

Towards Scientific Apperception Tests for Twenty-First Century Social Sciences Research: Formulating ‘Structured Apperception Techniques for Socio-Cultural Change’ in Twenty-First Century Social Sciences Research

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Abstract:- This paper takes forward the concepts and postulates of our two published papers on socio-cultural change to their logical conclusion, and seeks to put forward some new and novel techniques through which we believe the ideals of these two papers can be eminently realized. Another objective of this paper is to review the various types of already existing apperception tests such as the Thematic Apperception tests which try to assess the sub-conscious dynamics of a person’s personality, and projective tests which seek to reveal a person’s hidden emotions and internal conflicts as well. These tests are already in existence and are fairly widely used in fields as far apart as sociology, psychology and psychiatry, but we lay bare their inadequacies here and conclude that they are insufficient to meet the requirements of the present day, and of the post-globalized world. We therefore, also propose that these existing concepts and somewhat Eurocentric in their orientation, even if they were developed with the best of intentions, and some were even designed to satisfy the innate curiosities of Western researchers regarding other exotic and alien cultures, and to a certain extent, mold their perceptions of them, and fit them into their own archaic world views. We then propose an alternative approach keeping the core ideals of apperception tests and projective tests intact, while molding it to suit our requirements, and without diluting our singular objective of ushering in socio-cultural change across cultures and societies.

I. INTRODUCTION

This paper takes forward the concepts and postulates of our two published papers on socio-cultural change to their logical conclusion, and also additionally seeks to put forward some new and novel techniques through which we believe the ideals of these two papers can be eminently realized and put into operation. Another objective of this paper is to review the various types of already existing apperception tests such as the Thematic Apperception tests which try to assess the sub-conscious dynamics of a person’s personality as well as his other emotions and motivations by describing a varying set of ambiguous and pre-defined scenes to them, and projective tests which seek to reveal a person’s hidden emotions and internal conflicts as well by letting them respond to various pre-conceived ambiguous external stimuli. These tests are already in

existence (some of them have been developed a century or so ago, or even slightly earlier, and have been somewhat modified by other researchers, though they essentially remain the same in orientation) and have been fairly widely used in fields as far apart as sociology, psychology and psychiatry for several decades, but we now lay bare their inadequacies here and conclude that they are insufficient to meet the requirements of the present day, and of the post-globalized world where cultural perceptions in different contexts, and cross-cultural perceptions are also exceedingly important.

We therefore, also propose that these existing concepts and somewhat Eurocentric in their orientation, even if they were developed with the best of intentions, and some were even designed to satisfy the innate curiosities of Western researchers regarding other exotic and alien cultures, and to a certain extent, mold their perceptions of them, and fit them into their own archaic world views. We then propose an alternative approach keeping the core ideals of apperception tests and projective tests intact, while molding it to suit our requirements, and without diluting our singular objective of ushering in self-directed and self-initiated socio-cultural change across cultures and societies.

II. WHAT IS APPERCEPTION?

There are several different shades of meaning to the term “Apperception” which essentially has a Latin origin. However, the idea was subsequently developed upon by Rene Descartes, Leibniz, Immanuel Kant, Theodor Lipps, Alfred Adler, and others. The idea of apperception is commonly taken to mean the mental process through which a person or an individual perceives a new idea or concept, and assimilates it to the body of ideas he or she already possesses. The new experience is then transformed by the residuum of past knowledge to produce a new paradigm. Thus, a human is born with a tabula rasa, and gradually assimilates new ideas through a process of association. Ideas are variously absorbed from the endo, meso, and exo environments, and this process leads to individuals becoming unique over a period in time. Thus, new ideas are also perceived and interpreted uniquely by different individuals, and exposure to new ideas causes an individual’s thought processes to change to varying degrees; an individual’s older thoughts may also be fully or partly replaced. As an extension to this, we could also state that

different events are interpreted and assimilated differently by different individuals based on their past experiences, and only very rarely in exactly the same way. Consequently, cultures which comprise individuals are never identical; they vary based on the environment that shaped them, and the individuals they are made up of.

The Oxford dictionary refers to the term apperception as “the process by which the qualities of a particular object or situation, perceived by an individual are correlated with his or her preexisting knowledge.” The dictionary also states that this term is commonly used in psychology rather than routine or day to day English usage. The term apperception is also at times used in philosophy and epistemology. Rene Descartes for example, described the term vividly in his book “Traite des passions”, Leibniz described it in the book “Principes de la nature fondees”, (both of which were originally published in French) while Theodor Lipps described it in his 1902 book in German titled “Vom Fuhlen, Wollen und Denken”. The term was also used in the psychologies of Herbert Spencer, Hermann Lotze and Wilhelm Wundt.

According to Johann Friedrich Herbart, the term apperception refers to a process by which presentations and exposures to new ideas become systematized through a process of accretion of new elements to antecedent experience, also due to the highly subjective processes of the inner workings of the mind. Thus, apperception involves the working and operation of mental processes, both conscious and subconscious, and the study of systematized thoughts and ideas and their modification, change and replacement over time. Thus, the whole life of a human being or the apperipient being, especially his intelligent makeup, involves apperception to some degree, and the process is more or less continuous. This would affect the development of a personality and mind-orientation too, in relation to other forces. This concept can be extended to societies and cultures too, which also gradually change over a period in time. Thus, cultures are summations of individuals’ individuation processes; even though barriers across cultures are gradually breaking down, cultures can never be truly and fully open; thus, (transculturation can rarely happen completely) cultures will have their own unique features and some idiosyncrasies’. This observation also needs to be meshed with identity theory which we presented in an earlier paper.¹

III. WHAT ARE APPERCEPTION TESTS?

Apperception tests are therefore tests which scientifically measure, observe and evaluate the process of apperception of individuals possessing different characteristics, attributes, thought processes and mental makeups. In our terminology, individuals possess different thought worlds, worldviews, mind space attributes, different

¹ Generic Identity Theory for the Twenty-first Century: Towards grand unified approaches in identity formation, identity transformation and identity dilution or neutralization Sujay Rao Mandavilli Elk Asia Pacific Journal of Social Sciences Volume 5, Issue 3, 2019

individual orientations and different cultural orientations as well. We had discussed these concepts in detail in our two papers on socio-cultural change, and it would be instructive for readers to read them once before readership of this paper is accomplished. The term apperception test is sometimes used synonymously with ‘Thematic apperception tests’ or TATs, though this generalization may be largely erroneous and fallacious; from our perspective, TATs are only one type of apperception test, and in theory there could be many more.^{2 3}

IV. WHAT ARE PROJECTIVE TESTS?

In the field of psychology, a projective test is a personality test that is designed to let a person respond to various ambiguous stimuli, presumably in order to make him reveal his hidden emotions and internal conflicts to the person carrying out the test. This class or category of tests is often contrasted with objective tests and self-report tests. The latter refers to a structured approach where responses are analyzed in the context of a pre-determined and pre-specified universal standard. These kinds of tests are based on presuppositions and stand in marked contrast to projective tests where a detailed analysis of responses is done without any pre-conceived notions. These kinds of tests, which are varied in nature, (and are fairly old, even though interest tapered off in between, followed by a more recent resurgence) have their roots in psychoanalysis, and are based on the premise that humans have sub-conscious and unconscious attitudes, beliefs inner urges and deep-seated motivations that lie below the conscious layer; these may or may not impact the actual response given.

Thus, in case of projective tests, responses will be socially determined and consciously formulated. The deliberate and intentional ambiguity of the stimuli presented, allows the respondent to explore and analyze himself at a deeper level and not just at an explicit level. However useful these kinds of tests may be for other kinds of analyses, we state that from our perspective, that apperception tests (however ambiguous the term may be at present in a generic sense, as it is very rarely used in a generic sense) are more important and relevant, as they are used to capture socio-cultural change. There are very serious limitations of these tests from our perspective; firstly, these tests and the pictures associated with them are often abstract in nature, and the testee may not relate to them or process them meaningfully. Thus, there may be a tendency on the part of the testee to please the tester, and present

² The relevance of Culture and Personality Studies, National Character Studies, Cultural Determinism and Cultural Diffusion in Twenty-first Century Anthropology: An assessment of their compatibility with Symbiotic models of Socio-cultural change ELK Asia Pacific Journal of Social Science Volume 4, Issue 2, 2018

³ Articulating comprehensive frameworks on socio-cultural change: Perceptions of social and cultural change in contemporary Twenty-first century Anthropology from a ‘Neo-centrist’ perspective Published in ELK Asia Pacific Journal of Social Sciences Volume 3, Number 4 (July 2017 – September 2017)

explanations which he believes the tester would like to hear. Also, these tests are somewhat culture neutral, and may not take cultural considerations into account. These tests were widely used by Anthropologists such as Abram Kardiner and Cora du Bois, who used them to study other peoples and cultures such as the people of Alor of the Dutch East Indies.⁴
5 6 7 8

V. THEMATIC APPERCEPTION TEST

Another very common type of projective test is the Thematic Apperception Test. (also known as TAT in short). This test was first developed by American psychologists Henry A. Murray and Christina D. Morgan at Harvard University in the 1930s, and has been widely used ever since. Many variations of the basic theme have also appeared since. In this type of test, which is primarily used for psychological assessment or personality assessment but lends itself to other uses as well, an individual or individuals (adults of both genders and children above the age of five) are presented with various ambiguous scenes (ambiguity is intentional and considered quite essential to this test) usually of people or situations along with a set of instructions (sometimes blank cards are also used), and is then asked to describe various aspects of the scene. This is often done after a preliminary assessment of the patient's background is done, along with his life history, and history of disturbances, if any. There are a large number of TAT cards, and usually a subset of the cards is used, if all the cards cannot be administered in a single test. Examples of themes that a subject who is also known as a testee may be asked to describe are factors that led to the scene, the emotions, thoughts and feelings of the characters, and he possible subsequent downstream outcomes. The respondent "projects" his beliefs, attitudes and motivations into the response, mostly unconsciously or subconsciously; this also accounts for the origin of the name "projective". Thus, the entire gamut of a subject's behavior is assessed and not just the response; the evaluator must not lead the subject in any direction, or mislead him either, and must remain essentially neutral. There are also no standard or expected responses for any of the tests; this would put an end to pre-conceived notions in any form.

The administrator of the tests, or another competent third party then evaluates these descriptions, with a view to discovering the conflicts, motivations, inner urges, inner needs, proclivities and attitudes (including a desire for power and pelf) of the person who has undertaken the test,

⁴ Miller, J. (2015). "Dredging and Projecting the Depths of Personality: The Thematic Apperception Test and the Narratives of the Unconscious". *Science in Context*.

⁵ Hertz, Marguerite R. (September 1986). "Rorschachbound: A 50-Year Memoir". *Journal of Personality Assessment*

⁶ Pountney, Laura (2015). *Introducing anthropology*. Maric, Tomislav. Cambridge, UK

⁷ Robbins, R.H. & Larkin, S.N. (2007). *Cultural Anthropology: A problem-based approach*. Toronto, ON: Nelson Education Ltd.

⁸ The People of Alora: A Social Psychological Study of East Indian Island.

besides his ability to form interpersonal relationships as applicable. Sometimes, the individual's life events or mental makeup may be sought to be uncovered through these tests, and this test is also often used to evaluate mentally disturbed patients or patients with personality disorders. A suitable scoring system is also used in order to evaluate the responses, and generate an overall score if necessary, and such a scoring system may be standardized for a particular type of test, though in reality, different types of scoring mechanisms are used.

Traits are defined, and the performance against each of the trait is also assessed. In many occasions, a larger sample is used, and this would naturally endow the test with a greater overall reliability. However, we do not consider these types of tests to be either reliable or very useful from our perspective, and the reasons for this would be self-evident for anyone who is imbued with the philosophy of our work. As such, they may have a rather limited utility from the point of view of the purpose for which they were designed, and such tests may not reveal subject's inner personalities accurately. (However, to mitigate this, facial expressions, eye contact, other gestures or gesticulations and body language are also studied in great detail along with responses) Cultural biases too may not be detected, though this is often mitigated by taking care to ensure that the evaluator and testee come from the same cultural backgrounds. Some have stated that scoring systems have been over-simplified in many cases. Other somewhat western-centric criticisms have been made; these include the criticism that the people in the pictures are outdated in terms of their dress and hairstyle. We brush these off as being less important criticisms.^{9 10}

VI. RORSCHACH INKBLOT TEST

One of the most commonly and widely used projective test is the Rorschach inkblot test. This test is widely used in fields such as psychotherapy and counseling, (and sometimes in organizational studies) and is used to elicit information about a respondent's mental makeup and thinking patterns, and his creativity and intelligence as well. This test was initially developed in the early 1920's by Hermann Rorschach (based on his childhood interests and obsession with inkblots, and his later observations on patients' reactions to such inkblots), Alfred Binet, and others, and was originally used to diagnose schizophrenia. The inspiration for such tests is sometimes taken to be Sigmund Freud's dream symbolism or the common analysis of a symbol's meaning in the context of a culture, or across cultures. In this kind of a test, subjects are shown a series of irregular but symmetrical inkblots in colours such as black, grey and red, and are asked to explain what they understand from the patterns.

Such tests are usually administered by experienced professionals for better efficacy of results. The subject's

⁹ Anthropology E. Adamson Hoebel Third Edition, Mc Graw-Hill book company, 1966

¹⁰ Cultural Theory: The key concepts , Andrew Edgar and Peter Sedgwick Routledge, 2008

responses are then analyzed in different ways, noting not only the response, but also other factors such as the time taken to respond, the aspect of the drawing was focused on, and how individual responses compared to other participant's responses for the same drawing. Different scoring methods have been developed in conjunction with this test, and these have been improved and modified over time. There are many criticisms of this test, which we also agree with, and these are whether the tests are reliable or have any diagnostic or therapeutic value at all for most disorders. It also relies heavily on examiner interpretation, and is therefore open to bias. Therefore, this class of tests has more recently faced a barrage of criticism, and its usage has even been banned in some contexts pending further research and investigation.^{11 12}

A. Holtzman Inkblot Test

Holtzman Inkblot Test is a variation of the basic Rorschach inkblot test that was developed to overcome the limitations of the Rorschach test, and the controversies surrounding it. It is used for personality assessment and assessment of mental health issues such as depression and schizophrenia, and is used with patients who are five years or older. It uses a much wider pool of images (i.e. inkblots on cards or paper) with different themes, and tests are administered by a competent trained professional. It has twenty two quantitative variables such as reaction time, rejection, location, space, colour and form definitiveness to name a few. This test was first conceived by Wayne H. Holtzman and others in 1961. Characteristics of this test are its clearly defined objective scoring criteria as well as limiting subjects to one response per inkblot. It claims several benefits over Rorschach tests, such as ease and efficiency, and diagnostic value, though it may not be significantly better than those tests from our perspective. Its utility has been also disputed by many researchers as in the case of Rorschach inkblot tests.^{13 14}

B. Draw-A-Person test

In the Draw-A-Person test, the subject is asked to draw a person of his choice. The results are then scored based on a psychodynamic interpretation of the drawing made by the subject, and attributes such as the size, shape and complexity of features including facial features, type of clothing worn, and the background of the figure are taken into consideration in the final score. As is the case with any other kind of projective tests, these types of tests have very little demonstrated empirical and scientific validity, and artistic ability is a indeed very serious constraint. It may

vary widely from person to person, and may throw up erroneous results.^{15 16}

C. Kinetic family drawing

Figure drawings are projective diagnostic techniques in which an individual is asked to draw a person, an object or a situation, (most commonly a picture of the entire family including themselves) in order to derive or assess and individual's cognitive, interpersonal, or psychological functioning there from, and to assess a child's attitudes towards his family, or indeed the entire gamut of family relationships and dynamics there from, including undesirable elements such as child abuse. This class of drawings which belongs to a wider class of family drawing test, was developed in the year 1970 by Burns and Kaufman, and requires a skilled or an appropriately trained assessor to administer the tests. The examiner usually asks the child questions about various aspects of the drawing, such as what the picture reflects and the names of people who are present in the picture, and makes his own further inferences based on various aspects of the picture.

D. House-Tree-Person or HTP test techniques

The house-tree-person test (also often called HTP in short) is a type of projective test designed to measure different aspects of a subject's personality. Subjects are commonly asked to draw a house, a tree, and a person. The interpretation of these drawings is used to formulate a picture of the person's emotional, cognitive, and social functioning. These tests may be no more efficacious than other tests in its class, and may carry forward their weaknesses as well.

E. Sentence completion test

In Sentence completion tests, the subject is required to complete sentence "stems" which are presented to them using their own words. The subject's response is taken to be a projection of their conscious or unconscious attitudes, personality characteristics, beliefs and motivations. However, a glaring lacuna of these tests is that sentence completion tests often elicit learned associations instead of unconscious attitudes.¹⁷

F. Picture Arrangement Test

This category of tests was first created by the American psychologist Silvan Tomkins. This type of psychological test comprises twenty-five sets of three pictures which the subject must arrange into a sequence which they feel makes the best sense. The reliability and efficacy of this test has been disputed by many researchers, as exemplified by the contradictory results thrown up by such tests. Other picture

¹¹ Exner, John E. (2002). *The Rorschach: Basic Foundations and Principles of Interpretation: Volume 1*. Hoboken, NJ: John Wiley & Sons.

¹² Santo Di Nuovo; Maurizio Cuffaro (2004). *Il Rorschach in pratica: strumenti per la psicologia clinica e l'ambito giuridico*. Milano: F. Angeli.

¹³ Holtzman, Wayne H. "Children's IQ Test: Holtzman Inkblot Test". The Psychological Corporation.

¹⁴ McRenolds, Paul (1975). *Advances in Psychological Assessment*. San Francisco, California: Jossey-bass Inc.

¹⁵ Chapman, L. J.; Chapman, J. P. (1967). "Genesis of popular but erroneous psychodiagnostic observations". *Journal of Abnormal Psychology*

¹⁶ Harris, D. B. (1963). *Children's drawings as measures of intellectual maturity*. New York: Harcourt, Brace & World, Inc.

¹⁷ Rhode, A.R. (1957) *The Sentence Completion Method*. New York: The Ronald Press 1957; Lah, M.I. (1989). *Sentence Completion Tests*. In C.S. Newmark (Ed.), *Major psychological assessment instruments*, Vol II (pp 133-163). Boston: Allyn and Bacon.

tests include the Thompson version, Blacky pictures test, picture story tests for adolescents, education apperception tests, Make-A-Picture-Story and Michigan picture tests.¹⁸

G. Word Association Test

Word association test is a technique which was first developed by the famous Swiss psychiatrist Carl Jung in order to explore complexes in the personal unconscious level. This test was based on his own research on associations between words wherein a word which is presented to a respondent, elicits other similar or related words. Jung recognized the existence of groups of thoughts, feelings, perceptions, and memories, organized around a central theme; he referred to these as psychological complexes.

H. Animal Metaphor Test

The Animal Metaphor tests which were first developed by Dr Albert J. Lewis at the Center for the Study of Normative Behavior in Hamden, Connecticut comprise a series of analytical and creative prompts in which the person filling out the test is asked to create a story and then interpret its personal significance to that individual. As opposed to conventional projective tests, the Animal Metaphor Test lends itself to both diagnostic and therapeutic uses based on the concepts of cognitive behavior and insight therapy; This kind of test is also based on self-analysis and self-report questions. The test has various downstream uses as a clinical tool, as an educational assessment tool, and is also used in human resource selection in addition to its various other uses.

VII. GRAPHOLOGY

Graphology is a very highly controversial kind of an analysis of the physical characteristics and patterns of handwriting which purport to be able to identify the author of the writing, and his psychological state at the time of his writing a particular piece, and claims to even infer other personality characteristics to some extent on the basis of the presented hand-writing analyzed. This idea can be traced back to the work of Juan Huarte de San Juan in the sixteenth century, but was subsequently developed upon by several other researchers such as Camillo Baldi and Jean Hippolyte Michon. Even though some support has been garnered for this kind of test, most see it as controversial; indeed it borders on pseudo-science, and many researchers would even label it as such. These types of tests are therefore hardly ever used in a formal context.^{19 20}

¹⁸ Reber, Arthur S.; Allen, Rhiannon; Reber, Emily Sarah (2009). "The Penguin dictionary of psychology (4th ed.)". London, UK

¹⁹ Driver, Russell W.; Buckley, M. Ronald; Frink, Dwight D. (April 1996). "Should We Write Off Graphology?". *International Journal of Selection and Assessment*

²⁰ Johnston, Dianna B. (28 February 2001), *Title VII: Disparate Impact, Handwriting Analysis*, U.S. Equal Employment Opportunity Commission

VIII. VIGNETTE

The term vignette, which is originally a French loan word, is used in topics as far apart as graphic design and social science studies. In social sciences research, the construction and interpretation of vignettes is a very important theme, and can be used to study a participant's beliefs, opinions, attitudes, motivations, value systems and perceptions, (even ethical and moral values) and a wide gamut of other issues regarding various aspects of his life. In such a case, a participant's response to a vignette is evaluated, and his change in behavior or reaction patterns are noted and studied. Vignettes can also play an important role in various types of social sciences research such as longitudinal studies and cross-cultural research, and are sometimes employed as ice-breakers at the beginning of an interview. They can also be employed in conjunction with other kinds of social sciences research. In this kind of research, participants are presented with vignettes which are usually stimuli with text and images (or any other kind of stimuli), scenarios, short stories or case studies, and are asked to respond to them.

Vignettes must be realistic as far as possible, and participants must be able to relate to them in a natural and a meaningful way. Research regarding vignettes encompasses a wide variety of topics such as the development and construction of vignettes, and various other methodological and technical aspects such as researcher background, ethical issues, internal validity, overall reliability, choice of research topics, design of tests after literature review, suitability with regard to the research topic chosen and nature of tests, suitability of tests in relation to participant background including his cultural background, the construction of vignettes, the nature of participants, the administration of tests including the execution of pilot tests, the timing of tests, interpretation and participant responses. Common criticisms of these tests are absence of a correlation between a participant's actions, response and behaviour and his inner beliefs, and the need to take cultural differences into account, though other approaches have been proposed to overcome these concerns such as an investigator triangulation and a multi-method approach. (Hughes and Huby, 2002) (Fook et al., 1997)^{21 22 23}

²¹ The Use of Vignettes in Qualitative Research, Christine Barter and Emma Renold

²² Rossi, P. H. 1979. Vignette analysis: Uncovering the normative structure of complex judgments. in R. K. Merton, J. S. Coleman and P.H. Rossi (editors) *Qualitative and Quantitative Social Research: Papers in Honor of Paul F. Lazarsfeld*. New York: Free Press

²³ Nosanchuk, T.A. (1972) The vignette as an experimental approach to the study of social status: An exploratory study. *Social Science Research*.

IX. OBJECTIVES OF STRUCTURED APPERCEPTION TESTS FOR SOCIO-CULTURAL CHANGE

The key and major objectives of this test are to study different forms of socio-cultural change in diverse contexts and situations, and derive meaningful conclusions there from. Thus, as a part of this approach, different types of “events” (we deliberately and intentionally use this term; this term refers to an idea or an associated or inter-related set of ideas which may or may not be depicted pictorially or diagrammatically. It can also be accompanied by an anecdote, case study, description or a vignette, if required. At the very minimum, a text or an oral idea is enough) which can cause or induce “Eureka points” and “Mini Eureka points” (and can bring about a change of thought patterns, often with a ripple or a cascading effect (or a domino or a butterfly effect (Thus, these are essentially agents of change)); we had introduced these two concepts in our earlier papers, and these could be akin to moments of epiphany or even Damascus moments) are chosen and conceptualized taking the context, situation, research problem, or research question into consideration, using best judgment techniques (and often a short-list is derived from the long-list as a part of a careful strategy of systematic and comparative evaluation).

Moments of epiphany can be diverse in nature. For example, an encounter between the Indian freedom fighter Netaji Subash Chandra Bose and his racist history professor E F Oaten is thought to have changed the latter’s opinion of Indian culture completely. These tests are then administered to subjects from various socio-cultural backgrounds. Various reactions of participants such as shock, disbelief, anger, incredulity or immediate acceptance are also captured. Ideal states are also borne in mind during the analysis, and present beliefs benchmarked against these; we have described all these concepts in our earlier work. At the heart of this approach, is the identification of agents of change, an inventory of which must be built up for a culture or a set of cultures. Sampling also must reach a critical size before meaningful conclusions can be drawn, and if this test is to be used across cultures, suitable cross-cultural sampling techniques must be used as well.

Patterns are then sought to be ascertained both within and across cultures (by repeating tests continuously within the sample of subjects), and generalizations drawn once a certain threshold is reached. Thus, a truly inductive approach is adopted, and this is an approach that we have been championing all along. Results from these tests can then be used to usher in meaningful socio-cultural change either within or across cultures; these can be replicated usually on a mass scale through mediums such as mass media or education: apposite strategies must be derived for this, and our tests would provide a key and crucial input. This approach will therefore, include the selection of a suitable strategy to bring about the desired change at a wider level, and will also include techniques for their implementation.

This paper is as such linked to the concepts of mindspace, thought worlds, world views, mind-orientation and cultural-orientation, and it would be extremely useful and illustrative for the reader to read these two papers which were published by us a few years ago, first, and in the interests of a clearer understanding. Our paper on generic identity theory would also be a useful read, as many related concepts are deliberated in this paper. Understanding the concepts of ‘cultural frame of reference’ and ‘cross-cultural frame of reference’ (these refer to pre-scientific frames of reference within and across cultures, respectively) which were presented by us in a previous paper would also be extremely useful. Our works on Anthropological Pedagogy and the Sociology of science (These papers discuss means by which socio-cultural change can be brought about through the medium of education) can be brought about would also be an extremely useful read. Types of changes that can be detected through this test are Long-term or permanent changes and short-term changes, irreversible and reversible changes, directed and undirected changes, major changes and minor changes, positive changes and undesirable or harmful changes, gradual changes and non-gradual changes, endogenous changes and exogenous changes, contact-driven and non contact-driven changes, though this would perhaps require a combination of several social science research techniques, both short term, and long term.^{24 25 26 27 28}

X. USES OF STRUCTURED APPERCEPTION TEST FOR SOCIO-CULTURAL CHANGE

The ‘Structured Apperception test for socio-cultural change’ can be used in the following contexts and situations, though many other uses may eventually suggest themselves in the years and decades to come. We consider this approach

²⁴ Introducing Anthropological Pedagogy as a Core Component of Twenty-first Century Anthropology: The Role of Anthropological Pedagogy in the fulfilment of Anthropological and Sociological objectives Sujay Rao Mandavilli International Journal of Innovative Science and Research Technology (IJISRT) Volume 3, Issue 7, 2018 (Summary published in Indian Education and Research Journal Volume 4 No 7, 2008

²⁵ Operationalizing cross-cultural research design: Practical, cost-effective, and a minimalistic application of cross-cultural research design to minimize cultural bias in research and reconcile diverse viewpoints IJISRT, April 2023

²⁶ Elucidating the Certainty uncertainty principle for the Social Sciences: Guidelines for hypothesis formulation in the Social Sciences for enhanced objectivity and intellectual multi-polarity Sujay Rao Mandavilli IJISRT, March 2023

²⁷ Unleashing the potential of the ‘Sociology of Science’: Capitalizing on the power of science to usher in social, cultural and intellectual revolutions across the world, and lay the foundations of twenty-first century pedagogy Sujay Rao Mandavilli ELK Asia Pacific Journal of Social sciences ²⁸²⁸ Unveiling the Sociological Ninety-ten rules for Social Sciences research: Towards better hypothesis formulation in the Social Sciences in the interests of higher quality research and intellectual multi-polarity Sujay Rao Mandavilli Published in IJISRT, February 2023

to be a vastly superior approach to existing apperception tests, and projective tests, and would be particularly indispensable not only in studying socio-cultural change, but also bringing it about pro-actively.

A. *Changes In Enculturation Process*

Enculturation as understood in the field of social or cultural anthropology, or by the layman, may be defined as the process through which people pick up or assimilate the dynamics of their surrounding or parent culture and acquire the values, ethics or norms that form an indispensable or inalienable part of that culture and its worldviews. Every human is born with a tabula rasa, or a blank slate, but picks up values, norms and mores from his parents, extended family, his school, his peers, and from the society at large (through a process of apt socialization) successively. Every individual in a given society or culture is acculturated, usually informally, but many a time also formally, though not exactly in the same way, as different individuals are exposed to different stimuli at different periods in their life. Thus, no two individuals in a given society or culture are identical in terms of their mental makeup or value systems. Some individuals may become mentally healthy and capable individuals capable of serving society with their varied abilities, (some even exemplars) while others may become misfits who are not aligned to the needs of society, and become a burden on the society as a whole.

We had propose the concept of patterns of Enculturation (and as an extension patterns of acculturation) in an earlier paper, similar to the patterns of culture proposed by Ruth Benedict, to compare and contrast how the processes of enculturation operate in different cultures, and how these change with the passage of time. From the perspective of structured apperception tests for socio-cultural change, postulated in this paper, which would most commonly be administered on misfits or wayward individuals (though some times on healthier individuals requiring a minor reset in values), it is analyzed how stimuli or administered "events" (which are agents of change), can be life-changing, or bring about some kind of other meaningful change, by effecting a change in the pattern of enculturation. These tests can be typically administered on a few individuals, and if successful, be replicated on a wider scale within that culture, across related cultures, or across all cultures. Different "events" can also be formulated for different classes or categories of individuals.^{29 30}

B. *Changes in acculturation process*

The term acculturation has a slightly different meaning than enculturation and refers to adjusting or adapting to an alien culture. This usually involves processes of assimilation, accommodation and cultural integration. This is usually a continuous, symbiotic and bi-directional process

²⁹ Grusec, Joan E.; Hastings, Paul D. *Handbook of Socialization: Theory and Research*, Guilford Press, 2007

³⁰ Kim, Bryan S. K.; Ahn, Annie J.; Lam, N. Alexandra (2009), "Theories and Research on Acculturation and Enculturation Experiences among Asian American Families", *Handbook of Mental Health and Acculturation in Asian American Families*, Totowa, NJ: Humana Press,

wherein both cultures i.e. the immigrant's culture and the host culture that are in contact can change to produce new equations. However, the immigrant's culture changes much more rapidly and quickly. According to a definition provided by the Social Science Research Council, acculturation is defined as "Culture change that is initiated by the conjunction of two or more autonomous cultural systems. Its dynamics can be seen as the selective adaptation of different value systems, the various processes of integration and differentiation, the generation of developmental sequences, and the operation of role determinants and personality factors".

Though the term is sometimes traced to the year 1880, the earliest comprehensive definition of acculturation was given by Redfield, Linton, and Herskovits in 1936, wherein they stated: "Acculturation comprehends those phenomena which result when groups of individuals having different cultures come into continuous first-hand contact, with subsequent changes in the original culture patterns of either or both groups". Structured apperception tests for socio-cultural change can be administered to analyze bottlenecks to the process of acculturation either at an individual level or at a group level. The beneficial or the noble aspects of the host culture can be presented to students, or the benefits of better integration explained. Changes can then be wrought in the education system, or suitable counseling provided, after pilot studies are successfully conducted, and widespread implementation is actively considered.³¹

C. *Socio-cultural change in general*

This approach can also be used for bringing about socio-cultural change in general, as understood more scientifically from a cultural taxonomy. For example, Charles Darwin's theory of evolution can be presented to devout Christians, scientific views of history to devout Hindus, and pre-Islamic history to devout Muslims to gauge and assess their reactions. Negative aspects to religions can also be presented to the respective practitioners, but in a way they can handle them so that meaningful socio-cultural change is brought about. In this case, "Events" are selected after a careful consideration is done, and pilot studies followed by wider tests are executed or carried out. Specific elements of a culture can also be targeted. For example, if it is found that parenting styles or techniques as followed by a group are far from satisfactory, parents in that group are presented with better parenting techniques followed in other cultures. Likewise, If members of a culture adhere to a superiority complex or adhere to a closed mindset, beneficial aspects of other cultures are presented to them in order to open up their minds. The results from such studies are them aggregated at a wider level so that crucial inputs for socio-cultural change at a wider level are formed; these changes can also be cascaded to the education system, and suitable legislation formulated for their implementation, as applicable.

³¹ *School & Society: Learning Content through Culture*. Henry T. Trueba (editor), Concha Delgado-Gaitan (editor). Praeger Publishers. New York. 1988

Structured Apperception tests for socio-cultural change can also be put to a wide variety of other uses; for example, what-if analysis can also be performed, or people's views on a wide variety of issues can be ascertained across space and time. Would you become an apostate? Would you change your religion? Would you become an atheist? Would you become an agnostic, or a irreligious freethinker? Do you think a new world religion is necessary? Is mass atheism possible? Can religion disappear entirely and can a majority of people in different cultures live without any religion? Would the causes for the eventual failure of atheism be sociological or anthropological? (As we believe (and predict) it would be; recall E O Wilson's great idea, wrong species analogy with respect to Communism; we believe that atheism would not only fail spectacularly, but also lead to what we called self-reinforcing cognitive dissonance, and increase belief in religion indirectly) What differences would there in different socio-cultural groups and socio-economic groups (or even occupational groups)? These questions center on the same theme, and can be used by future social sciences researchers in estimating the direction of socio-cultural changes in different societies in different time periods, (as they can form a part of qualitative research techniques) and to evaluate what kind of change is possible, and what kind of change may not happen.^{32 33}

This approach can also be used for any other assorted forms of cultural change in general: for example, if we want to reduce violence in a society, or reduce drug consumption in a society, we present subjects with presentations or videos indicating the dangers of drug consumption, or simply, attempt to give subjects a meaningful direction in life, by helping them discover their talents in life and help them find their own calling. This can likewise be accomplished through the administration of events as we have discussed. This approach can also be used to ascertain whether changes are permanent or temporary, short-term or long term, easily reversible or non-reversible, deep-rooted or shallow. This can be done by administering suitable tests or devising suitable experiments. For example, if a subject is presented with atheistic or anti-religious videos, his reaction at various points in time after viewing the videos can be ascertained, as also how easily he is swayed by further downstream influences, exposure, or propaganda. This approach can also be used to evaluate a new philosophy, or a moral guide; in this case, participant's responses across cultures can be evaluated.

These tests must also be conducted in an atmosphere of absolute neutrality, and no other undue forms of influence may be permissible; thus, brainwashing, coaxing, etc which will influence the subject in some way, must not be allowed under any circumstances, so that an unbiased interpretation is always achieved or accomplished.

³² Allatson, Paul (2007), *Key Terms in Latino/a Cultural And Literary Studies*, Oxford and Malden, MA: Blackwell

³³ Montesquieu: *Spirit of the Laws*. Eds. Anne M. Cohler, Basia Carolyn Miller, and Harold Samuel Stone. Cambridge Texts in the History of Political Thought. Cambridge: Cambridge UP, 1989

D. Changes in Mindspace

We had also introduced the concept of 'mindspace' in an earlier paper, (and had even proposed a concept known as 'Ethnography of mindspace') and we still believe this is a simple but effective tool, and one that is also capable of being analyzed, meaningfully in a structured, mathematical or a statistical way. The idea of 'mindspace' emanates from the idea that every individual has limited time at his disposal, or limited mental bandwidth to focus on multitudinous issues. Thus, if an individual spends an inordinate amount of time on a particular activity, it reduces the time he has for other activities.

This idea is linked to other concepts such as enculturation, acculturation, mind-orientation, societal or cultural orientation, thought worlds and world views. In some, this idea refers to a set of ideas, beliefs or attitudes an individual fills up his mind with. Mindspace changes slowly over a period in time (though rapid changes are possible through Eureka points, mini Eureka points, moments of epiphany and Damascus moments; such changes can also be triggered through "events" as discussed in this paper by getting individuals interested in a new set of activities, or remediating individuals who fill up their minds with garbage. Mindspace could vary widely across individuals within and across cultures, though they tend to be analogous in individuals possessing a particular mind-orientation within a culture.

Components of Mindspace can be quantified and operationalized, and apposite qualitative social science research techniques such as interviews, questionnaires and focus group discussion (FGD) techniques can be used. Thus, our approach can eventually lead to a healthier mind set and individuals working in the interests of the greater common good of society, or focusing on more productive goals.³⁴

E. Changes in thought worlds and worldviews

We had introduced the concept of thought worlds in an earlier paper and had linked it multi-dimensionally to the concepts of both mind-orientation and mindspace, even though the idea of thought worlds usually covers a wider gamut and set of issues, including those which as not typically included in an assessment of mind-orientation. Thus, changes to thought worlds may bring about changes in mind space and vice versa, though in the case of mind space, different ideas vie with each other for prominence and dominance. (Mindspace is more superficial and shallow than thought worlds, and its constituents can change more rapidly; the latter are often more deep-rooted)

World views are like thought worlds, but are developed in relation to the senses and the outside world. They are also subsets of thought worlds, and usually include only those aspects with an external orientation. All these

³⁴ Neisser, Ulrich; Boodoo, Gwyneth; Bouchard, Thomas J.; Boykin, A. Wade; Brody, Nathan; Ceci, Stephen J.; Halpern, Diane F.; Loehlin, John C.; Perloff, Robert; Sternberg, Robert J.; Urbina, Susana (1996). "Intelligence: Knowns and Unknowns". *American Psychologist*. 51:77–101.

concepts are related to each other not only multi-dimensionally, but also multi-directionally, with a change in one aspect or dimension having a ripple or cascading effect on all other aspects or dimensions. Thus, changes can also be effected in thought worlds or world views through suitable stimuli.

We have also proposed that all these concepts including mind-orientation are superior to ideas and concepts such as personality which may not lend themselves so easily to qualitative and quantitative studies. Thus, the general interrelationships between culture, mind-orientation and thought worlds (all of which can be compartmentalized on the basis of cultural taxonomies) are also extremely deep-rooted, fundamental, comprehensive and multi-directional enough to be of great practical value in social science research. Thus, thought worlds, which usually cover the entire breadth and diversity of the human experience can be assessed rather elegantly and readily on the field through social science research techniques, and suitable course-corrections be recommended, also through the methods proposed in this paper. Our approach could facilitate many techniques such as those designed to bring about convergence of thought worlds or group convergence of thought worlds.³⁵

F. Changes in mind-orientation

The concept of mind-orientation, which is fundamentally related to all other concepts presented above, is another way of assessing an individual's thought patterns and bringing about social and cultural change in society. Thus, per our definition, mind-orientation refers not only to the thoughts, beliefs and values a person fills up his mind with, but also how he acts upon them to orient his attitudes in life, give his life a certain direction, or endow it with a certain purpose. Like enculturation patterns, mind-orientation is also shaped by parenting and upbringing, peer pressure and influences, type of education received, his own socio-economic status, societal mores and constraints, exposure to cults and ideologies, the degree of individuation and non-conformity permitted by his society, membership of primary and secondary groups, exposure to other cultural values, etc in a tightly interwoven pattern.

Mind-orientation is also formed against the backdrop of transculturation trends and the global-socio-cultural landscape, though these trends may have a rather minimal influence on mind-orientation in most cases. We had referred to these trends as cultural symbiosis, and had even presented the 'symbiotic approach to socio-cultural change' in an earlier paper.

Unlike thought worlds, world views and mindspace, the mind-orientation of individuals, or a group of individuals in a society changes rather more slowly given that it is constrained by social and cultural values and norms, and may rarely transform itself completely. However, life-changing events, life-altering events, and a high degree of cognitive dissonance can prove to be exceptions, Societal

changes may also happen due to other factors such as generational change, and vertical, horizontal (and lateral) factors. Thus, succeeding generations may be enculturated differently, and this is one common way by which societal changes and transformations take place. It would also be more fruitful and productive to reach out to the younger generation to bring about change, and "events" must also therefore be introduced at the right age in the interests of greater efficacy.³⁶

- The following are the basic mind-orientation types that we had defined though each type can have further subtypes. These refer to primary mind-orientations, and individuals can typically have two or more mind-orientations. We had also linked these mind-orientations to economic performance in our paper on Anthropological economics, and all our observations will still hold good.
- Family orientation: In this type of mind-orientation, the individual's efforts are primarily geared towards the satisfaction of familial needs, and keeping his family conformable and happy. Earnings are sub-servient to this, and are for the sole purpose of providing for the family. This is perhaps the most common type of mind-orientation in most parts of the world, and particularly in traditional societies such as India.
- Employment or Business orientation: In this case, the individual's efforts are primarily geared towards employment of business. I.e. satisfaction of livelihood needs, and all other efforts are subservient to such efforts. This kind of mind-orientation is associated with other attributes such as workaholicism and may be common in countries such as Japan and South Korea. There is also a distinction between this and employment orientation, and the modal personal traits or attributes may vary in each case. Both can be extremely beneficial to society, as they can allow for wealth to be generated very rapidly.
- Individual mind-orientation: In this type of a mind-orientation, the individual tends to be extremely self-centric in his pursuits, and pursues his own goals aggressively. There may be several variations of the basic theme, and each can be characterized by different personal attributes or traits.
- Societal Orientation: In this type of Mind-orientation, an individual tends to put the well-being and needs of society above individual and all other needs. This type of mind-orientation is relatively rare in most major societies, though it can provide many tangible benefits to offer to society.
- Religious, spiritual or philosophical orientation: In this case, a great deal of importance is attached by the individual to his religious, spiritual or philosophical needs often at the expense of his other needs. Religiousness must be distinguished from both spiritualism and a philosophical bent of mind as there may be subtle differences between all the three. Religious, spiritual and

³⁵ Lynn, R. and Vanhanen, T. (2002). IQ and the wealth of nations. Westport, CT: Praeger

³⁶ Introducing Anthropological Economics: The quest for an Anthropological basis for Economic theory, growth models and policy development for wealth and human welfare maximization Sujay Rao Mandavilli ELK Asia Pacific Journal of Social Sciences Volume 6, Issue 3 (April –June 2020)

philosophical orientation beyond a certain may be counter-productive to society and lower its well-being or progress beyond a point.

- Intellectual or creative orientation: In this type of mind-orientation, undue importance is placed on intellectual needs and creative pursuits. This type of mind-orientation may have several variants. This type of mind-orientation may be uncommon particularly in traditional or conservative societies, and may be the exception (rather than the norm) in advanced societies.
- The near diametric opposite of an intellectual or creative orientation is regimentation and adherence to bureaucracy (or a set of procedures to follow), and this may stifle creativity and imagination in most cases. In the case of militant orientation, individuals are prepared to fight and protect society from external threats or misadventures. This type of mind-orientation may be rare in advanced societies, but may be more common in tribal and feudal societies where feuds and various types of disputes such as territorial disputes are common.
- 8. The Anarchist or the queer man: This type of mind-orientation may be characterized by a partial or complete disorientation in some or many aspects of life. This may be a result of unique personal experiences or a worldview shaped by a high degree of cognitive dissonance, or other unique experiences during the course of an individual's lifetime.

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Other types of basic mind-orientation can also be defined with a reasonable justification, but most would likely be subservient to, and slotted into the above categories. It may also be necessary to plot an individual's primary as well as his secondary mind-orientation, and an individual's mind-orientation is usually composite, with a primary, and one or more secondary mind-orientations. Mind-orientations can be consciously sought to be changed using the techniques in our purview and at our disposal; "events" are presented to subjects after careful study and consideration, and these can induce or trigger changes in mind-orientation, usually for a subject's or overall society's benefit, and against the backdrop of a bigger goal or scheme of things.

Another possible way could be to sample individuals either within or across cultures and understand how their respective mind-orientations came to be. This method and techniques can be fruitfully used for model-building and theorization as well, and as a heuristic for individual-level reinforcement (Reinforcement psychology refers to the study of the effect of reinforcement techniques on behavior, and is based on the research carried out by B.F. Skinner, who is also considered to be the father of operant conditioning research) and development exercises, activities and programs to bring about suitable changes, and define additional technique or events for course corrections.^{38 39}

Needless to say, this approach can also be used for a static analysis of mindspace, thought worlds, world views, mind-orientation and cultural-orientation, and in this cases, questions are posed to elicit responses that in turn reveal the inner working of the mind. For example, Hindu creation myths, other creation myths, the flat earth theory, the geocentric theory, or other kinds of superstitions or dogmas can be present to assess and ascertain their inner thought worlds, and their belief in such phenomena.

G. Changes in cultural-orientation or societal orientation

We had proposed the Seven Cultural Orientations as described in this paragraph

- Past-orientation versus future-orientation: Past-orientation and Future-orientation refer to the relative emphasis placed by a given culture or society on its past and its future. Future-orientation is associated with attributes such as foresight, planning, long-term vision and individualism. An over-emphasis on the past may lead to a justification of the cultural baggage of the past and may impede cultural progress of various kinds.
- Inward-looking cultures versus outward cultures: Some cultures are more outward-looking than others, and this may often be an innate characteristic of such cultures. This is akin to the internal or external orientation of society, and this would also be determined by political and cultural institutions of that culture or society as well as the level of physical, educational and social infrastructure and the general intellectualism prevalent.
- Rigid versus flexible cultures: Cultures may also be classified into rigid and flexible. Flexible cultures are usually those with less cultural and intellectual baggage, and are amenable to change.
- Individualistic versus collective cultures: Some cultures like the USA are more individualistic, while some others like the erstwhile USSR emphasized collective thought and action.
- Material and non-material orientation: Some cultures like the USA may have a more materialistic orientation, while some other developed countries like Japan much less so.
- Contentment versus innovation: Some cultures do not wish to change, while some others change more easily. This metric would indicate a culture's appetite for innovation, and would be commensurate with its innovation indices.
- Rational-orientation versus Non Rational-orientation: In a rational society, less emphasis is placed on myths, legends, dogmas, superstitions etc. It is likely that all non-rational societies will evolve into rational societies eventually, and the sociologist or cultural Anthropologist has a crucial role to play here. Changes to societal or cultural orientation can be successfully predicted and estimated using our technique, and changes that are perceived in a group of individuals (an adequate sample

³⁷ 21 E. A Hoebel, Man in the Primitive World: An introduction to Anthropology, McGraw Hill, New York, 1958

³⁸ Festinger, L. (1957). A Theory of Cognitive Dissonance. Stanford, CA: Stanford University Press.

³⁹ Cross cultural perspectives in Human development: Theory, research and application Edited by T. S Saraswathi, Sage publications, New Delhi, 2003

size is necessary) may be generalized to the society as a whole.^{40 41 42}

XI. PRE-SCIENTIFIC MIND TO SCIENTIFIC-MIND

Similarly, presenting balanced and accurate biographies of various prophets held sacred and sacrosanct in various religions (which also expose their flaws or limitations, and the frameworks within which they operated), presenting a scientific or logical background of origin of religions, which also proffer scientific explanations for religious dogmas and beliefs, can go a long way in bring about socio-cultural change, and transition away from pre-scientific beliefs by edging them out slowly. For the transition to be successful and complete, all pre-scientific beliefs in different belief systems must be identified and isolated, and strategies to transition out of them to more scientific, logical, plausible, or widely held beliefs must be chalked out. Similarly, a transition from less than ideal beliefs to ideal beliefs can be sought out through reinforcement; likewise, a transition from dangerous beliefs to less dangerous beliefs and a transition from half-baked beliefs to well-rounded beliefs may also be necessary in some cases. The strength of scientific beliefs can also likewise, be reinforced where found weak, by helping a subject understand a concept he or she has not understood clearly before, such that a transition to scientific ideas and ideals can be completely and satisfactorily accomplished.

It is very obvious that we have a long way to go, and that there is a lot for work to be done; for example, the ISRO Chairman S Somanath made pseudo-scientific statements regarding science in the Vedas in 2023, and the former ICHR Chairperson Yellapragada Sudershan Rao also believed in a literal interpretation of Indian epics. Both are highly educated (and rather unfortunately, so). Events can be varied; for example, the Dalai Lama's work on human values and ethics (or Sam Harris' alternative approaches) may do the trick in many cases; of course, this can be demonstrated scientifically and empirically. Such approaches may do the trick where well-meaning intellectuals have failed. The number of Atheists in relation to the total population is very small even in advanced intellectual societies, and may remain so even in the long-run, and even well-meaning intellectuals like Meera Nanda have been branded left-leaning, and viewed with suspicion. Thus, these approaches would be far more scientific and effective than "promoting" atheism.

Other approaches such as provocative anti-Islamic cartoons by the left-leaning Charlie Hebdo magazine in 2006 may not be in order; the point is to change societies scientifically using valid social science research techniques, and in a manner that changes can be long-lasting, and

successfully accomplished. These and indeed undoubtedly necessary along with a deeper understanding of culture; rationalists in India like Sanal Edamaruku and H. Narasimhaiah have attempted valiantly to expose superstitions and God men, but appear to have underestimated the importance of religion in daily life. Social science research techniques were also relatively undeveloped and unpolished then. Hence, their relative failure. The West must also learn to understand the bigger picture (i.e. the interrelationship between cultures and civilizations) and not merely brush off issues as "Third-world issues", as has often been their wont. "Who is the biggest victim of radical Islamism?", we may ask. Undoubtedly, it has been the west!^{43 44 45}

XII. STRENGTH OF RELIGIOUS IDENTITY, LINGUISTIC IDENTITY OR OTHER IDENTITIES

The common English term 'identity' originates from the Latin word *idem* which means "same". The idea of identity originates from society or culture and may also be defined at a social group level or at an individual level: The former usually influences the latter to a great degree, but there is always a multi-layered differentiation, and a bi-directional osmosis. Therefore, the concept of categorization is at the core of identity studies. Theories, concepts and ideas relating to identity formation are very widely used by sociologists, anthropologists, psychologists and philosophers in their respective fields of research. (Jackson 2002) Individual identities also reflect an individual's own ambitions, urges and aspirations as shaped by society and yet are rarely fixed or permanent; they constantly and continuously evolve due to an individual's interactions with society, (and also geography and the physical environment) and can also be shaped or influenced by eternal stimuli. This idea and concept forms the *raison d'être* and justification for our paper. Different theories to explain identity have been proposed by sociologists such as Herbert Blumer, G H Mead and C H Cooley, and we have proposed our own approach as well. An individual's identity would comprise various aspects such as religious identity, linguistic identity, nationalistic identity etc, and these would be tightly inter-related, and interwoven with each other.

Biological identity The concept of race is now more or less obsolete, and has now been replaced by dynamic definitions of ethno-biological identity, as race is not seen to be static. Genetic definitions of race also became more popular starting from the 1940's, (blood group classifications are also sometimes used) and more modern

⁴³ Ethics for the New Millennium , Paperback, May 2001 by Dalai Lama

⁴⁴ *Prophets Facing Backward: Postmodern Critiques of Science and the Hindu Nationalism in India*. New Brunswick: Rutgers University Press, 2004

⁴⁵ *Wrongs of the Religious Right: Reflections on secularism, science and Hindutva*. New Delhi: Three Essays Collective, 2005

⁴⁰ Management Relations in the work culture in Japan as compared to that of the West, Ruth Wolf Innovative Journal of Business and Management September – October 2013

⁴¹ Strategies of Attitude changes, 1969 Robert Bandura

⁴² Fundamentals of Social Psychology Robert A Baron et al Pearson 2012

definitions of “race” were provided by Dobzhansky, Garn, Buettner-Janusch and Boyd. Others have used the term cline to describe continuous variation in morphological and metrical traits. In countries, such as India, the concept of “race” may be meaningless as various ethnic groups were miscegenated a long time ago; however, in societies such as the USA, “race” is a reality; we have a celebration of Black history month, and ‘Black lives matter’ movements. Even the variant of English spoken by Blacks (Ebonics) is considered unique, and is celebrated. The imagined importance of race in relation to human accomplishment can be sought to be negated thorough our test; for example, it can be satisfactorily proven that other “races” contributed to human technological progress too.

A. *Religious identity:*

Religion has been a topic of great importance interest to sociologists, and EB Tylor and Max Muller were pioneers in this field. The Anthropology of religion is a diverse field of study which includes a several topics such as a comparative study of religions, and the role of religion in society and its relation to a culture. Traditionally, cultural anthropologists have studied myths, rituals, sacred texts, sacred sites, religious institutions, belief in shamanism, ghosts, animism, animatism and the history of religions as well. However, in the twenty-first century a study of religion must move away from traditional fields of study to areas such as religion and identity-formation, the impact of scientific temper on religions, inter-relationships between religious groups and the impact of religion on individuation, world peace and global harmony.

Religions shape the process of enculturation (or acculturation in many cases) thought worlds and worldviews in many different ways. To cite an example, pork is considered to be taboo or haram in Islam and beef is taboo in Hinduism. Idolatry is forbidden in Islam, and relationships with specific groups of people are also dictated by religion. According to its critics, Islam condones slavery and some other acts while Hinduism is often associated with the caste system. Our approach can seek to modulate or weaken religious identity to the extent possible, by inducing events; subjects can be introduced to a host of meaningful philosophies, (unfortunately, science has no other alternative to offer to religion today, other than atheism) the importance of individual achievement, or can be lectured on the historical and cultural context in which their respective religions arose, the scientific origin of their holy books or even the practice of lifting of religious practices from other religions.

Thus, different forms of identity change such as a change from religion to irreligion, Irreligion to religion, Religion to atheism, atheism to religion, religion to agnosticism, agnosticism to religion, Irreligion to anti-theism and anti-theism to irreligion must be studied and mapped, and the triggers for such change suitably isolated and analyzed, so that they can become inputs for further social science studies. Thus, the nature and extent of future changes to society, and the fate or future of religion or religious movements can be predicted along with the possibility of the replacement of religious derived and

inspired ideals with more modern humanistic ones, and the possibility of mass apostasy or mass exit from religion or the mass adoption of atheistic ideals or beliefs.

Will there be silent anti-religious revolutions (driven by personal transformation or change in heart), or will there be violent changes in the future? Is agnosticism a much better alternative to atheism? Or will milder versions of religions birthed in different cultural and social contexts do the trick? Will observations remain the same, or will they change over a period in time? Can societies and nations exist without religions? Can millions of people possible become secular humanists over a period in time? We can possibly adumbrate on all these issues as well through our technique. This technique can of course always be combined with various other techniques such as the analysis of factors that birthed and spread various religions, and the ethnography of religious beliefs, the ethnography of ideas, and the ethnography of pre-scientific ideas. It can also be combined with biography studies and portrait studies. Long-term research techniques would also certainly become necessary if long-term trends are to be evaluated.

B. *Linguistic identity:*

A language is a mode of communication that is common to human societies all over the world, regardless of its state of advancement. A language, which may further be comprised of dialects, has a diction and formal set of rules known as grammar, which develop and are formalized over a period in time. According to Noam Chomsky, “A language is either a finite or infinite set of sentences, each finite in length and constructed out of a finite set of elements.” The strength of linguistic identity may vary from case to case. Among Tamils for example, language worship or deification is common, and their language is referred to as a mother. Dravidian nationalists also claim that their language (i.e. Tamil) is the oldest in humankind, and many groups from Tamil Nadu are singularly pre-occupied with language. Likewise, some Hindu nationalists too claim that Sanskrit is the mother of all languages, and all world languages are derived from this. This concept is also found to a smaller degree among Telugu speakers. Linguistic identity can be weakened by exposing members of linguistic groups to other vistas, or explaining the origin of language to them scientifically. Such dogmatic and exaggerated claims prevail because scientists do not have viable or credible alternative scientific explanations in place.

C. *National or territorial identity:*

National identity is a person’s identity or sense of belonging to one’s state or one’s nation, and is often based on the feeling an individual shares with a group of people about a nation. This idea often overlaps with ethnic pride; in some cases, identity associated with a wider geographical region is also common; a group may seek to promote western elitism in science or intellectualism, while another group may be opposed to it. Voltaire and Samuel Johnson have warned of the dangers of over-patriotism, as indeed many global wars have been fought on the basis of national identity. Many Indians are overly nationalistic; this can be contained through many meaningful techniques; the historical interrelationships between various cultures of the

Old World can be explained, and the fallacy of the Gangetic plains being the mother of all civilizations can be exposed.

D. Cultural identity:

Cultural identity is based on a pride in various aspects of one's own culture. This can enhance an individual's feel-good factor, and his sense of belonging to that culture. The strength of cultural identity varies in extent and degree from culture to culture, and can manifest itself in many different ways. For example, pride in one's food and gastronomic tradition is seen among many Indian cultures and French culture in general. Cultural identity is linked to many other types of identity, and can similarly be sought to be modulated wherever required, perhaps by exposing individuals to other cultures from an early age, and tweaking the educational curriculum accordingly.

E. Social identity:

Social identity also stems also from ethnic pride but more specifically from a pride in one's own social identity. A degree of social identity is an essential pre-requisite for progress and forms an important part of emancipatory movements; several other Anthropologists have however, looked down upon ethnic pride derisively, stating that it could interfere with individual accomplishment in certain cases. Awareness of oppression of certain groups by certain other groups can be raised using this technique, (as events can be carefully chosen based on their efficacy, and used to promote mass awareness) and such awareness aggregated at a higher level. Many important social movements were primarily based on identity as were also Black rights movements launched by Martin Luther King and others. For example, the Dalit emancipation movement of the 1800's was first launched by the reformer Jothiba Phule who set up educational institutions for underprivileged groups, and later, Bhimrao Ambedkar, and Kancha Ilaiah to name a few carried on the fight for Dalit rights.

F. Economic identity:

Any society may be categorized into economically privileged groups and economically less privileged groups, the distances between which may be calculated using different metrics or techniques such as the Gini Coefficient and the Lorenz curve. We had introduced concepts such as socio-cultural groups, socio-economic groups, and occupational groups in another paper. Social and Cultural Distances between groups may also exist, and may be sought to be mitigated.

G. Acquired identities (Examples include affiliations to say the Communist Party of India):

Individuals may also participate in primary and secondary groups, membership of which is usually voluntary or non-mandatory, and these memberships (and the ideas acquired there from) shape the identity of individuals or society to varying degrees, and in different ways. The idea of primary groups was first proposed by C H Cooley in 1909, in his book, 'Social organization: Human nature and social order'. Primary groups are usually characterized by more intimate relations, face-to-face interaction, association, and co-operation. Primary groups can lead to better bonding among like-minded individuals,

help in personality development and fulfill psychological needs. On the other hand, secondary groups are characterized by more formal and impersonal relationships, and the objectives of relationships are utilitarian. (Ogburn and Nimkoff (1966)) From our perspective, the negative implications of membership with such groups can be isolated, and tests to negate them formulated, through the generation of eureka points and mini eureka points.

H. Other residual components of identity (Composite and as per cultural taxonomy):

Other residual components of identity would be those which are not covered under any of the other categories, but must be included and analyzed in order to arrive at a comprehensive assessment of identity nonetheless. Suitable metrics may also be devised for the quantification of the strength of Identity, and these may be at an individual level, or at a group level. (These are to be computed by assessing the strengths of different components of identity, at aggregating them at the level of an individual or a culture)

XIII. USE OF 'CULTURAL FRAME OF REFERENCE' AND 'CROSS-CULTURAL FRAME OF REFERENCE'

We had discussed the concept of a 'Cultural frame of reference' and 'Cross-cultural frame of reference'. This could be an extremely important an fool-proof technique from our perspective, and can be related to the elements of a cultural taxonomy. This concept must also be related to the concepts of mindspace, thought worlds, worldviews, mind-orientation, and cultural orientation. This concept must be executed scientifically, and the cultural frame of reference must be scientifically arrived at. Thus, the cultural frame of reference refers to the frame of reference through which an individual analyzes and interprets thoughts. This may vary from individual to individual, though it would be more or less similar in members of a society or culture. This must be understood thoroughly before any kind of a change can be hoped to be effected, as this would also be akin to how a person responds or might respond to stimuli. A cross-cultural frame of reference would be a frame of references as could be applied across cultures. This would be a subset of the concept of cultural frame of reference, and would be akin to the concept of cultural universals. Likewise, all pre-scientific beliefs must also be captured as a part of this exercise, and these could form the basis of all cultural remediation efforts. ^{46 47}

As a part of any meaningful cultural studies, emic perspectives must also be obtained. Experiences of anthropologists such as Scheper-Hughes who carried out their research in favelas in Brazil would be illuminating and highly illustrative; she even went on to campaign for her subjects (from a formerly neutral and dispassionate

⁴⁶ Ankerl, Guy. 2000. Global Communication without Universal Civilization. vol.I: Coexisting Contemporary Civilizations: Arabo-Muslim, Bharati, Chinese, and Western. Geneva: INU PRESS,

⁴⁷ Boas, Franz. [1911] 1963. The Mind of Primitive Man. New York: Collier Books

standpoint), albeit within a broader and more acceptable moral framework. The idea of cultural relativism must also be borne in mind at all times; this principle was advocated by Franz Boas in the early twentieth century. According to this principle, all cultures must be given equal values and must be comprehended from the point of the people's own cultures. However, from our perspective, this must be counter-balanced with that culture's larger and greater good, and the well-being and progress of humanity as a whole.⁴⁸
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Steps to be followed in the administration of 'Structured apperception tests for socio-cultural change'

The following steps will broadly need to be followed in the administration of 'Structured apperception tests for socio-cultural change', though this approach is by and large only indicative. Undue rigidity will be largely self-defeating from our perspective, yet a process and controlled methodology can be much more efficacious, and can yield the desired results; it can therefore also help achieve the desired outcomes much more reliably.

- The first step would be to study a culture in detail. The researcher must study their beliefs, ideas, ideals, thought worlds, worldviews and cultural orientations, the psyche of subjects, and all other aspects of the culture that can have a bearing on the tests conducted. The researcher may refer to our two papers on socio-cultural change, or any other research work on culture in relation to society, and socio-cultural change before commencing his research.
- Identify pre-scientific beliefs: The researcher may also identify pre-scientific beliefs held by all or most members of a cultural group, or any other aspects of that culture warranting remediation. These would be aggregated into a cultural frame of reference. He may also benchmark that culture with other cultures to identify areas for improvement and change. He may also counter balance such beliefs against scientific beliefs which are already prevalent in that culture (These would demonstrate the areas or aspects of that culture which are in order, and do not require any remediation).
- Analyze gaps: The researcher then identifies the gaps, and identifies those aspects of the culture that require remediation.
- Set up a strategy: The researcher then devises a strategy to bring about change. If necessary and possible, he may discuss and brainstorm the strategy with other researchers in the field.
- Study possible Eureka points and mini eureka points: The researcher may then study possible eureka points and mini eureka points, which refer to points of epiphany, or events causing a sudden or gradual change. These may also likewise be discussed with other researchers in the field.
- Prepare a list of "events" or possible change agents ("Events" are change agents). Events refer to change

agents that actually bring about the change. These may refer to stories, anecdotes, incidents, real-world occurrences, vignettes, audio-visual aids etc, and must be tied to eureka points and mini eureka points as well. For example, information on Dinosaurs may be presented to those who doubt evolution. Likewise, images of Harappan Gods may be presented to show that Indian religious traditions have changed greatly over the years. This will put an end to the notion that Indian religious traditions were rigid or noon-changing. In an alternative test, the size of the cosmos with trillions of stars may be presented to him to bring him uptodate with scientific research. The researcher must also develop criteria and objectives for "events": The researcher may also develop a key set of criteria for events if necessary, and also formulate objectives for "events" as applicable (these must necessarily be mapped and co-related). Thus, the underlying philosophy between tests is also formulated.

- A set of tests that use these "events" as a vehicle to bring about socio-cultural change is then devised, and brainstormed if necessary. It may be further refined by the researcher based on previous experiences, or based on other inputs such as a literature review.
- Carry out pilot studies and adopt trial and error approaches: The researcher then carries out pilot studies on a small number of subjects, and adopts trial and error approaches, before the approach can be finalized and formalized, and replicated on a larger scale. If necessary, pilot studies can be carried out across cultures, to test their universal validity.
- Based on the results of the pilot study, and experiences obtained, the researcher may prepare a shortlist of tests to be used, along with its accompanying events. This will constitute the final list of tests and events to be used.
- The tests may then be administered. The researcher may then combine this test with standard social science research techniques such as interviews and questionnaires, or other social science research techniques that we have discussed in this paper. The tests must be administered on a wide sample, and also across cultures if necessary to achieve generalization.
- The results of the test must then be documented: The researcher must document eureka points and mini eureka points. He must also document how eureka points and mini eureka points changed individuals; analyze the process of change and the end state. He must also document how events administered brought about the change, and must also elaborate on the sample size used. This is referred to as before and after experiment design.
- The researcher must also analyze which ideas were successful. He must try to evaluate whether these changes are likely to be permanent or temporary, reversible or irreversible, superficial or shallow. He must try to gauge whether these results can be replicated on a wider scale, and will be successful on a wider scale, both within and across cultures. He may revise tests if necessary, or make them more comprehensive. The researcher will therefore, make a serious attempt to make generalizations, and draw wider inferences from the test, to derive principle if applicable.

⁴⁸ Adeoye, Blessing; Tomei, Lawrence (2014). *Effects of information capitalism and globalisation on teaching and learning*

⁴⁹ *Culture, leadership, and organizations: the GLOBE study of 62 societies* (1st ed.). SAGE Publications

- The researcher then decides the downstream changes to be made. This is referred to as implementation. For example, the researcher may decide that the education system may need to be reformed, or a widespread education campaign be launched on television to educate people on the negative consequences of a certain social ill. He may therefore, collaborate with the relevant authorities to bring about the change. Thus, this approach has sociology at its heart and basis. This means that social and cultural change can have wide-ranging and far-reaching consequences for different fields of human endeavour.

XIV. CONCLUSION

There are now well-meaning individuals around the world who are intent on bringing about meaningful and useful changes in society. This is in addition to the long list of social reformers the world has witnessed in the past. In India, there have been many great reformers in the days of yore, examples being Raja Ram Mohan Roy, who operated within the framework of religion, and did not seek to annul religious identity completely. The New Atheists like Richard Dawkins may be well-meaning too, but as evolutionary biologists and assorted non-social scientists, they have not been formally trained on sociology or social and cultural anthropology. Besides that, they hold decidedly Eurocentric views, which may be opposed to their well-meaning endeavours. That may not be their fault, as they may not have been exposed to other cultures as insiders from an early age.

All this would essentially remain a quibble; social science research techniques have to evolve commensurately to deal with the multitudinous challenges society faces today, given that they are steeped in a Eurocentric past, with its practitioners trying to study and analyze alien cultures and societies from a Eurocentric prism or lens, and without the desire to bring about meaningful change in them. Thus, in the future, social scientists must be what journalists are at present; they must become the torchbearers of social change. We have been fighting a battle for nearly two decades now, and we believe this would merely be an episode in our struggle. It is however a very useful cog in the wheel, and a small step in our long journey. This journey would be long and arduous, given that there is no consensus among intellectuals who are celebrated as torchbearers of society, even on basic issues yet. This kind of consensus is long overdue and must be accomplished and reached, after different kinds of individuals have shed their respective ideological and cultural baggage. This is an ideal we must all work towards. This is also an ideal to which our work is humbly dedicated.