CHAPTER III
A COMPETENCE THEORY OF INNOVATION
1. INTRODUCTION

The preceding chapter concluded with the suggestion that evolutionary performance of society lays the ground for a revolutionary competence which transforms the complementary structures of relationship to oneself, to others and to nature into the symmetrical structures and this revolutionary performance of innovations further decides the degree of institutionalization of symmetry in the individual personality, social structure as well as ecological thinking and action. But this transformation, as a part of the whole evolutionary process towards symmetry, is caused by human innovativeness. Individual innovations taken together form the infrastructure of the concepts of evolutionary and revolutionary competence of societies and cultures. Therefore, we have to study man to understand society and cultural ecology and to explain the changes in them in terms of individual innovative actions. Such an understanding of innovation as caused by the individual actors would require the basic understanding of two fundamental concepts: competence and performance.
2. COMPETENCE AND PERFORMANCE

The foregoing statements aimed at the socio-cultural analysis in a way which is methodologically novel assume the incorporative use of the key concepts of competence and performance. There is no need to explain the general and specific meanings of the concepts. So we go on to argue about the methodological and theoretical importance of the categories of competence and performance in the proposed theoretical framework. As in the study of language, especially in the exercises which aim at understanding speech acts, are employed the categories of linguistic competence and linguistic performance, so can be assumed in case of the study of socio-cultural change. An analogous relationship can be established therefore, between the speech and social action in terms of their functional prerequisites. Both the speech act and the social action can best be understood with the categories of competence and performance. Similarly and analogously to linguistic competence and linguistic performance are the categories of competence for action and performance of action. We can therefore conceptualize competence and performance as theoretical tools of socio-cultural analysis.

But as it has already been discussed elsewhere in the thesis, socio-cultural analysis can be done from two points of view and both these together could give a holistic picture of the socio-cultural phenomena. The first point of view can be called as the synchronic aspect where the attempt is made to grasp the orderliness of socio-cultural situations. The
synchronic analysis therefore presupposes the static state of a society. Contrary to the synchronic is the subject matter of the diachronic study of society and culture. The diachronic point of view regards society and culture as constantly changing and the methodology is so developed as to enable the understanding and explanation of determinants and consequences of socio-cultural changes. Although both the synchronic and the diachronic aspects of the socio-cultural analysis aim to create different impressions of socio-cultural phenomena, every adequate theoretical formulation has to have a strength to incorporate both of these impressions - understanding of order as well as understanding of change. Such a theoretical task would require a single framework which would accommodate the elaborations of social statics and dynamics. If so, the competence theory must be applicable to both the states. Therefore, competence and performance must be distinguished in two parts - in stability and in change.

Competence and performance functional in the situation of stability are responsible for the maintenance of social order, of society-ecology balance, of mental health of the individuals and so on. Such an analysis of competence and performance would form a synchronic dimension of the study of how social order is preserved. Let us call it a "synchronic dimension of the study of competence and performance". The competence and performance required for socio-cultural change are of different type and they would form a diachronic dimension of the study. Let us call it a "diachronic dimension of the study of competence and performance".
As it has already been suggested that socio-cultural change is original with the human innovativeness let us now provide the competence-performance basis to it. In other words, the theory of innovation and evolution is the theory of innovative competence and innovative performance. At the lower level of abstraction it can be called a competence theory of innovation.
3. A GENERAL THEORY OF INNOVATION

A. Variation and Bisociation

Human innovativeness is a result of two different capacities with which the *homo communica*ns is made of and differs from other animals. The capacity for variability of response and the capacity for bisociative thinking are species-specific features of man and these capacities might have resulted from certain developments in his physique and structural-functional growth in complexity of his brain as consequences of a long time span of the organic evolution. Although it is not possible to pinpoint the exact time of the occurrence of these traits in man, we can derive from certain stage-specific evidences of innovative expressions available to us in the form of archaeological data regarding the life of prehistoric societies, the developmental course of the human capacities for variation and bisociation. But it is not the aim of the present discussions and we therefore go on with the task of arguing as to why are these capacities species-specific and what is their significant contribution to human innovativeness.

The 'variability of response' trait of man is species-specific. Humans are not only capable of but they cannot help variation in responding to a specific stimulus even in similar conditions. Among other determinants of variation the most salient is the non-instinctual character of man. Animals of other species have a programmed structure composed of instincts and their instinctual nature outlines their behaviour in a specific stimulus-specific response manner. The variability
of response can be a trait also of some higher species but there too the degree of variation is due to a programmed structure with a limited flexibility of instinctual drives. To that extent animal behaviour is characterized by the dominance of relationship to nature. In other words, all of animal life may perhaps be explained in terms of the connections between their relationship to their own instinctual nature and their relationship to the natural environment as a means to satisfy the organic needs arising from or patterned by the drives guided by the instincts. Machines too, to certain extent and in this particular respect can be compared with animals. The functions of machines are invariant and are dependent upon their structural arrangement. The case may be different with the highly sophisticated and structurally complex machines like computers. As against the behaviour of machines and animals are the phenomena of human behaviour. Man has developed the capacity for culture or it is original with him. The complexity of human social as well as biological life experiences creates a very great range of inter individual variation - both in biological as well as social sense. Deuteroscopically considering the concept of mazeway we can therefore say that since all human individuals carry more or less different mazeways they are capacitiated for variation in social action. The process of the formation of variation in responding to similar socio-cultural stimulus becomes still more complex for man because most of his behaviour is composed of reactions to the actions of other individuals. Therefore, in case of man the context of
relationship to others takes a pristine place which was previously occupied by the context of relationship to one's own nature and to the outside nature in case of other comparable animals. The inherited social experience in the form of culture is transformed from one generation to the next in case of man and thus lays the grounds of possibility for the genesis of ever greater variation in the components of individuals' mazeway as well as of the social institutions. Therefore we may conclude that the capacity for variation is species-specific. As in case of individual that we find the variation in comparison with other individuals and with the individual in the past, we also find the same in case of society. Socio-cultural differences are evident of variation although the causes of such variation are different. But in case of a single society or culture the possibility of variation is inherent. The subject-matters of human psychology and social psychology are aimed at, among other things, explaining these variations. To sum up, the capacity for variation is caused by the biological as well as cultural equipments of man and both of which are indispensable as Theodozius Dobzhansky says: "The history of the human species has been brought about by interactions of biological and cultural variables; it is just as futile to attempt to understand human biology if one disregards cultural influences as it is to understand the origin and rise of culture if one disregards human biological nature. Human biology and culture are parts of a single system, unique and unprecedented in the history of the living world". (Dobzhansky 1951: 385).
But the capacity for variation is not possible in isolation or independently of the capacity for bisociation. The relationship between these two species-specific capacities of man is one of mutual enhancement. Variation presupposes non-instinctual and cultural nature of man and bisociation presupposes the typical nature of human experiences. Moreover, the cultural element in the causation of variation is only indirect while the composition of the grounds of possibility of experience for man is highly cultural. The very structure of human biological and social dependence in the early period of life is responsible for the creation and perpetuation of bisociative stimulus. As it has been aptly pointed out by La Barre: "the human animal" is subjected to both biological and social dependence on parents (biological as well as symbolic) for a much longer period than any other species, and one of the major important causes for this "neoteny" (dependence) is that the humans are also cultural animals (La Barre 1954: 303-334). All the other forms of dependence such as infantilization, fetalization etc. are different aspects of neoteny. Therefore, the immediate consequences of neoteny are secondarily responsible for the genesis of the species-specific capacity of man for bisociation. The lengthy period of dependency on the parental generation is nevertheless characterized by the cumulative efforts of the human infant to assimilate the differentiated structures of experience into a single frame of reference. This process takes place and persists throughout the life.
The structure of parental experiences as imposed upon the child through the process of socialization and mere symbiosis with the adults becomes a part of his life world. We can say in this respect that more the exposure to the experiences of past generations of a child the more he is prone to bisociation. We shall come back to draw the implications of this point in the succeeding discussions. Because to a human child are available the structures of life events of the past generations and of the parental generation in the form of the elements incorporated in his mazeway through the processes of encultureation and socialization and at the same time he is associated, in some form or the other, with the structure of his own perceived reality, the transition from infantile dependence to maturation is possible only by organizing these two or more structures successfully, and therefore, the so-called normal development of personality can be defined in terms of successful bisociation. It is worth, in this respect to examine briefly the types of learning and thinking - associative, dissociative and bisociative.

Associative learning and thinking assumes an organized process. The structure or organizational principles of the thought and action are already available as if as an inbuilt mechanism in the very composition of the brain. Associative action therefore depends upon the principles of primary learning. Example of association can be sought in the writing of Jung (Woodworth 1938 : 350). Dissociative thinking can be said to be another kind of associative thinking - a
free associative thinking which is "unguided, without design, and inconstant......in which case the thoughts are safe to wander, as in a dream" (ibid. : 370). Koestler writes of association in this respect as: "associative thinking is the exercise of a habit. It may be rigid or flexible, with a wide range of adaptability; yet it remains a habit......Association, qua exercise of a skill, is thus distinguished from learning, which is the acquisition of a new skill, and from bisociation, which is the combination, re-shuffling and re-structuring of skills" (Koestler 1964 : 647). The third type of thinking is bisociation. Bisociation would mean the species-specific capacity of man by means of which he can successfully organize two or more matrices or structures available to him in a meaningful way. Since dissociative thinking is a subtype of associative thinking or if different, it presupposes instinctually driven chain of perceptions and hence it does not contribute to creative act in any plausible systematic manner. Koestler believes that while associative thinking is dominated by habit, bisociative creativity reflects human originality and derives the differentia specifica of the habit and originality as follows: (ibid. : 659-60).

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<thead>
<tr>
<th>Habit (Association)</th>
<th>Originality (Bisociation)</th>
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<tr>
<td>1) Association within the confines of a given matrix.</td>
<td>Bisociation of independent matrices.</td>
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<tr>
<td>2) Guidance by pre-conscious or extra-conscious processes.</td>
<td>Guidance by sub-conscious processes normally under restraint.</td>
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<tr>
<td>Habit (Association)</td>
<td>Originality (Bisociation)</td>
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<td>3) Dynamic equilibrium.</td>
<td>Activation of regenerative potentials.</td>
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<td>4) Rigid to flexible (in case of free association) variations on a theme.</td>
<td>Super-flexibility.</td>
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<td>5) Repetitiveness.</td>
<td>Novelty.</td>
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<td>6) Conservative.</td>
<td>Destructive-Constructive.</td>
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It is therefore clear by the above distinction that the difference between associative and bisociative thinking and the higher probability index of innovation as arising from bisociative thinking. Both the capacity for variation and the capacity for bisociative thinking are species-specific of the Homo Sapiens for their biological and cultural determinants. The novelty arising from successful intermingling of structures promotes the human tendency and capacity for variation. But such variation is again of two types. Dissociative variation can be mere deviance while bisociative variation arising from the deutero-learning or meta-learning is of a type of structured variation. As Bateson has named it the capacity for deutero-learning is species-specific of man and it means that the human beings are capable of learning a certain principle in a certain context of action and of applying this principle in similar or disparate contexts. This learning to learn is called as deutero-learning or meta-learning (Bateson 1958 : 285).

Now if variation and bisociation are the basic ingredients of innovative competence, it could heuristically be
proposed that it is possible to explore the relative evolutionary performance of societies in this respect. As it can be empirically proved, the primitive society was characterized by a relatively lesser period of neoteny, and thus the structures of experience of the parental and the younger generations were relatively similar due to various factors such as relatively lower level of horizontal or vertical mobilities, relatively lower level of acculturation or direct cultural-contact, domination of tradition and lesser permissiveness on the part of the parental generation etc. The youths of the primitive society, since they attained maturity relatively earlier, were prone to lesser exposure to the different structures and consequently lacked in greater bisociation. On the other hand, the modern society exhibits greater neoteny for a longer period of the younger generation on the parental generation. Other features of the modern society are increased acculturation, direct cultural-contact, greater permissiveness on the part of the parental generation, higher level of intra-society mobility and so on. If so and if greater neoteny causes greater variability, we can say that modern life has created such conditions as are necessary for greater human innovativeness. Therefore we can conclude that the course of cultural development is paralleled by the greater human innovativeness.

B. The Innovative Act

If innovative competence is a result of species-specific capacities for variability and for bisociative thinking
all human action would directly or indirectly be taken as expressions of innovativeness. And all forms of variation would mean innovation. But as it has been implicitly hinted, innovation means a particular type of structured variation from the norm. The originality and novelty of an innovative act can be judged only after its performance. Koestler writes about the verifiability of the creative act as - "...that verification comes only post factum, when the creative act is completed; the act itself is always a leap into the dark, a dive into the deeps, ... the verifiability of the product after the act ...... even in this respect the contrast is not absolute, but a matter of degrees" (Koestler 1964: 330).

What Koestler emphasizes here is that the novelty and profitability of the creative act can be judged only after it is performed. The same is the case with innovativeness. An innovative performance is a result of innovative competence and its significance can be judged with some criterion. The significance is always in terms of relative novelty, relative profitability and so on, but not in absolute terms since innovation is bound to be within a certain frame of reference. The criterion to judge the innovative performance, therefore can be said to be the one which would enable to distinguish clearly the novelty and relative profitability of an innovated product in comparison with the ones already available. Such a criterion has to include the yardstick to measure the following properties of the concerned innovation -
a - Surplus power.
b - Surplus function.
c - Surplus meaning.

In other words, any innovative performance, in order to be "innovative", has to have these three dimensions. Any such product therefore, must create surplus power to perform surplus function and provide surplus meaning for the consumers. The attributes - surplus power, surplus function and surplus meaning are to be derived from the innovated product's comparison with the product for which the former is to be taken as a substitute. If so, the innovative performance can be defined as a whole or structure which arises from the combination the old structure and its variant structure or structures.

C. The Expressive Media of Innovative Competence

The linguistic competence is species-specific and hence all the human groups are endowed with the capacity of symbolic communication. But the structures of actualization of linguistic competence are culturally variant. Therefore different societies are observed to develop the species-specific phonetic and semantic capacities in different ways, by mobilizing linguistic competence through the channels or structures specific to their cultures. In the same manner different socio-cultural systems can be observed to mobilize innovative competence in different contexts or media. To an individual are available these three contexts of interaction which embrace the totality of his life experience: the self,
others and environment. These three interactional contexts can be said to be the media in which the innovative competence may be actualized. The first is the context of relationship to oneself which can also be called as "expressive context". The innovative performance in this context would mean a process by which the pristine structure of relationship to oneself is combined with its variant to create a new way or mode of self expression. The original pattern of relationship to oneself could be altruistic or egoistic, of submission or of assertion. Bisociational variation may bring about changes in it. The context of relationship to others is the context of constant interaction with other social actors, and is called as "interactive context" or medium for actualization of innovative competence. The third context of relationship to nature is viewed as human use of nature as a source of aesthetic experience as well as a source of subsistence - and is called a "ecological context or medium."

The "expressive" innovation may be viewed as an attempt to bring about changes in the very mode of perception of social and objective reality. The self, in this process undergoes drastic changes. The I-me dynamics within the self may become a battle field in innovative situations. The battle may take a form of a conflict among various mutually contradicting expressive orientations and the innovator may be viewed as a person struggling to reorganize his world view. The attributes of innovative action in the expressive context
would make available to an individual new insights into various social and ecological problems. The reorganized mazeway components would fulfil surplus function in order to provide the channels to surplus power of the new pattern. The individual, equipped with the new structure of relationship to oneself can put himself to work with a new meaning which he had previously sought for and for which he had to jeopardize the pristine structure.

The "interactive" innovation may be said to be the individual’s attempt to resituate himself in the prevalent socio-cultural stratificatory system. On a higher level, it would mean an attempt of a group to cope up in an unexperienced manner with the changed techno-ecological conditions. The structural changes in the context of relationship to others, especially by means of interactive innovations would have very wide social, economic and political implications. Interpersonal as well as intergroup relationships would be provided with surplus power, surplus function and surplus meaning.

The "ecological innovation" would mean differently. The man-nature interaction is mediated by tools. Therefore, ecological problems are to be seen as techno-ecological problems. Ecological innovations regarding techno-ecological problems are to be viewed as the newer ways of ecological exploitation for human use. Technological innovation is but a part of the "ecological innovation" because man is not only a tool maker. He also uses his tools in order to exploit nature to satisfy his needs and wants. He is also
capable for perceiving the feedbacks of his ecological activity. Thus he innovates, in the ecological medium, not only new tools and techniques but also the ways to cope up with the resultant changes in the ecology itself. Therefore, the wide range of ecological innovations involves technological innovations, innovations in the organizational patterns of ecological activity, innovations in the perception of nature and so on. Here too, the factors of surplus power, surplus function and surplus meaning characterize all innovations.

To sum up, innovative competence may be expressed in any one of the three contexts of human relationship. And the types of innovation as against the contexts of relationship can be briefly summarized as follows:

The context of relationship to nature:
   ecological (technological) innovation.

The context of relationship to others:
   interactive innovation.

The context of relationship to oneself:
   expressive innovation.

But we have already seen that the fundamental constituent capacities of variability and bisociation are species-specific and therefore, all normal human individuals are equipped with innovative competence. In reality we may witness that only a very few of the members of any society become true
innovators. Therefore we can see that although innovative potentiality is a common gift to all men, innovative performance assumes certain other factors on the part of those very few individuals. We shall try to isolate some of the personality constituents of the innovative agents in the next section.

D. Innovative Personality Structure

Like other members of his group the innovator also is equipped with the capacities of variability and bisociative thinking. But in order to perform or actualize the innate innovative competence the innovator must undergo certain special training and must acquire the motivational force. The training involves the direct and indirect cognition resulting into a development of faculty of rationality, whereas motivational forces may also be derived from the life experiences right from the early childhood-period. Thus for any innovative performance are required two additional factors: rationality and motivation. Let us therefore attempt to distinguish the three types of personality profile of the innovative agents in terms of the cognitive and motivational elements required for expressive, interactive and ecological innovations.

(1) The Technocratic Personality - We shall call the technologically oriented innovative personality as "technocratic personality". A particular pattern of cognitive and motivational organization of mazeway is required for an innovation in the ecological sphere. The cognitive element needed for
techno-ecological innovations must refer to "instrumental rationality" by which the different types of "means-related" operations can be judged in terms of their relative profitability and opportunity cost. A large component of mazeway therefore in case of a "technocratic personality" (Here the term "technocratic personality" refers to the innovative agent in the arena of techno-ecological dimension) would consist of principles of behaviour of the machines and/or the principles of organization of the ecological activity. The peculiarity of thought processes of the innovative agent would reflect adaptation to the changes in social needs and wants through the structuring of new methods or means. Therefore, the innovative performance in the context of man-nature relationship can be called as "means-oriented" action and would result into improvement of techniques and organization of human ecological activity to attain both the static as well as dynamic ends decided or preferred by the socio-cultural setting. The second aspect of the technocratic personality refers to the socio-cultural and motivational background of the innovative agent. The motivational composition would refer to task-sensitivity and play-sensitivity of the innovator. The innovator must be made available an access to the various associations of instrumentalities. The access and action with different techniques in a specific task-complex may result into bisociative creativity. The innovator's sensitiveness to the task and sensitiveness to the operationality of different structures of techniques therefore would constitute the
The motivational aspect of the mazeway. The socio-cultural importance in creating the grounds for motivation as well as cognition of this type is undeniable in so far as the concerned person is situated in a way which enables him the development of innovative competence.

(ii) The Communitarian Personality

It is primarily important to make clear the meaning of the term "communitarian personality". The interactive innovations arise from the attempts made by the innovators endowed with a certain personality structure. The personality structure of the innovative agent in the arena of social structural and cultural changes refers to the aspect of relationship patterns available to the social actors. Such a personality formation must be sensitive to the socio-cultural processes and therefore, is called as "the communitarian personality". Here too the cognitive and motivational aspects of mazeway must be taken into account. The cognitive aspect would call forth a type of rationality different from the earlier type of instrumental rationality seen in the techno-ecological innovations. This type of rationality can be called as the "normative rationality" by which different kinds of systems of socio-cultural beliefs, goals, values etc. are judged against each other in terms of their relative potency and relevance. The normative rationality would therefore cause uncovering of the new possible combinations of the patterns of socio-political and economic relationships. The motivational aspect the mazeway profile of the communitarian
personality is "ends-oriented". The task-sensitivity and play-sensitivity, in this case would refer to the socio-political awareness and the access to and a kind of play with the different available structures of social relationships. The ends of interactive innovation can be exemplified as the values of equality, equal opportunity, freedom etc. The importance of socio-cultural situation of the innovative agent lies in so far as he is brought up and lived in simultaneously more than one referent structure.

(iii) **The Expressive Personality**

The term "expressive personality" refers to the personality structure of the one who is responsible for the expressive innovations. The cognitive aspect of the personality points at the type of rationality built in within the organizational pattern of the thought and action can be called as "expressive rationality". The expressive rationality would cause the bisociative creativity reflecting the new forms or media for the expression of individual ends. It may be aimed at the substitution of a novel structure of the self expression in place of the old one. It may give a new meaning to the individual life experiences within the changing socio-ecological structure of dynamically interrelated objects and cause further feedbacks upon the socio-cultural system as a whole. The motivational aspect composed of the task-sensitivity and play-sensitivity would refer to the perception of the necessity of change in the former structure and to a complex of experimentation with the different expressive structures.
E. Innovation and Socio-cultural Setting

The pattern of relationship between individual innovativeness and socio-cultural background may be explored at two levels or from two aspects: synchronic and diachronic. The synchronic aspect would also provide for the micro-level understanding of the impact of innovations on society and society's response to it at a given point of time while the diachronic aspect provides an insight in the understanding of long-term effects of innovations on the society and would constitute a macro-perspective. We shall, however, presently concentrate on the micro-level or synchronic study while the macro-level or diachronic study is proposed in the next chapter.

(i) Socio-cultural Setting and Provision for Innovation Stimulation

It was suggested in the earlier section that the socio-cultural situation of the innovative agents creates conditions for both task-sensitivity and play-sensitivity - the factors contributing to the formation of innovative thought. The socio-cultural setting can be said to be providing the necessary stimulation for the innovators. This provision may be channeled through the following ways:

(a) The society may set a certain task upon its members to which the latter may respond in a novel way. Such a task may be from any one or more of the contexts of human relationship, that is, to oneself, to others and to nature, and thus may be connected to the problems regarding the spheres of
human happiness, socio-economic or socio-political and techno-ecological situations. Such a task may be conveyed to the individuals through various channels such as child-rearing practices, education and so on. The stimulation of this kind may form a part of the individuals' cognitively defined system of means and ends patterns. (b) The second way in which socio-cultural stimulation of innovation may take place is the motivational aspect. Society may activate its innovative actors by means of generating a kind of motivational force within them. Motivation may be generated by status-role dynamics, by means of incentives and rewards and so on. (c) Thirdly, the socio-cultural background may build up certain institutional structures for the disposal of potential innovators. This may function in two ways: the first is that the institutional structures may be regarded as referent structures or "association" and the second is the intra-institutional variability and permissiveness itself may facilitate bisociation.

To sum up, the socio-cultural background provides a stimulation to its innovative agents by means of cognitive, motivational and institutional categories.

(ii) Primary, Adaptive and Compensatory Socio-cultural Stimulation

Socio-cultural stimulation as a whole forms a socio-cultural background of human innovativeness. But society as a structural whole is constantly embarking upon a variety of problems and the ways in which different societies attempt to
solve them are culturally patterned on the basis of thematic principles. Whatever this may suggest, socio-cultural stimulation may be further classified into three broad categories of primary, adaptive and compensatory (reactive) which correspond to the three contexts of innovations.

The socio-cultural sectors of maximum, medium and minimum priority also indirectly refer to the types of primary, adaptive and compensatory (reactive) stimulation. A further elaboration of these concepts may run as follows:

Primary stimulation of innovativeness refers to the society's setting of any urgent task with its motivational and institutional concomitants upon its members. The sector of maximum priority is the arena of deployment of primary stimulation. The innovative expressions in this context are automatically aimed at bringing about changes in the core-institutions of culture.

Adaptive stimulation of innovative agents corresponds to the society's placement of those tasks upon its innovators which aim at adaptation of other institutions to the changing core-institutions. The socio-cultural sector of medium priority reflects the domination of adaptive stimulation. Adaptive stimulation is therefore aimed at the task of bridging the cultural lag created by the primary stimulation.

Compensatory stimulation of creativity is deployed in the socio-cultural sector of minimum priority. In this case, the stimulation is aimed at maintenance of dynamic equilibrium.
between the primary and adaptive contexts by means of crea-
tivity characterized by, among other factors, reactionary
reflection of the development of primary or core-institutions.

We can therefore generalize on the basis of above
elaboration and say that the innovations caused by primary sti-
mulation are "transformative innovations". The innovative
act in the arena of top priority sector of the core-institutions,
although it actually causes transformation of the concerned
institutional structure, it also prepares the basis for trans-
formation of all the relationship structures. Different is
the case with innovations caused by adaptive stimulation.
Since they are aimed at bridging the lag between two sectors
of socio-cultural setting by means of the structural changes
in the "adaptive" sectors and at conservation of socio-
cultural entity, these innovations can be named as "conservative
innovations". The third type of innovations which are caused
by the compensatory stimulation and are aimed at maintenance of
balance among all the three contexts, can be called as
"ritualized innovations". The term "ritualized innovations"
is used to mean the inherent powerlessness of the innovative
attempts in so far as they are not aimed at and they cannot
bring about changes, by whatsoever means in the directionality
of socio-cultural dynamics determined by transformative and
adaptive innovations. All the reactionary attempts, there-
fore, resulting from this type of innovational stimulation are
held to be mere rituals in the sector of minimum priority.

Another interesting point arising from the above discussion
is worth mentioning. The relationship between the primary stimulation and its respondents is one of dignity and harmony. The innovators in the socio-cultural sector of maximum priority can be said to be the "real movers" of society. So the relationship between these two may be said to be of a "symbiotic" type in which stimulation generates innovative competence and innovative performance responds to stimulation by fulfilling the socio-cultural needs. While the relationship between socio-cultural setting and innovative respondents responsible for conservative and ritualized innovations can be called as of "parasitical" type in which the innovators play only a limited role of causing adaptation and equilibrium. The innovators of these two types are not the "real movers" of a society and thus they can be categorized as expressing parasitical creativity with respect to the transformative creativity.

F. Technocratic Society and Innovativeness: An Illustration

This section attempts to illustrate the functioning of social stimulation and innovativeness in an ideal-typical technocratic society. The technocratic society is characterized by the distribution of socio-cultural stimulation in the following pattern:

- **Primary stimulation** - Techno-ecological context.
- **Adaptive stimulation** - Social-structural context.
- **Compensatory stimulation** - Individual-psychological context.

The type of innovations expected from the techno-ecological
context is transformative innovations which bring about changes in the prevalent technological structures and the core-institutions of culture, i.e. techno-economic-ecological institutions are transformed by the emergence of new structure. The adaptive stimulation is in the arena of social structure and the conservative innovations, therefore are aimed at influencing the creation of new forms of group relationships, intra-group as well as inter-group relationships, new legislation, general social reformation etc., in order to adapt other institutions of culture to the transformative changes in the techno-economic-ecological context. The individual-psychological context in an ideal-typical technocratic society is provided with compensatory (reactive) stimulation. The functions fulfilled by ritualized innovations are important from the point of view of the harmony among the transformative, conservative and reactive contexts. The innovations here are aimed at situating the individual meaningfully in a place of optimum level of homeostasis or dynamic equilibrium with the transformative and adaptive contexts. The innovative expressions of this type may take a form of aesthetic creation: radical art and literature etc., in response to the over-development of technological organ.

This is about the functioning of social stimulation and of transformative, conservative and ritualized innovations in an ideal-typical technocratic society. Similar profiles can be formulated with regard to other types of societies. The other types of societies can be conceptualized in terms of
the deployment of social stimulation of primary, adaptive and compensatory kinds as against the contexts of maximum, medium and minimum priority in the fields of technology, social-structure and personality. In other words, there are two possible types of societies, other than the technocratic one. The first can be conceptualized as an ideal-typical "communitarian" society where the transformative context is social-structural, the conservative context is individual-psychological and the compensatory context is techno-ecological. The second ideal-typical society may be termed as "anarchic" where the transformative context is individual-psychological the conservative context is techno-ecological and the compensatory context is social-structural.

We may therefore conclude that although the innovations of all the three types are possible in all the three types of social formations mentioned above, each of the three types of societies may choose a different context for primary stimulations.