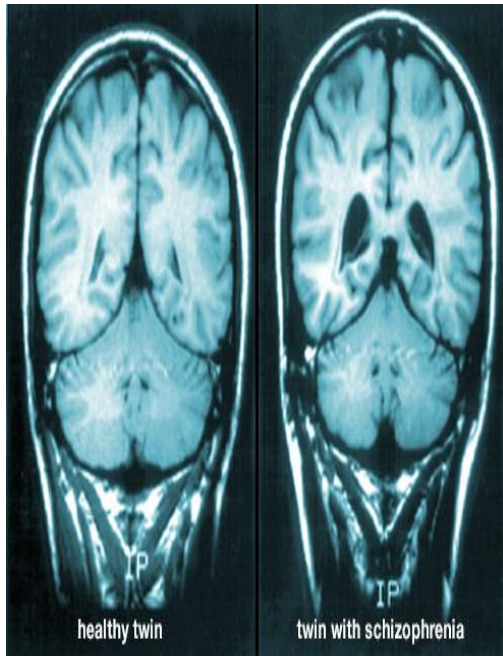
⁵⁸ The lack of additional words to express one's thought in normal speech, a common symptom of schizophrenia.

⁵⁹ A nonsensical assemblage of words.

“When you hate dogs, you go buy fans to make the weather cool, then I will join the teachers to give lessons about how to read, uh, and avoid drugs”

Substantially, all the therapists ushered the researcher to how schizophrenia is a “spatiotemporal disorder” as the brain’s physiological spatiotemporal activity is messed up, unlike the anatomical structure of a schizophrenic brain which is mostly identical to that of a “normal” brain, where an MRI⁶⁰ shows that:

⁶⁰ Magnetic resonance imaging.



1- Parts in the brain ‘ventricles’⁶¹ were larger, where dopamine activity is increased, the latter is linked to auditory hallucinations and delusions

Figure 3.10 Ventricles’ Size in Schizophrenia



2 - Other parts of the brain that deal with auditory perception, processing semantics, and memory, known as temporal lobe⁶² had less brain activity.

Figure 3.11 Temporal Lobe’s Activity in Schizophrenia

⁶¹ The brain has four connected ventricles, they contain cerebrospinal fluid.

⁶² Check figure 728 from Gray's Anatomy.

In sum, hearing voices that comment on the person's behavior or thoughts, mostly threatening insults (paranoia), or warning statements is a symptom that corresponds to figure 3.10. While, isolating one's self and lacking insight on the surrounding as well as one's own memories and identity coincides with the barely existent neural activity of the temporal lobe as shown in figure 3.11. Generally speaking, the researcher was able to stratify the language abnormalities in terms of production as well as perception and comprehension.

3.3.2 Observation Analysis

The individuals that were subject to the researcher's observation, belonged to different age ranges, and genders, to analyze the factors contributing to specific symptoms and stages of SCZ. As it is shown below, the three patients demonstrated polarizing symptoms of schizophrenia, in the sense that each patient's verbal and non-verbal behaviour is described independently to explore the dialectics of this mental illness.

| The Patient | Exhibited Behaviour | Detection of Schizophrenic Symptoms |
|---|--|---|
| <p>1: A 42 year old male named "Walid". Experienced child abuse at the hand of his stepfather.</p> | <p>-Speaking to an inner child's voice: "it is okay son, cry no, i break our chocolate tomorrow if you behave yourself Walid."</p> <p>-showing angry behaviour by slapping</p> | <p>- Hearing and interacting with auditory delusions.</p> <p>- disorganized speech.</p> <p>-influence symptom; triggered by the voices.</p> |

| | | |
|---|---|--|
| | <p>the table and threatening the voice to shut up, and then starts crying.</p> | |
| <p>2: A 54 year old female, had a miscarriage, and lost her son at the age of 2 years old.</p> | <p>-Acting as if she is knitting, counting stitches out loud (5, 6, 7...) and completely focused on making a “baby cardigan”, as she referred to. While doing so, she constantly checks an inexistent TV, and ignores whatever the therapist is saying.</p> | <p>-constant visual hallucinations - ignoring social cues and stimuli. -Failing social interaction. -total reality denial.</p> |
| <p>3: A 30 year old male, previously described to be extremely religious.</p> | <p>-Keeps saying that the “djinn Ferness” took his nose along with his left hand, he completely ignores the existence of his hand and nose when the therapist pointed at them. -when given a mirror he starts screaming that there is a hole rather than</p> | <p>-reality impairment. -dissociative personality. -Paranoia</p> |

| | | |
|--|--|--|
| | <p>a nose. Then, he perfectly started reciting verses of Quran.</p> <p>- When the researcher was taking notes, the patient was irritated, and kept looking at the researcher's notebook.</p> | |
|--|--|--|

Based on the bio-data provided by the therapists, it is lucid that each patient’s past contributed in the development of an ASC. The first patient, projects past traumatic memories that he seemed to be reliving most of the time by speaking incoherently of them. Meanwhile, the second patient is a woman experiencing grief and denial of the death of her two children, as a reaction she wanders in her unconscious mind which manifests in reliving times where she used to knit and watch TV. Lastly, the third patient comes from a very conservative religious family, he started experiencing paranoia and persecutions at the age of 27, which later on developed to identity dissociation and reality misperception, his case is an epitome of placebo effect⁶³

In order to further clarify what the researcher’s purpose was to observe in these three cases, a diagram of different criteria in relation to schizophrenia is annexed:

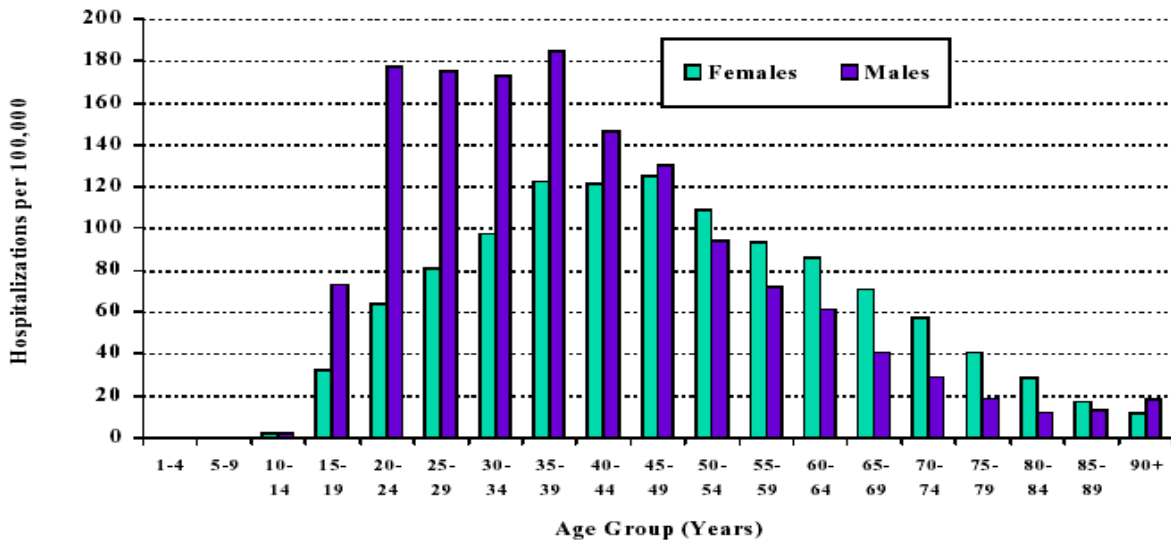


Figure 3.12 Schizophrenia, Gender and Age (Canadian Institute for Health Information, 1999)

⁶³ The drastic change is a result of the person’s blind faith in the preconceptions he/ she embraced for a long time.

Analytically, a relationship between the illness and changes occurring during adolescence is identified. Women by 40 have a high risk probably due to menopausal peak. On the other hand, men's peaks are in late 20s until late 30s presumably due to social pressure. Finally, late life schizophrenia is rare due to less psychological and social pressure.

3.3.3 Appraisal of Content Analysis

As stated previously, one of the research instruments used to collect qualitative data is the content analysis method. A strategically chosen movie adaptation entitled "The Soloist" (2009) is to be scrutinized in order to explore the case of SCZ. The movie is about a multi-instrumentalist musician called Nathaniel who is struggling to adapt within society, while denying he has SCZ, Mr. Lopez on the other hand is a journalist trying to help Nathaniel come into terms with his illness, for he sees so much potential in his musical skills. The researcher is to investigate traits of schizophrenic character including any unusual perception, language production, and behaviour throughout every scene in the movie.

Starting with current events:

- 8.47- 9.46: Nathaniel ignores the addresser, and jumps from one topic to another, while linking the outside words (of Mr., Lopez) with his stream of disorganized thoughts.

Then, he proceeds to observe the outside world (Beethoven statue). And eventually connects with the addresser, while getting self-conscious about his "unusual" choice of clothing, to say the least.

- 17.00: A complete loss of awareness of his surrounding is displayed, then mumbling about Beethoven brings him back to conversation with his addresser. Whilst standing next to Mr. Lopez, and observing a plane in the sky, he inquires “are you flying that plane?”
- 19.25: Nathaniel speaks of his dead mother in a blank stare ‘he shows no affection’.

The narrative was displaced into his childhood

- 21.54: He started developing a compulsive preoccupation with Beethoven, “I’m crazy about Beethoven”.
- 24.40: Experiencing visual hallucination of a burned car. (he lived in the ghetto, so the car scene could be real, though his perception of the care on fire moving is far from reality)
- 25.20: started being consumed in the music, while isolating himself in the basement.
- 27.10: feeling the pressure of his mother’s statement “the whole world waiting for you”. He, later on, keeps hearing notes, mumbling them and playing on strings of Cello he sees on his arm.

Going back to the present time

- 29.12: he almost get hit by a car while cleaning the tunnel, and shouting that the drivers show “disrespect to Beethoven”, he ignores the passing cars, but pays clear attention the cigarette’s bud, that he fetches compulsively.
- 30.19: he is totally convinced that they smoke cigarettes “to torment” him.

- 31:20: He uses a strange choice of words on how to take care of the Cello bow, is just like “feeding a parroquet”, and how rozelle is like prisoners to the blues” (cops).
- 33:05 while playing, he hears his music as part of a symphony while seeing pigeons fly following the rhythm of the music he hears.

The narrative takes us one more time to Nathaniel’s teenage hood

- 40:30: When we witness Nathaniel’s weird behaviour; mouthing the music, speaking to himself when in company
- 40:48: a turning point. When he experienced the illusion that he is alone in the –actually crowded- theater while hearing his name being repeated by different male and female voices.
- 45:16: he recognized his unusual perception, when having trouble "differentiating" and keeping things "separated".
- 45:45: the voices in his head became consistent; "I will protect you from the pain, from their eyes and ears, they can hear your thoughts Nathaniel"

Jumping back to the present

- 46:20: The outer world’s sounds, along with music are distorted. He has trouble focusing his vision, blinding lights, voices: "run away, you should hide. Whiteness, you will never be like Beethoven. "
- 51:09: he speaks of witnessing a beating and an overdose of someone with no sympathy.
- 51:19: "I used to sleep on Wallstreet but it was too dirty", he gave as an answer to "is this where u sleep?"

- 51.40: Nathaniel's choice of words became sophisticated all of a sudden, thanking Mr. Lopez for landing him a hand. He, then, shows his awareness of his vision for the future, that he and all humans will die, just like Beethoven, and his purpose is to honor his parents and just do music. Moreover, he inquired about Mr. Lopez carrier and passions.
- 52.45 Nathaniel exhibits a change in his apathy, he speaks of how he imagines that Beethoven and Mozart can be just as hungry as he is, and how he wishes safety and peace for the people around, for all humans deserves so.
- 56.07: He is dressed in weird clothing; wearing a ninja mask, yet when invited to a social gathering, he is aware that he would "cause a scene"; that he would "stick out".
- 1.00.00: While attending a musical performance, he shuts down from the world and continues to perceive music as colours, while he is in total darkness. Each colour represents an instrument. He, eventually, opens his eyes to say that "Beethoven is in the room".
- 1.16.26: He announces that his God is Mr. Lopez.
- 1.24.30: When playing the Cello, he hears a female's voice repeating "I am all there is", his own voice warning him to run from the room, and Mr. Lopez' voice assuring him that "everything is fine continue to play".
- 1.26: He, then, transcends to the past when he believed that his sister was trying to poison him, while listening to the voices warning him when he was playing the Cello. After that, in present he links the Cello teacher with his sister, hence he attacks him, and runs away from the theater just like he ran away from home because it wasn't "safe" anymore.

- 1.32.20: Nathaniel expresses that the body can only take so much, that he is no longer young. Reflecting his awareness of his age and physical health.
- 1.34. 30: Is the scene where his denial of his schizophrenic mind is displayed by aggressive behaviour, and over-emotional, threatening Mr. Lopez' life.
- 1.42: Nathaniel is having a conversation with himself about how all people are disguised in masks. But once his sister comes to sit next to him, he acknowledges the good time they spent together in the past.
- 1.44: Nathaniel is shown to show guilt and regret of the way he treated Mr. Lopez aggressively, he proceeds by apologizing for his behaviour.
- The movie ends with Mr. Lopez, retrospectively, stating that “Friendship and believing in someone can improve brain chemistry and the person’s functioning”.

To a great significant extent, signs of Nathaniel’s misconceptions and impaired perception of reality are scattered throughout the movie, he has persecuted thoughts of his surrounding, as well as re-occurring visual and auditory hallucinations, along with delirium of human being his own God. In addition, his showing no affection and denial of any abnormality is obvious throughout the movie.

As for his language, a manifestation of disorganized speech and word salad prevails over rational use of words. Many neologisms were idiosyncratically adapted by Nathaniel, for instance the pre-mentioned example “Wallstreet”, where he used a common word to and loosely associated it to the context. In other respects, the voices constantly surface when he feels under pressure; they are statements, either instructing him to constantly escape and save himself, or demeaning his worth. Strategically demonstrated throughout many scenes,

Nathaniel's altered state of consciousness vanishes into normal reality grasp and even prudence whenever seeing/ thinking of Beethoven. Not only that, but even Talking of Beethoven and including him in his flow of ideas, makes his speech less disorganized and more comprehensive.

3.4 Data Interpretation and Discussion of the Main Findings

All qualitative research deals with interpretation, that differs in depth and conceptualization, considering the data analysis process, and the continuum of the researcher's/participants' objectivity (Silverman, 2000). Tacitly relevant to our study, where the researcher is bound to generate new findings about the nature of the correlations between language and consciousness, to what extent they influence one another, and how these processes are altered due to certain factors. To reach the research aims, both qualitative and quantitative data analyses were applied to the results obtained from interviews with clinical therapists, and from observations of patients suffering from an ASC characterizing SCZ. Moreover, the content analysis method was resorted to in order to fructify clear results that allowed the researcher to confirm or reject the research hypotheses.

Concerning the researcher's first hypothesis indicating that possessing the faculty of language is not sufficient to have a normal subjective awareness, all aspects of schizophrenic language that the researcher has dealt with reflects a normal linguistic competence on behalf of the sample of patients, it is their performance or their communicative skills that show signs of degradation, due to their ASC, i.e. cognitive processes defect. In other words, the researcher's attempt is to approach individuals with abnormal states of consciousness through their language use, which gives access to information and inferential reasoning for action. Thus, linguistic features do correspond to the speaker's consciousness in a

sense that any linguistic behaviour is necessary to access one's consciousness, but does not necessarily mirror the normal or ASC. On account of the results procured from interviews and observation, it is obvious that the reportability of our mental states depends on linguistic capacities, when this reportability encompasses language as well as mental functions' output, i.e. memory, attention, perception, thinking...etc. succinctly, the findings confirm the researcher's first hypothesis.

When inspecting the results, it is undoubtedly the unusual brain neural networks' activity – can be switched back to standard with medication- that determines the ASC experienced by schizophrenic patients, this activity transforms, inducing the human senses and mental processes to distort the actual impression of reality within the patient's brain (consciousness is the brain's imperfect image of reality), this latter is a form of denial or defense mechanism to cope with childhood trauma, childbirth trauma, a loved one loss or mental agitation; as demonstrated by the three opted schizophrenic patients accordingly. Depending on the age, gender, personal and cultural background of the person with an ASC, anomalous behaviours as well as linguistic deviations, often, occur reflecting the person's unique unconscious awareness of the matter he/she cannot bear dealing with. And as a result of his/her unconscious mind resurfacing, his perception, social actions and speech will derail on what is commonly standard, hence, auditory (internal voices) and visual hallucinations are perceived, which the patient will or will not act accordingly, yet in both in cases he/she gets consumed by the voices, which distracts his/her attention and interaction with the external world. Furthermore, the speaker will tend to slip off track by expressing his thought obliquely and irrationally.

Consistent with the second hypothesis, the information collected from the therapists and from observing SCZ up-close, as well as the movie analysis

promote that this mental disorder is but a deviation from the normal experience of human consciousness. Whether this deviation is the next step in human consciousness evolution as speculated by the researcher, or a mere vestige traced backwards in the evolution of consciousness - as Julian Jaynes (1976) claims in his BMT - is still a puzzling matter. Simply put, the fact that this illness has been having a high prevalence in the past few centuries, which can be linked to the development of lifestyle, hence human language, creativity and expression, along with the disorder's positive selection⁶⁴, i.e. one can reckon schizophrenics as the price paid by humans to have mutated cognitive and language skills, that when investigated separately, might have positive effect on the evolution of human consciousness, but as a bundle of altered mental processes, it sets the person into declination of conscious awareness of space, time, personal memories and thought expression.

To demonstrate, in certain cases where paranoia overwhelms over the other schizophrenic symptoms, the person's attention span is at its peak; noticing the smallest details around him/ her, while in other cases the detailed narration of one's certain past memories reflect that the stages of memory comprising coding, storage and retrieval function regularly, the process that induces a subjective experience on behalf of the patient. Thus, schizophrenic peculiarities may be a trace of the bicameral mind suggested by Jaynes in the sense that in the bronze age (approximately 3000 years ago) humans had no subjective experience, but rather transmitted voices from the right hemisphere of the brain dictating what the left hemisphere should execute.

⁶⁴ If certain genes are said to be "positively selected", it means they remained largely unchanged over time, suggesting that there was some advantage to having them.

However, the content analysis shows that though schizophrenic persons may experience trouble on tests of mental skills such as attention, perception, learning and memory, it does not mean they are not intelligent. Many creative and smart people throughout history have had schizophrenia, including Nathaniel Ayers, the Russian ballet dancer Vaslav Nijinsky, Nobel Prize-winning mathematician John Nash and famous painter Van Gogh. Scientists from different disciplines are even looking into links between genes that may be related to both psychosis and prodigious creativity.

Concisely but inconclusively put, the researcher's second hypothesis denoting the nature of schizophrenic consciousness to be a superior one than the regular human consciousness is rejected, considering that the current knowledge of the human consciousness and its anomalies in specific, and of the human psyche in general is yet imperfect, since certain areas will not yield to computation.

3.5 Research Limitations

In the process of this research work, limitations constrained the pace and the results of this study. The first restriction relates to the opted problematic itself, though researchers have come a long way in deciphering the nature of language, consciousness and its intrinsic properties on the other hand are still obscure.

Another delimitation that shackled the researcher encompasses the target population, as the observation of our purposive sample may or may not be representative of the entire target population of SCZ; mainly due to the fact that each patient was studied in isolation, rather than in an interactive setting with outer world, or with the research to avoid the risk of triggering any unfavourable behaviour from the patients. The second reason is the research's

objectives to focus on the linguistic behaviour of each patient and his cognitive functions rather than other variables. In conformity, “sampling bias” is introduced as a result to the researcher’s tendency to provide a safe environment for the observation, and for favouring the selection of participants that have particular characteristics.

Given this methodological limitations, the validity of the present findings is clearly an issue. As far as the semi-structured interview design is concerned, where the majority of questions captured qualitative data from the clinical therapists. As a result quantitative data was rarely met through the use of the mixed methods approach, which can be justified with the opted research questions that are of qualitative nature. As a measure take by the researcher, quantitative data was included from different studies to clarify the data collected from the informants.

Furthermore, the study bet on collecting insight and experiences from the professionals, mainly to the researcher’s lack of knowledge about this particular psychological case of study. Based on the information generated from the in-depth interviews - which may be characterized by repression of their true beliefs and opinions while revealing only what makes them appear professional- the researcher was inspired to design a check list for the patients’ observation, the latter may have introduced uncertainty, for the interviewees simply defended their points of view with arguments that suit them personally.

Thus, the respondent effect was present throughout the data collection process where the participants may have deliberately given incorrect answers as an automatic response to knowing the study purpose explained by the researcher

himself, whom might have had an effect on the interviewees. Yet as a mending strategy, the questions were piloted avoiding any ambiguities or indications of bias, along with asking a sequence of complementary questions rather than just one thematic question, first to avoid misunderstanding mainly due to the jargon used by the therapists, and second to enrich the research.

3.6 Perspectives and Suggestions

The overall findings of research work shows that the nature of schizophrenic consciousness specifically, and any altered state of consciousness generally remain a mystery throughout all the witnessed medical advancement nowadays, for though schizophrenic and people with psychosis have a sum of degraded cognitive processes, and a social withdrawal, most of these people are endowed with exceptional capacities in art, sport, science, philosophy... Hence, if their altered perception and way of thinking is kept under the condition of moderating certain flawed mental processes which induce these people's windfall, prodigious and well-aware individuals are the outcome.

One may wonder about the effect of medications and therapy on schizophrenic people, their hallucinations will eventually disappear, their affection and social skills will be regained, their reality detachment will be altered to a "typical" reality association and their mental processes including memory, attention and comprehension will be rendered to average. However, what if that past deviating consciousness and way of expressing was a privilege rather than a disadvantage to humans in general? What if dissecting the nature of schizophrenic consciousness in order to erase its downfalls while enhancing the

altered mental capacities that regulate exceeding skills is an actual choice? What if that choice is psychedelics?

People taking psychedelic substances such as LSD, psilocybin (magic mushroom), mescaline (peyote and other cacti) either in a medical experiment or recreationally, with the right set and setting (the right mind state and the right environment), go through an experience called a "psychedelic trip", almost like a schizophrenic simulation where they unlock doors of their subconscious mind; the latter is therefore manifested in form of visual and auditory hallucinations temporarily. The mind is, then, claimed to be shattered into different stages, where one can perceive things beyond any mental barrier, allowing the user to openly deal with their traumas and issues with a positive approach. They reconstruct the pieces of their psyche and come out of the experience with profound realizations and sense of well-being. (Pollan, 2018)

Many scientific studies approached what is claimed by the “Drug Enforcement Administration”, as harmful and addictive substances, to figure out their therapeutic power. As an opposition to what many governmental administrations’ allegation about how psychedelics increase mental problems while inducing addiction, studies in the United States of America such as “Psychedelics and Mental Health: A Population Study on Tuesday, 2013” concluded that there were no significant associations between lifetime use of any psychedelics and any of the mental health issues . Rather, in several cases psychedelic use was associated with lower rate of mental health problems. Moreover, research works at the University of Carolina in 2011 reported an ignition in social skills and reconnection with loved ones on behalf of patients with psychosis after a supervised modest dose of psilocybin.

Nowadays, a continuum of medical studies are being conducted on psychedelics- assisted psychotherapy to unlock the mystery of the human's altered state consciousness characterizing psychosis, mainly SCZ and PTSD. What is intriguing about the current therapeutic power of psychedelics is that these substances do not affect the mental illness directly via neurochemistry like other conventional medication does; it is the nature of the experience induced them that matters the most. Generally, after a positive trip, people get a positive healthy result on their mental issue. If the experience is not guided and handled properly, it might make things worse instead. Officially stated, Multidisciplinary Association for Psychedelics Studies (MAPS) concluded that MDMA, which is the active component of the drug 'ecstasy', is used to treat veteran soldiers suffering from PTSD, where 83% reported a positive result. Not only that, psilocybin which is the active component of 'magic mushrooms' is used to treat severe cases of depression and dissociative illnesses was investigated in a study in John Hopkins University of Medicine, declaring that 80 % of the people administered with psilocybin in the experiment reported an increase sense of well-being and satisfaction in life, even months after the experiment. 30% reported that they went through "the single most important experience of their lives".

One may argue that inducing a subjective experience with a chemical substance is extreme, and would fire back at one point ultimately, and to that William Jaymes (1890) stated that "the greatest discovery of my generation is that human beings can alter their lives by altering their attitudes. As you think, so shall you be".

Thus the researcher suggests that few universal laws must be taught since they are proven to regulate all aspects of one's life, these laws govern how one

can face and cope with past experiences in order to perfectly perform in the present while keeping an eye on creating the future, abiding by these laws will help broaden both typical and anomalous vision of reality and unlock their potential genius within each person with altered consciousness. Compactly, the researcher recommends patients with schizophrenia to undergo administrative procedures where they are taught the following laws:

Law of cause and effect: denoting that nothing comes from nothing, hence changing the conditions is necessary to change the outcome i.e. starting by being aware of one's thoughts and memories behind them. (Cheng, 1997)

Law of correspondence or attraction: derived from the global energy theory stating that the same amount and quality of energy in the universe is but a mirror of one's thought and energy, just like the properties of echo phenomenon. (D.J Macdonald, L.G Standing, 2002)

Law of subconscious: indicating that the subconscious does not perceive a clear cut between reality and imagination. This law is well explained in neuro-linguistic programming (NLP) denoting that a person can program himself positively or negatively by facing his 'limiting beliefs' and deploying stimulating ideas to improve his mental capacities. (Elfiky, 2007)

Law of equivalent: Or 'law of free association' originally devised by the founder of psychoanalysis Sigmund Freud, which serves to amplify certain ideas by increasing the frequency of thinking about them in an unconscious matter. In my opinion, this is the most useful law to be abided with by people with altered states of consciousness. It is about associating different but similar ideas; for

instance, thinking about a traumatic event that occurred in the past will open the path to other similar incidents having an equivalent impact on the person's mind, which will make him relive the situations' effect, which is necessary to overcome traumas. Same thing is enforced when a schizophrenic is remembering someone he used to be affectionate about, which will bring out good memories about that person, as well as other persons he used to associate the feelings with. In general, the logic of these associations is a form of unconscious thinking projected to regain control over consciousness. The upshot of complying with this law is memory retrieval and strengthening the person's ties with reality. (Bollas, 2008, p. 21)

Law of concentration: alluding to capturing all that is in the perceptive zone, by being in a 'flow state' or a hyperfocus stage. This law is stately significant paranoia cases including paranoid schizophrenics. It reflects that when the brain decides to see or hear something, it undoubtedly will, whether on TV in the radio, in people's conversations... yet, that item was always there. It is when the brain chose to concentrate on that item that it appears everywhere. (Csikszentmihalyi, 1988)

Another school's principles that can be applied to reverse the alter state of consciousness and regain subjective experience is 'transpersonal psychology' which integrates spirituality and transcendentalism, indicating that in order to have the ultimate self-development, one must extend his horizons beyond the individual and the surrounding, to include unconventional perception of life and cosmos (R. Walsh, F. Vaughan, 1993). After psychedelic research became outlawed, new alternative techniques for accessing transpersonal experiences including 'holotropic breathwork' were developed; to personal psychologists, transpersonal consciousness is the experience of reality which is not accessible to ordinary consciousness due to defense mechanisms. Altered consciousness in

psychoses including SCZ, on the other hand is a form of transpersonal experience representing the emergence of the transpersonal into the realm of the ordinary. Hence to reverse the effect of altered consciousness from a negative to a positive one, certain qualities must be regulated through few techniques such as holotropic breathing. According to Stanislav Grof⁶⁵, in his book is titled “Holotropic Breathwork” emphasized the relationship between the unconscious content and the defenses, engraved within our collective unconscious, to him breathing can do something with the unconscious material by lowering the defense mechanisms to get access to content of the unconscious, which ins SCZ is already surfacing to be modulated accordingly.

3.7 Future Research

Due to the unavailability of time, it was not possible to conduct a large-sample evaluation of altered consciousness and abnormal use of language in SCZ. Consequently, though the results are encouraging, the researcher is guarded about generalizing due to the modicum of the three patients observed and the three therapists interviewed. Thus, the researcher holds the belief that more complex experiments would generate more conclusive data about the impact of anomalous state of consciousness on the linguistic behaviour in SCZ.

Additional research can be devoted to using one consciousness theory like functionalism and its correlation to Chomsky’s innateness theory. The first claiming that mental states are identified by a functional role, giving reference to how the human brain is a biophysical device with common neural substrate that performs computation on inputs then produce physical and verbal behaviours

⁶⁵ the Maryland Psychiatrist Research Center. I was chief of psychiatrist research

(Block, What Is Functionalism?, 1996). While the second one's basis lies in biolinguistics which specifies that the principles underpinning the structure of language are biologically present in the human brain and is similar in all human brains. (Lyons J. , 1978, p. 4)

Using both of the pre-mentioned theories of consciousness and language the question may be phrased as: What is the relationship between the biological nature of consciousness, its anomalies and the biology of language and its disorders? The results will definitely reinforce the findings of this research. In fact, it would be an interesting project to use the functionalism theory of consciousness to predict language development of children of a certain age that suffer from a language disorder. Since subjective awareness and mindfulness is a good detector of the language competence a child possesses, early assessment and detection of language problems such dyslexia from of examining their state of consciousness, is extremely important so that children who are behind in reading can catch up with their peers.

Another similar proposed research can be conducted in the realm of abnormal consciousness, with contrasting the theory of solipsism in opposition to adult autism. As solipsists' claim is that other consciousness than the self is not important, for acknowledging the existence of outer conscious states -or mental functions that they know they personally have- makes no sense to them. (Wood, Ledger , 1962, p. 295). On the other hand, autistic children have no knowledge of the mind whatsoever epitomized in their lack of comprehension of how two propositions comprising the inner mind and outer minds may differ in meaning, which is not the case of adult autists who are rarely discussed in research when referring to the autistic nature of lacking understanding of the theory of mind.

Adults with autism may know that other person have a different experience than theirs, but find difficulty understanding how each mind has its subjective experience, which may or may not reflect solipsistic belief that the person's conscious experience is the only conscious experience that will ever exist, hence the acceptance is the answer (Frith, 2014)

3.8 Conclusion

During this chapter, the main aim was to show the way this research was conducted, by listing and describing the data collection process and the procedures used to generate both quantitative but mostly qualitative data. Being a triangulation of research instruments in-depth interviews, an observation annexed with a checklist, and last a content analysis method, all designed purposefully to explore schizophrenic consciousness and its correlations to the unusual linguistic behaviour.

The chapter provided an interpretation of the data and a discussion of the findings, along with listing the obstacles faced by the researcher. Then, a conclusion was inferred after the discussion, carefully approving and revoking the hypotheses put forward in this investigation. Finally, the researcher came up with some suggestions and recommendations that can be adopted and applied in the process of retrieving a standard state of mental processes, hence a typical state of consciousness and an adequate use of language.

General Conclusion

The heated debate and various controversies surrounding the exact nature of consciousness and its deviating forms affecting other human faculties including human language are still ongoing. And interests in studying these phenomena have been stimulated considerably by the advance of technology that may allow to a certain extent the computation of these phenomena.

As a contribution, the researcher focused in his investigation of these phenomena on studying language in schizophrenia, considering how the study of schizophrenic consciousness may inform our understanding, retrospectively, of normal language processing. His goal was to reach a relation of causality between language and consciousness; accordingly, the two first mutually-beneficial chapters were devoted to revisiting definitions of consciousness and language in a multi-disciplinary manner, referencing important theories and research previously conducted. The third chapter, on the other side, is the core of this research representing the final and the most significant step of collecting and interpreting purposive data, for the sake of generating new hypotheses in this field of research.

In the third chapter, the research tried to identify the major abnormal consequences that can derive from an alter state of consciousness, instead of delimiting the scope to the unusual use of language only, extending to include different cognitive process. In order to extrapolate if such deviated phenomena are in favor of the process of human evolution. Aiming at specific findings, the researcher used a mixed method approach comprising an interview with three clinical therapist, and observation of a sample of three schizophrenic patients, and a content analysis method of the movie ‘the soloist’ mirroring a schizophrenic

General Conclusion

prodigy. The analysis of the collected data resulted in confirming the first hypothesis while partially denying the second one. Regarding the first hypothesis accounting for the necessity of language to report our mental states, hence when the language faculty is damaged, no subjective experience is narrated, although that doesn't infer not having the experience in an altered state. As far as the second hypothesis is concerned, both the analysis of data collected from observation and the content analysis reject that any form of altered state of consciousness characterizing psychosis, is relatively supreme compared to typical state of consciousness, yet if certain altered mental processes were to be dissected separately, the long term memory, hyper focus, over sensations. Yet, reckoning that knowledge of the human consciousness is still vague, hence its deviation cannot remotely be claimed to be decaying or improving. Thus, the second hypothesis is rejected.

All in all, interesting results corroborated the objectives of this research work. The choice of schizophrenia to represent an altered state of consciousness, hence distorted mental capacities, was successful, due to its prevalence among psychoses, its variety of linguistic features, and its relevance to psychological and social factors it. Yet, the linguistic phenomena displayed by a patient with an alter state of consciousness comprising tangentiality, alogia, neologisms loosening of associations, word salad, derailment , all these cannot be computed in a concrete manner in terms of correlations to the conscious state of the patients. Genetic inheritance may be the cause, just like a trauma can change the brain chemical activity, along with placebo effect that may cause dissociation in perception, comprehension and expression, resulting in optimal denial from the patient of his mental disorder, which may shackle his process of recovery.

General Conclusion

As any research process, the present one was hindered by some obstacles. First, the nature of the research problem, which is still being tackled yet remains ambiguous. Second, the observation the sample may induce sampling biases, especially since the researcher is purposive in selection of participants that exhibit particular characteristics. Moreover, the process of data collection captured qualitative data most of the time. As a result, quantitative data was rarely met through the use of the mixed methods approach, quantitative data was included from different studies to clarify the data collected from the informants. Finally, the researcher's lack of knowledge about this particular psychological case of study may introduce subjectivity. Last but not least, the fact that the therapists knew of the study purpose elaborated by the researcher at the beginning of each interview, may have introduced 'Hawthorne effect' represented in incorrect or socially acceptable answers as an automatic response to knowing the research aims.

To conclude this research work, the researcher sought to include other studies from other fields encompassing medicine, laws of energy and cognitive behavioural therapy to enrich the study, by providing novel suggestions that can solve the problematic of altered consciousness without cancelling its positive effects using psychedelics and practicing self-reinforcement. The researcher proceeded to recommend two original ideas for future research. The first indicating the use of functionalism theory of consciousness to predict children's language disorder, such as early diagnosis of dyslexic children from examining their state of consciousness. While the second proposes comparing and contrasting the theory of solipsism with to adult autism to figure out if such disorders are to be celebrated or treated.

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Appendices

Appendix A: Therapists' Interview

Diagnosis approach

- 1) Is diagnosing a patient with schizophrenia an easy task?
- 2) Is there a common test used for schizophrenia diagnosis?
- 3) What are the symptoms you look for when diagnosing a patient with schizophrenia?
- 4) Are there any mental illnesses that may overlap with schizophrenia?
- 5) Can you provide a number for the SCZ patients in relation to other patients with different mental illness?

Consciousness in Schizophrenia

- 1) How can you describe schizophrenic consciousness?
- 2) Do schizophrenic patients perceive a different reality than a regular person?
- 3) If no, does hypnosis help them get a grip of reality?
- 4) How do you evaluate a schizophrenic attention span?
- 5) How do you evaluate a schizophrenic person's memory?
- 6) What are the factors that may cause schizophrenia?
- 7) What are the approaches to help a schizophrenic regain regular mental functions?

Language Use in Schizophrenia

- 1) How can you describe a schizophrenic speech?
- 2) Can you provide us with examples of schizophrenic speech?
- 3) According to your experience, do all schizophrenic patients have irregular speech patterns?
- 4) What are the factors that may cause such language abnormalities?
- 5) What do you think of brain activity in schizophrenia?
- 6) If schizophrenic brain activity is atypical, do you think that correlates to language abnormalities?

Appendix B: Patients' Check List

Check List

- Auditory hallucination -
- Visual hallucination -
- Both hallucinations -
- Having conversation with the self -
- Persecution -
- Paranoia -
- Denial -
- Atypical behaviour and body language -
- Personality dissociation -
- Misperception of meaning -
- Coherent discourse -
- Disorganized discourse -
- Neologisms -
- Paying attention to the surrounding -
- Reacting to a stimulus -
- Words triggering memories -
- Special awareness -
- Time awareness -

*Knowledge is the plague of life, and
consciousness, an open wound in its heart.*

Emil Cioran

Summary

The aim of this research work is to investigate how schizophrenic patients at Tlemcen psychiatry display an unusual range of linguistic behaviour. It relies on the use of a number of research tools where data were collected qualitatively and quantitatively. The results revealed that patients with an altered state of consciousness characterizing Schizophrenia, do exhibit tangentiality, alogia, neologisms, loosening of associations, word salad, derailment. Consequently, these verbal behaviours represent a degradation of the faculty of language which gives access to consciousness.

Key Words: Schizophrenic patients, atypical language phenomena, altered state of consciousness.

Résumé

Le but de ce travail de recherche est d'examiner comment les patients schizophrènes de la psychiatrie de Tlemcen présentent une gamme inhabituelle de comportements linguistiques. L'étude s'appuie sur l'utilisation de certains outils de recherche où les données ont été collectées qualitativement et quantitativement. Les résultats ont révélé que les patients avec un état de conscience altéré caractérisant la schizophrénie passaient du coq à l'âne, ainsi qu'ils démontraient une alogie, un néologisme, un relâchement des associations, une salade de mots, un déraillement. Par conséquent, ces comportements verbaux représentent une dégradation de la faculté de langage donnant accès à la conscience.

Mots-clés: les patients schizophrènes, phénomènes linguistiques atypiques, un état de conscience altéré.

الملخص

يهدف هذا البحث إلى فحص مجموعة من السلوكيات اللغوية غير العادية التي يمارسها مرضى الفصام بمصحة الامراض العقلية في تلمسان. و ذلك بالاعتماد على مجموعة من أدوات البحث لجمع البيانات من حيث النوعية والكمية. و كشفت النتائج أن المرضى الذين يعانون من حالة وعي متغيرة و التي تتميز مرض الفصام ببرزون ظاهرة العرضية في حديثهم بالإضافة إلى الحبسة الكلامية ، تلفيق المفردات، تخفيف الارتباطات، سلطة الكلمات و الخروج عن الموضوع. وبالتالي، فإن هذه السلوكيات اللفظية تعتبر تدهورًا للغة التي تتيح النفود إلى الوعي.

الكلمات المفتاحية: مرضى الفصام ، ظواهر لغوية استثنائية، حالة وعي متغيرة.

