PICTORIAL REPRESENTATION

OF THE THESIS
Chapter III

Fig 3.1 Model of Subject's Perception

According to Christoffer Gefwert, world consists of many objects fig.(1). Subject recieves sense impressions from the object in reality and mentally construct a model of reality. If emphasis is on the right side of the figure, it produces Materialist description of the object and emphasis on the left side produces Idealist description of the object. In this, subject has only an observer status which leads to the problems of inter subjectivity fig(2). He introduces language as an instrument to achieve intersubjective uniformity which results in the problem of interpretation (3).

However, he could not incorporate the subject into the world of reality as a participator. He acknowledged the gravity of the problem and also agrees that the knowledge of Nature becomes imperfect unless this problem is solved and the subject acquires a participatory status.
Fig 3.1  Motion, Variability and Description

1. Subject  Ego  Consciousness

2. Subject  Ego  Consciousness  Language

3. Subject  Language

Objects  Reality
The World  Objects
The World
A phenomenon consists of number of elements (1). If the phenomenon changes as a whole entity from one position to another position over time without any change in the positions of the constituent elements, it can be called motion in the physical space (a,b,c,d). If the phenomenon, over time, changes the internal arrangement of the constituent elements, it can be called motion in the social space. If the phenomenon, over time, undergoes changes either by introducing or removing some elements, it can be called motion in the internal space.
Fig. 3.2

1 (\( \cdot X \))

2
(a) \( \cdot X \)
(b) \( \cdot X \)
(c) \( \cdot X \)
(d) Motion in physical space

3
(e) \( \cdot X \)
(f) \( \cdot X \)
(g) \( \cdot X \)
(h) Motion in social space

4
(i) \( \cdot X \)
(j) \( \cdot X \)
Motion in internal space
Fig 3.3 Motion, Variability and Description:

Two configurations A, B are considered and the various possible relations that can exist between them can be visualised as follows:

1. B is independent of A and not a consequence of A. There are some similarities as well as differences. Researcher develops intellectual curiosity in this variability, a la the exercise of picking the odd man out.

2. A and B are related, A changed to B. Among the various possibilities, A changed only to B. Researcher's interest will be on those aspects of A which has undergone changes and compare B with A; like any evaluation studies. Causal forces for the change get underplayed.

3. A has changed and moved to B, but the future course of movement of B cannot be predicted. Researcher limits itself to movement of A to B. Causal forces get the attention which gets identified with an external force. A is like a billiard ball which can be made to move by the application of a suitable external force, which is similar to a Newtonian concept of motion where B gets the primacy.

4. A moved to B and will move to C, and motion is attributed to the initial disequilibrium conditions of the phenomenon. The historical process in which A got generated becomes important and A gets the primacy.
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4. A moved to B and will move to C, and motion is attributed to the initial disequilibrium conditions of the phenomenon. The historical process in which A got generated becomes important and A gets the primacy.
1. Unrelated, A, B are in variance

2. Related - changed $A \rightarrow B$ A moved only to B

3. Changed - moved $A \rightarrow B \rightarrow C$

4. Moved - motion $A \rightarrow B \rightarrow C$
**Fig 3.4 Multiplicity of descriptions:**

Subject observes the object from P side and will believe that whatever is observable is the reality and the subject refuses to recognise the fact that object has other facets also. Its concern is only that dimension which it can observe and rationalise. They are, in the philosophical discourse, named Solipsists. Subject, after rationalising the sense perceptions in P dimension, extrapolates the rest of the object. For **solipsists**, no other dimension exists, for others it can be a square; a rectangle or even a circle. **Similarly,** a subject can view the object from either E or S side. This variability in the subject produces multiple descriptions of the object (Fig. 1). Similarly, the object when located in different space-time context generates different descriptions. This variability in the object generates multiple descriptions (Fig. 2). **Alternatively,** the subject over a period acquires skills and can observe the object better. For example, the use of a microscope or a telescope makes it possible for the subject to perceive the object with more details. This is similar to a subject in motion.
Chapter IV

Fig 4.1 Modeling of subject:

A subject can be modeled as an evolving two dimensional *matrix* consisting of two interacting sets namely perception set P and rational set R (fig. a). It is not that these two sets have an equal area in the *configuration*. During the evolution of the human mind, in the initial stages, perception set occupies a larger space as compared to the rational set, which means knowledge generation mainly depends on the process of induction, that is, observations form the basis of knowledge by which theory gets generated and the source of knowledge can be located in the sense perceptions, increase in the *quantum* of sense perceptions lead to qualitatively different rational set. This is represented by $RP'_{\text{arm}}$ in a linear presentation, Positivist philosophers can be located here. During the course of time, rational set occupies a larger area compared to perception set (fig. b). In this, the knowledge generation mainly depends on the Hypothetico-deductive process and the deduction, $RP'_{\text{arm}}$, plays a dominant role. Creative capacity and intuition, in addition to sense perceptions, become the source of knowledge. Popper and Medaev can be located here. Theoretical abstractions form the base which predict observations. In another *picturisation* (fig. 3) both P & R occupy positions of importance in which case it is neither induction like the first category nor the deduction as in the second category play a dominant role but each determines the other; that is, quantitative increase in P gives rise to rational theories which in turn gives rise to qualitatively different perceptions to the subject about the object. This
movement of observation to theory and theory generating new observations can be defined as subject in motion.
Fig. 4.1

Subject in Motion

A

B

C

R

R

R

P

P

P

P

P

P
Subject, initially, is ignorant of the object and will not receive sense impressions of the object. No mental construct of the object is formed by the subject (a). Gradually, for various reasons such as subject has increased its capacities and is capable now to perceive the object or the changes in the object attracts the attention of the subject, it receives sense impressions from the object and by abstracting mentally constructs a model of the object. In a process of gradual accumulation, the subject completes all the dimensions to have a picture of totality of the object (b,c,d). It is similar to the story of five blind men and the elephant. The process of completion of the model is through repeated observations as suggested by positivists, conjecture and falsification as suggested by Popper or Paradigm changes as suggested by Kuhn. The subject, with the help of changes in the perception and rational sets completes the picture of the object and in this process, the subject is gradually acquiring the knowledge of the object and is said to be in motion. Subject in such a formulation is similar to a car racing towards the goal.
Chapter V

Fig 5.1 Modeling of an Object:

The object $Q$ can be visualised as three dimensional fluid flux, and it can be modelled as three dimensional generative matrix and the three components $P$, $R$ and $S$ are mutually dependent on each other. Each dimension can be seen as an elastic spring which incorporates a condition of self expansion. Each layer is related to the other through an elastic spring. Their mutual interaction is such that each layer undergoes changes while anchoring in the other which is conditioned by the other dimensions. In case of necessity, these layers re-adjust and change in such a way so as to allow changes in the initial layer. This makes it necessary to classify changes as intralevel changes due to contradictions within itself and interlevel changes due to contradiction between any two layers.

For convenience of easy understanding, another pictorial representation is considered. The above picture of three dimensions can be alternatively imagined as a cube of three dimensions, containing not rigid walls but only elastic walls which undergoes changes in time.
Fig. 5.1 Object in Motion

A
P
R
S
3 Layered Object

B

Time
Fig 5.2 Object in Motion:

Subject can model the object in a number of ways such as stationary object or a changing object. In the latter case, object can be modeled as a fluid flux by which motion gets internalised. In this, the object is visualised as a three-dimensional matrix with three interdependent elements P, R and S. In the initial position the matrix $P_1R_1S_1$ represents the object. Due to the internal dis-equilibrium, $P_1$ changes to $P_2$ and this change effects the other levels and they also change and finally the matrix becomes $P_2R_2S_2$, which means $P$ is the driving force. This model of changing object can be called classical/traditional model. Other alternate situations can also be imagined where $R$ and even $S$ can also be the driving force. These two alternatives in fact form the three phases of development which can be seen as sequential in *Nature*. 
Fig. 5.2

Subject

Object
Fig 5.3 Modeling a human individual:

The human individual hi in the collective with a matrix [P R S] dimensional in activity, the path of development can be visualised, not as linear, but a three pronged Gestalt ( ). The specialty here is if hi struggles in one direction, it is in unity with the other two dimensions, except in the periods of revolution in which hi becomes active in all dimensions. Another point to remember here is since the natural character of hi is struggle, it can never be a passive agent accepting the relations of status quo, but becomes active at least in one dimension, which makes the path of development a three pronged gestalt.

Fig 5.1

Each individual, in its activity, comes into struggle with another individual. The resultant of struggles of all the human beings generate history. In the figure, hi has struggle in three dimensions, h2 is struggling in P and S only whereas h3 is in unity with p while struggling in P & S. These intersecting forces give rise to infinite number of parallelograms of forces and the resultant gives rise to a historical event.
Fig. 5.3  Modeling a Human Individual

Fig. 5.4
Chapter VI

**Fig 6.1** Subject as well as Object are in motion:

The dimensions of subject and object are compressed into a single plane to facilitate easy presentation and understanding. In the above figure, neither the origin nor the end acquires any importance. One can start enquiry at any time, from any place either from the side of the object or from the side of the subject. Idealists start with the side of the subject and Materialists start from the side of the object. The stability or equilibrium situation in the object becomes a desirable criteria for goal centric methodology and the subject restricts itself to discussing the condition of equilibrium of the object, and any deviation that results in practice are mopped aside. In such a case, knowledge generation is restricted to path 1 where subject is in motion for a given object or path 2 where the object is in motion for a given subject. Both the paths represent goal centric methodology. **Alternatively,** where knowledge generation is through path 3, or through motion centric methodology, a spiral development oscillating between the object and the subject is visualised. In this, subject's attention is focused on the changes in the equilibrium condition of the object and hence subject concentrates on the struggles in the object, which are pointers to change. To this subject, the entry point of enquiry into the object can be the struggle dimension of the object.