

Development of Picture Drawing Test to Assess Consciousness Layers of Tribal Children of Tripura

Debdulal Dutta Roy

Indian Statistical Institute, Kolkata

Drawing is the journey from outer layer to inner core of human mind. In describing Psychic experience, Sri Aurobindo and the Mother gave importance on three layers of Consciousness - the outer, inner and inner core. The outer layer is composed of individual percepts. Inner layer can be understood by one's feeling to the object and the inner core includes some qualities transmitted through heredity. The inner core attributes are eternal. Objective of this study was to examine the outer, inner and inner core layers of consciousness of the tribal children in Tripura by developing picture drawing test. Data were collected from 50 tribal children of grades III and IV living in the remote villages of Tripura wherein hit and run guerrilla attack was common. Children were asked to draw any picture on the given sheet of paper as nice as possible. A set of attributes was conceptualized to study various outer (missing important parts, anomalies), inner (vividness, orderliness, complexity) and the inner core (harmony with environment, cleanliness, aesthetic) layers of consciousness. A binary type scoring categories was developed to assess above attributes of their drawings through the judges. Judges were psychologists with experience in children art. Judges' scores were converted into T-scores. The three layers were positively correlated with each other in a significant manner. Results revealed little distortion of outer layer and poor organization of inner and inner core layers of consciousness among the tribal children. Zero order correlation among the three layers suggest that outer layer was correlated more with the inner and inner core layers. Results provide a new paradigm to study postulates of Sri Aurobindo and the Mother on consciousness using unbounded picture drawing tests.

In western psychology, consciousness is the awareness of the sensations, thoughts and feelings being experienced at a given moment. It is the subjective understanding of both the environment around us and our private internal world, unobservable to the outsiders (Feldman, 2000). Consciousness spans several dimensions, encompassing several levels of awareness. It varies from active to passive state (Hilgard, 1980; Milner and Rugg, 1992). In more active states, we systematically carry out mental activity, focusing our thoughts and absorbing the world around us. In more passive states of consciousness, such as sleeping, we are only minimally aware of the stimuli around us. Still, we remain at least partially aware of events outside our bodies, because we still can

be awakened by sufficiently strong stimuli - such as the ringing of a persistent alarm clock.

In the Indian psychology, consciousness has not been studied in terms of the mere awareness of current sensations, thoughts or feelings rather it is considered as the different planes of existence at different points of a graded universe as proposed by Shri Aurobindo. Table 1 shows differences in meaning of consciousness between West and East.

Basu (2000) noted different levels of consciousness in Sri Aurobindo's views. According to him, at one plane, consciousness formulates the material base of existence (the physical plane). At higher level, consciousness formulates the life base

(the vital plane) out of the material base. At a higher level, consciousness manifests the mind (the mental plane) out of the life-base involved in a matter. These levels of consciousness are similar to the different layers of mind as conceptualized by the Mother, disciple of Sri Aurobindo. In her book 'On Education', mother conceptualized three layers of mind vis-à-vis consciousness – the outer layer (surroundings man sees, hears and touches), inner layer (qualities or feelings those are intangible) and innermost core (the same essence of life). One moves from outer to the inner core aspects of consciousness through five principles of education - the physical, the vital, the mental, the psychic and the spiritual education. According to the mother,

is the implicit language. It is an essential constituent of human cognition, culture and day to day lives. Drawing externalizes the inner self (Hammer,1958) or inner mental activity (Elkind, 1976). Variation of drawing ranges from scribbling to the form of Art. It is an useful tool to assess different layers of consciousness for the children having phonological difficulties, language delay, etc. Drawing becomes art when the child understands different morphology and syntax of drawing. Drawing has specific semantics. Semantic acquisition occurs with acquisition of vocabulary and the meanings associated with different symbols – line, dot, etc. In western Psychology, drawing was assessed as a bounded phenomena. Here, the child is asked to

Table 1: Meaning of Consciousness in the West and the East

West	East
<ul style="list-style-type: none"> · It is the awareness of sensation, thoughts and feelings being experienced at a given moment. · It has three layers – conscious, preconscious and unconscious. There is a upward flow of unconscious ideas to get into the consciousness in symbolic manner. · It can be assessed through hypnotic suggestions, introspection, Psychoanalysis and neural activities. 	<ul style="list-style-type: none"> · It is energy, the motion. It creates the universe. · It has three layers- outer, inner and inner core. But they are not compartmentalised so there is a dynamic flow of energy from outer to inner core layers of consciousness. · It can be studied through experiential methods.

these phases of education follow chronologically the growth of individual. This does not mean that one of them should replace another, but that all must continue, completing one another until the end of his life. According to Sri Aurobindo, essence of consciousness is the power to be aware of itself and its objects. And in its true nature this power must be direct, self-fulfilled and complete.

Experiential model is used in assessing individual differences in consciousness. This model does not follow any quantitative techniques resulting conflict in testing significance of different postulates of Sri Aurobindo and the Mother. Current study attempts to study individual differences in layers of consciousness of tribal children through picture drawing test.

Drawing tests

In western psychology, drawing was used to study cognitive (Goodenough, 1926) as well as personality functioning (Machover, 1949). Drawing

draw specific thing - draw a person in Human figure drawing test (HFD test) or draw house, tree and person in HTP test. Machover (1949) contented that individual aspects of a person’s drawing can assist in gaining an understanding of the individual who produced the drawing. She developed specific guidelines (placement of figures on the page, body part content, size, line quality, erasures) to identify specific personality functioning. The classical picture drawing tests assess unconscious dynamics but the divine consciousness attributes can not be studied with the available scoring methods. Since consciousness is unbounded phenomena (Basu, 2000), it becomes difficult to develop specific scoring methods based on specific figure. Again, this is also difficult for scoring drawing of any out of bound picture. Current study attempts to find out some scoring procedure of unbounded picture drawn by the children in order to understand the state of outer, inner and inner core layers of consciousness of tribal children. Figure1 shows

three layers of consciousness.

Outer Layer

Drawing focuses attention to inner consciousness from outer consciousness. Outer consciousness or outer nature is made up of the physical, the vital and the mental. It is everything in man that is visible on the surface for others. It is tangible. It includes all the actions and interactions. For example, drawing on watching at the flower by a child is the expression of outer nature. This comes through development of sensory capabilities and control over the different organs. For example, child develops image about different forms of the object by developing his capability on shape, size, distance or depth, color discrimination and on the figure ground relations. Children with good outer consciousness perceive the object as a whole in organized manner. In drawing, this is reflected through less picture anomalies and incorporating important parts in drawing.

Inner Layer

Inner nature comes after outer nature. It is everything that is behind the scene. It is not visible to others and often not even to oneself. There were three main parts of the inner nature- inner mental, inner vital and inner physical. In the above example, watching at the flower reveals one's preference or love for flower. This love or preference is the inner

nature. By the repeated interaction with different attributes of object, child develops some concept about the object. This conception simplifies the complexity of object by making it more vivid and orderly organized. It is assumed that this inner layer of consciousness is expressed in terms of vividness, orderliness and complexity in drawing.

Innermost Core

It is the central core of human being. It is the inner self, Atman, it is immortal and remains the same through all our lives. These qualities may change or may be perfected from birth to birth, but our essence remains always the same. For example, art on watching at the flower by a girl child is the expression of aesthetic. Each human being possesses some aesthetic values that may be expression of inner harmony between the living entity and the surroundings. In explaining psychic education, Sri Aurobindo and the Mother suggested few values through which one can assess innermost core. These values are aesthetic, orderliness, cleanliness etc.

Method

Sample

Data were collected from the tribal children (N=50) lived in the remote tribal villages of West Tripura. The villages are very close to Bangladesh and trouble prone due to frequent murders and

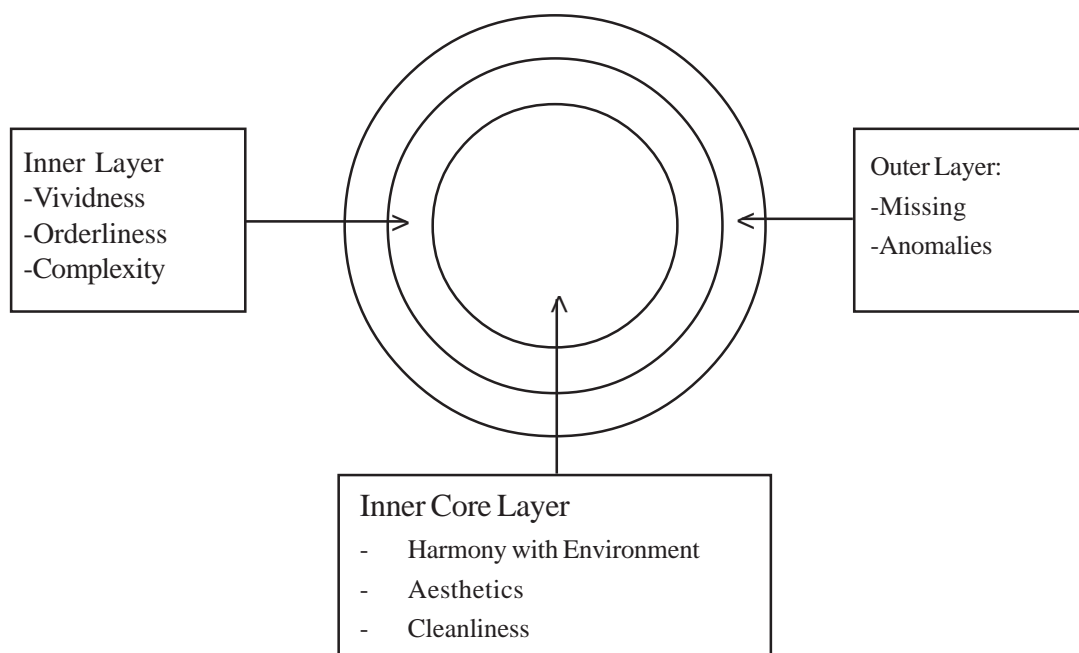


Figure 1: Consciousness Layers

attacks on the tribal people by the rebels. I selected these two areas as I wanted to explore any influence of extreme social conditions on the inner psyche of the children. With the help of administrative force provided by the head quarter of TTAADC (Tripura Tribal Areas Autonomous District Council), I entered into those areas.

Socio-economic condition of those children's family are very low. Most of the parents were illiterate. Their occupation was agriculture and manual labour. The average age of the child was 9.26 with SD 1.05. The children were in the grades of class III and IV. Most of the tribal children belonged to the Tripuri community. Only two children belonged to Jamatia community. Except one (belonged to Mohammedan) all the children were Hindus.

Procedure

Children were requested to sit separately so that one could not see other drawing. They were asked to draw any picture nicely on a given white sheet. Since, I was allowed to be there for 20 minutes due to administrative reasons, I allowed them 15 minutes to draw the picture. There is no specific drawing class in the school routine.

Outer Consciousness areas		
Areas	Description	Scores
Missing	Most important parts are missing	0
	Most important parts are drawn	1
Anomalies	Distorted most of the parts	0
	All most no distortion	1
Vividness	Inner Consciousness	
	Drawing is not related to real figure	0
Complexity	Drawing resembles real figure	1
	Too much parts are connected with the figure	0
Harmony	Only relevant parts are connected	1
	Inner core Consciousness	
Orderliness	Most of things drawn in the environment are inappropriate	0
	Most of things drawn in the environment are appropriate	1
Cleanliness	Most of the things are disordered	0
	Most of the things are orderly drawn	1
Aesthetic	Presence of rubbing or crossing signs	0
	Absence of rubbing or crossing signs	1
	Most of the elements of the drawing are not appealing	0
	Most of the elements of the drawing are appealing	1

Scoring

Scoring procedure to determine individual difference in the outer, inner and inner core nature of consciousness is given in below :

The drawings were administered to three judges who were psychologists with some experience in children art. The judges following the scoring procedure scored each drawing. Finally, the scores were converted into standard score and later were converted into t scores following the formula below:

$$t \text{ score} = \text{Standard score} * 10 + 50$$

t scores for each layer were categorized into 5 divisions and each respondent was classified into 5 divisions based upon t-scores in each layer. Finally, percentage distribution was made to understand distribution of the outer, inner and inner core layers of consciousness among tribal children.

Results

Outer layer is composed of individual percepts. It was assessed by two attributes - anomalies and missing parts. Results show that 61.54% possessed scores higher than low average category suggesting little distortion in the outer layer of consciousness. Vividness, orderliness and cleanliness are the three attributes of inner layer. Only 40% of tribal children possessed scores higher than the average poor level suggesting poor development of inner layer of consciousness 48% of tribal children belonged to the category higher than low average in inner core consciousness layer. This also suggests poor development of inner consciousness of the tribal children. Table 3 shows differences in picture drawing tests of classical and the current research model.

Outer layer of consciousness was correlated more with the inner ($r(48)=0.55, p<0.00015$) than the inner core layer ($r(48)=0.50, p<0.01$). On the other hand inner layer was less related ($r(48)=0.42, p<0.00015$).

Discussion

Results support the postulates of Sri Aurobindo and the Mother. They postulated that consciousness can be evaluated. Usually, it is studied through experiential model due to dearth of objective instrument. Current study shows that picture drawing test is an useful technique to assess individual differences in consciousness layers. They assumed unbounded phenomena of

Table 3. Percentage distribution of tribal children across three layers of consciousness

T-score	Categories	Outer layer		Inner layer		Inner core layers	
		N	%	N	%	N	%
<30	Poor						
30-39	Low	19	38.46	2	4		
40-44	Low Average			28	56	26	52
45-54	Average	15	28.85			10	20
55-59	High average			14	28		
60-69	High	16	32.69			9	18
>69	Outstanding			6	12	5	10

consciousness. Widely used picture drawing tests like DAP and HFD are bounded tests. Therefore, this study gave emphasis on any picture drawing so that unbounded consciousness of the children can be studied. In bounded testing, scoring categories are more related to the specific figures used in the test but in scoring unbounded test, it is important to give emphasis on the attributes applicable for any drawing. As a result, scoring categories followed here are unbounded.

It was postulated that development of inner and inner core consciousness depends upon development of outer consciousness. Results revealed more significant relationship of these two layers with outer consciousness. Though consciousness is unbounded, it is condition specific like body consciousness, material consciousness etc. Current study assessed layers of consciousness through vital and spiritual consciousness attributes so the results reflect individual differences in the vital and spiritual consciousness of tribal children. Available picture drawing tests like HFD and HTP assessed several unconscious conflicts but current study did not assess conflicts rather it assessed one's organized perception and thinking and finally it assessed some attributes of Psychic being.

References

- Basu, S. (2000). *Integral health*, Pondicherry : Sri Aurobindo Ashram Press.
- Elkind, D. (1976). *Child development and Education*. N.Y. : Oxford University Press
- Feldman, R.S. (2000). *Understanding Psychology*, New Delhi : Mc Graw-Hill offices.
- Glossary of Terms in Sri Aurobindo's writings, Pondicherry: Sri Aurobindo Ashram., 1998.
- Goodenough, F.L. (1926). *Measurement of intelligence by drawings*. N.Y. : Harcourt, Brace & World.
- Hammer, E. (Ed.). (1958). *The clinical application of projective drawings*. Springfield, IL : Charles C. Thomas.
- Hilgard, E. R. (1980). The trilogy of mind: Cognition, affection, and conation. *Journal of the History of the Behavioral Sciences*, 16, 107-117.
- Machover, K. (1949). *Personality projection in the drawing of a human figure*. Springfield, IL: Charles C Thomas.
- Milner, A.D. and Rugg, M.D. (Eds.) (1992) *The neuropsychology of consciousness*. London: Academic Press.
- 2001, *Psychic Education : A workbook*, New Delhi: Sri Aurobindo Education Society.

I am indebted to Sri M.S. Bhattacharya, Director of School Education, Tripura , Mr. A.K. Reang , Education Officer (West Tripura) and Mr. K. Jamatia, Education officer of TTADC, Professor Benimadhab Mazumdar of Tripura University, Professor B.G. Majumder, Director, State Resource Centre for their administrative and academic assistance in collection of data.

Debdulal Dutta Roy, PhD, Psychology Research Unit, Indian Statistical Institute, 203, B.T.Road, Kolkata- 700108. E-mail: ddroy@isical.ac.in