

## On the Mode of Social Research

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When we wish to understand a phenomenon which is observed or assumed to be a specified constant, we have only to find answer to the question "what is it" and ascertain "how is it" that it behaves as a constant feature. Such as, we may state that the sun rises in the east and sets in the west, and ascertain how it thus behaves constantly in reference to any place and any time. An explanation is involved in answering the question "how is it", viz. "Why is it" that the sun always rises in the east and sets in the west; but an answer to this question "why" follows automatically from the answer to the question "how": the former need not be posed as a separate question. On the other hand, if we wish to understand at which point in the eastern horizon, as viewed from a particular *place* and at a particular *time*, the sun as an *object* rises, and correspondingly sets in the western horizon, we become involved with a *system of variation* in its place, time, and object dimensions: the behavior of the sun, then, is no more an observed or specified constant. Accordingly, the question "why does the position of the sun in the eastern and the western horizon vary by place and time" acquires a meaning of its own; it is no more submerged in the question "how does it vary from point to point in the eastern and the western horizon", which retains its distinct relevance to characterize the system of variation. Following therefrom, we may ask the question "what will it be" in reference to the probabilistic position of the sun in the eastern and western horizons as viewed in the future from different place and time coordinates. And, when we have answered, sequentially, this last of the four questions, our appreciation of the phenomenon, in reference to the particular system of variation we have taken into account, is complete. For we have not only learnt of its characteristics and causality but also of its predictable behavior in the time to come.

With reference to a phenomenon, or a set of phenomena, we may conceptualize the systems of variation in a successively more and more ex-

haustive and complicated manner in order to appreciate reality evermore precisely and comprehensively. The process will evidently call for more and more exhaustive and complicated answers to the four questions we have posed above, but these four questions will be applicable to appraise any system of variation unequivocally and comprehensively. My submission is, therefore, that one may ask four fundamental questions in respect of any system of variation (concerned with one or more phenomena) in its space and time dimensions: *what is it? how is it? why is it?* and *what will it be?* The first question refers to the description of the system, the second to its classification (viz. an analysis of its internal articulations and variations as well as its interrelationships with other systems), the third to an explanation of its causality, and the fourth to the predictability of the structure, function, and process of the system of variation in the future.

As individual researchers, we may deal with one, some or all the four questions, or give them unequal emphasis when dealing with more than one question, according to our resources, inclination and ability. But, as a community of scientists, we should deal with all of them comprehensively and adequately in order that through the systems of variation examined we may accumulate knowledge on the phenomena under reference in a precise and objective manner. In social research, however, a wide variation is noticed in this respect both conceptually and operationally. There was a time in empirical social research when we laid a particular stress on the first question, dealt in passing with the second, rather ignored the third, and did not consider the fourth within our terms of reference. Non-empirical social research, correspondingly, used to be engrossed with speculations and conjectures on the third and the fourth question, with little adulteration from answers to the first two. Seldom an attempt was made to draw a sequential, objective and logically consistent link among all the four questions in reference to a circumscribed or universalized topic (e.g., Durkheim 1952; Marx 1955).

Lately, irrespective of the controversy on whether a social science discipline like social anthropology or sociology is a "science", empirical social research tends to pay serious attention to the first three questions although the answer to the third is either a matter of almost automatic deduction from that to the second (e.g., Banfield 1958) or of reference to a theory (e.g., Bellah 1957), which may be an established one—like the Marxist, Weberian, Parsonian, etc.—or an indigenous (*swadeshi*) theory mooted by the local *guru* of the researcher. Seldom there is an attempt to answer the third question by an analysis from the grass root level (e.g., Laslett 1965a). Also the fourth question is almost always avoided as "unscientific", although in respect of the live phenomena in a society we

may not be averse to *imply* "what will it be" in light of our answers to the first three questions (e.g., Benedict 1947).

The relative importance of the four questions becomes clear when we specify the purpose of social research. If our objective is to do a piece of "natural history", obviously the emphasis will be on the description and classification of a phenomenon or system of variation, which would involve an analysis of its characteristics and subsequently an examination of its interrelations with the associated phenomena or systems of variation. The third question, in this context, is virtually irrelevant; the fourth is out of the picture: If, on the other hand, we define the purpose of social research as to *explain* a system of variation, the first three questions should attain equal relevance but we may get away with the allocation of a secondary position to the third question in the aforesaid manner. Because, in spite of our casual treatment of the question "why is it" and neglect of "what will it be", we may be able to explain the role of a system of variation in a historically accomplished situation since it is then place and time bound at both ends. Consequently, within the place-time limits, the answer to the first two questions of "what is it" and "how is it" can more or less explain the dynamics of the system in the sense of suggesting plausible reasons for the *end* result (e.g., Weber 1930).

With this coverage of information, however, we cannot proceed to diagnose the *probabilistic* role of a system of variation in the future, for we are then faced with the condition that its place-time terminals are free at one end, viz. in the contemporary perspective. This is obvious for the time dimension, and the place dimension also must be free because no one knows exactly the spatial extension of the system in the future and whether (a) it will maintain its logically and operationally conceived form and content, (b) enlarge itself, (c) form a part of another system of variation, or (d) assume a new form and content altogether. Such as, nation-building in the subcontinent of India enlarged its form and content (from being only "Indian") From 1947, with East Bengal forming a part of the newly emerged system Pakistan; but, since 1971, nation-building in East Bengal has assumed a new form and content with the formation of the State of Bangladesh. A system of variation may, thus, assume one of several possible roles and the prediction of the *most probable* role may either be left to our imagination or an appraisal of "what is it", "how is it", and "why is it" of the system from the grass root level. Because only by the second procedure we may learn about its viability, propensity, and proliferation in respect of different stimuli, which will denote the *specific conditions* and the *degree of probability* under which the system may assume particular structure, function in a particular manner, and under

go a suggested process of change or register casual fluctuations around a central tendency.

An answer to the fourth question "what will it be" is not, therefore, a necessity for descriptive and explanatory research, which it becomes when the objective of social research is to diagnose the role of the live phenomena or systems of variation in a society, in whichever manner the phenomena and the systems of variation may be defined to denote a logical consistency and separate identity, respectively. In this context, all the four questions attain equal importance without any scope to ignore the fourth or dilute the content of the third question "why is it".

It follows that in order to systematize our knowledge under place-time variations, we should distinguish among the *descriptive*, *explanatory*, and *diagnostic* character of social research in as much as the theme of research refers to a specified *point*, a *closed* and an *open* circuit, respectively, in place and time, while descriptive research may also refer to a closed circuit of the place-time co-ordinates (but not diagnostic research). For example, nation-building in India today is a descriptive piece of research. Nation building in the subcontinent of India until the withdrawal of the British power in 1947 is a theme of research which refers to a history bound situation and is either descriptive or explanatory in character. A change in sight of the research theme to nation-building in the same subcontinent in the contemporary perspective may appear to be explanatory in character but it falls within the gamut of diagnostic research if it includes the *expected* course of nation-building *beyond today*, which is evidently implied in all contemporary researches unless it is of the descriptive type. Correspondingly, "Tokugawa Religion: the values of pre-industrial Japan" (Bellah 1957) falls under the explanatory category, and "The Moral Basis of a Backward Society" (Banfield 1958) falls under the diagnostic category.

My comments are not meant to deride the excellence of many explanatory studies or the usefulness of some conscientious attempts at diagnostic research, as referred to above. It is also not my contention to undermine the necessity of producing theories or making use of the available ones, which was once decried by gross empiricism and its echo is not totally lost yet. A theory, after all, answers the questions "why is it" and "what will it be" in the sequence of answering the questions "what is it" and "how is it". Any theory, however, cannot but be *place-time-object* specific: the three dimensions of variation which must be taken into account to draw a logical inference on any phenomenon as noted in Indian philosophy under the phrase *sthana-kala-patra*. The efficiency of a theory is, therefore, appraised by the valid extension of its place-time-object limits, which should ultimately approximate universality

but which it can never do fully and finally as it would then foreclose the quest for knowledge. So that, my comments follow from our continual efforts to improve the course of social research without undermining what has been achieved so far; and, in that context, our task is to clarify the role the theory is to play according to the object of our study.

There are two ways in which a theory can be used in social research. It can be used as a model to give the best possible fit to the variations noticed in "what is it" and "how is it" of a phenomenon or a system of variation, and thus utilizing the theory to answer the question "why is it". Such a use of the theory may be satisfactory when we examine a phenomenon or a system of variation in a place-time bound situation because, although more data may be brought to light in future, at the given state of our knowledge all the data are there within a closed circuit of place-time-object variations. A researcher, therefore would be justified to consider a particular theory to explain the situation while that may be disputed by another researcher who prefers, on logically valid grounds, another theory to give a better fit.

For example, while Kennedy would be justified to explain the ethos of the Parsis in India today in terms of Weber's and Merton's formulation of ideas and actions (Kennedy Jr, 1965: 16-26), another researcher may not agree with his unilateral attempt "to relate certain values with certain behavior patterns" (*ibid.*: 18) and point out that: a) the Parsis, Khojas, Gujaratis and Marwaris are four of several ethnic groups which have their homeland in the western region of India; b) according to their success in the "twin interests in trade and technology" (*ibid.*: 26), the Marwaris and the Gujaratis are to be ranked at the top of the society, the Parsis next, and the Khojas closely following the Parsis; c) following Kennedy's assumption that the Parsis are governed by the values expressed in Zoroastrianism, the Khojas are governed by the values expressed in Islam of a distinct variety, and the Gujaratis and Marwaris are governed by the values expressed in Hinduism (mainly of the Vaishnava trend) and Jainism, respectively; and d) the constellation of values as expressed in Jainism and Hinduism of the Vaishnava trend (which may not be regarded as so very apart) is certainly very different from that in Islam or Zoroastrianism. However, Kennedy's attempt to explain the situation would not be invalidated by the other researcher's comments as above and his explanation of the situation in light of another theory which may regard any relation between the above mentioned ideas and actions as of secondary or no importance. For the issue here is not of the *validity* to use one or another theory but which one of the theories is the most *efficient* to explain the situation or whether none of the available theories is adequate

for the purpose and, therefore, the answer to the question "why is it" should be sought from the grass root level of behavior patterns observed.

Evidently, the attributes of validity and efficiency are not synonymous although they may coincide under certain circumstances. Hence, the use of a theory as a means to unravel a place-time bound situation and deduce thereby the answer to the question "why is it" remains valid although it may not be efficient. But both the validity and efficiency of using a theory in a deductive-positivistic manner is lost when we enter into a course of diagnostic research. Obviously, if a theory could automatically denote "what will it be", there would have been no need for further research. In this situation, therefore, the plausible theories represent one aspect of our *a priori* knowledge, the other being given by the empirical findings in reference to the questions "what is it" and "how is it". For example, Kennedy's suggestion to employ Weber's and Merton's theories to detect "industrial rationality" (*ibid.*: 26) is to be regarded as one of the possibilities in the present context irrespective of the act that it may or may not have proved efficient in the previously discussed context. For what is needed now is to examine simultaneously the applicability and inapplicability of the relation drawn between certain values and the observed behavior patterns and similar other causal relations drawn with the same behavior patterns. That is, the theories now attain the status of *hypotheses* to be tested in the contemporary perspective although they may have been tested previously in regard to the place-time-object variations they comprehend and however extensively and intensively they may have been found to take note of these variations in the past.

We may agree, therefore, that if the objective of research is purely descriptive and classificatory as in "natural history", any theory is hardly of relevance and the strategy of research is fact-finding and interpretation of the facts found in reference to the two questions "what is it" and "how is it". If the objective of research is explanatory in a place-time bound situation, a theory may be used as a yardstick in a *deductive-positivistic* manner and the answers to the three questions "what is it", "how is it", and "why is it" may be obtained in the same manner. But if the objective of research is diagnostic in a place-time open situation, the plausible theories are to be used as hypotheses to be tested on an *inductive-inferential* base and all the four questions "what is it", "how is it", "why is it", and "what will it be" should be answered on that basis.

Now, by considering theory and practice together, which one must to conduct research efficiently (if it is not restricted to description only), we may make the following points regarding an effective pursuit of social research ;

1. With reference to a system of variation which may refer to a phenomenon or more than one phenomena (in whichever manner a phenomenon or system of variation may be identified so long as it maintains logical consistency and distinctiveness), descriptive research answers the questions "what is it" and "how is it", explanatory research answers additionally the question "why is it", and diagnostic research answers furthermore the question "what will it be". Speculations on "why is it" and "what will it be" from descriptive research, or on "what will it be" from explanatory research, are not unknown. So long as these speculations are kept separate from research findings, no harm is done since they may be considered on their face value. However, concerted attempts are sometimes made to answer these questions from descriptive and explanatory research, as applicable, which yield inefficient results. The attempts may also become futile or even harmful because the three approaches to social research have different orders of potentiality to appraise the system of variation under reference and, thus, refer to different methodologies.

2. Explanatory research is usually distinguished from descriptive research as involving a distinct method, i.e., a different form of procedure for an orderly arrangement of the proposals, data, analysis, and interpretation of the results of research. But diagnostic research is generally regarded to be a part of explanatory research, that is, it is assumed to follow the same orientation and methodology as the latter and distinguished by certain techniques or mechanical skill to be employed in reference to a particular program or subject-matter for explanatory research. Such as, diagnostic research is sometimes considered necessary to "welfare sociology" in order that how a welfare program is to be launched effectively may be ascertained. For a similar purpose, diagnostic research may be regarded as an appendage to the "sociology of development". It would be useful, therefore, to distinguish among the descriptive, explanatory, and diagnostic modes of social research because any one of them may be favored by a researcher according to his inclination, ability, and resources, but he should be aware of the scope and limitation of the respective modes of research and thus make his efforts worthwhile within the sphere of knowledge he has elected himself to be confined, instead of trespassing into others.

3. Because of its terms of reference to elicit answers to only the two questions of "what is it" and "how is it" in respect of the system of variation under examination, the orientation of descriptive research would, obviously, be deductive and positivistic, and its methodology would be geared exclusively to deductive techniques. The additional term of reference to answer the question "why is it" does not require a shift in the orientation of explanatory research from the descriptive because;

(1) the contour and content of the system of variation examined are specified by its place-time coordinates, i.e., its limits are imposed; and (2) the course of research is geared to substantiate a causal explanation in the light of a prevailing theory or a hypothesis evolved out of empirical findings. However, inductive techniques enter into the methodology of explanatory research in order to apply the concept of probability to test the validity of the theorized or hypothesized causal explanation.

4. For diagnostic research, on the other hand, the future limit of the system of variation under examination cannot be fixed in the place-time co-ordinates because its ultimate term of reference is to answer the question "what will it be". Pursuantly, for the "open" system, the answer to the question "why is it" cannot be obtained from an explanatory theory or empirically formulated hypothesis. It is now necessary to ascertain from the grass root level the viability, propensity, and proliferation of the system of variation in respect of different stimuli so as to predict, probabilistically, the future course of behavior of the system. The question "why is it" thus assumes a greater significance than for explanatory research, and all that is known and knowable regarding the system, from theory and empirical findings, will have to be marshalled together in order that the relevant theories and *a priori* hypotheses from a systematically ordered series of *alternate hypotheses*. These are to be tested against an appropriate *null hypotheses* in order to find a more and more precise and unequivocal answer to the question. Also, in order to facilitate the course of diagnosis and make the answer to the question "what will it be" evermore precise and comprehensive, the alternate hypotheses should be conceived to form an *infinite but enumerable series* and to emerge *unrestrictedly* from the field of variation dealing with the "open" system. For the alternate hypotheses will be formulated successively in a fuller and better form along with our accumulation of knowledge in respect of this field of variation. The orientation of diagnostic research, therefore, must be inductive and inferential, and its methodology would involve a constant interaction between the deductive and inductive techniques.

5. The inductive-inferential orientation and the corresponding methodology may appear to be relevant to explanatory research also because more than one theory or empirically formulated hypotheses may be employed to a certain which one of them gives the "best possible fit" to answer the question "why is it" regarding the system of variation under examination. But, so long as these theories and hypotheses form a specified finite series, conceptually and methodologically,—(i.e., an explanation of causality in the system of variation is sought through a predetermined and specified set of theories and *a priori* hypotheses),—the deductive-positivistic orientation would be adequate to answer the question "why



is it". Only, in this case, inductive techniques to test the theories and hypotheses would be not only relevant but also a necessary condition. Since the terms of explanatory research end with answering the question "why is it" in respect of a place-time bound situation, it does not require the formulation of "alternate hypotheses" in the manner proposed for diagnostic research; i.e. as forming an infinite but enumerable series and emerging unrestrictedly from the field of variation which produces them. Correspondingly, its methodology does not require keeping room for taking into account any number of alternate hypotheses which, for diagnostic research, will be formulated sequentially and unrestrictedly as our knowledge on the system of variation under examination becomes evermore precise and comprehensive by successive research operations. Obviously, if the terms of research are extended to include the question "what will it be", explanatory research would equate to diagnostic research for which an inductive-inferential orientation is a relevant and necessary condition, just as the need for a different methodology is.

6. The inductive-inferential orientation may appear to be relevant to explanatory research also on another count: it may seek for an explanation of interrelations among a number of systems of variation. Such as, the question "why is it" may refer to the phenomenon of feudalism as portrayed exclusively in the European context or as referring also to feudalism in China, Japan, India, etc. However, those denoted as different systems of variation must be analogous, if not homologous; otherwise there would have been no point in seeking for one causal explanation for all of them. Logically, therefore, they would be more appropriately denoted as sub-systems, and that which would have been regarded as interrelations among a number of systems would be better considered as variations between the sub-systems and within a system. Also, as stated regarding a set of theories and *a priori* hypotheses for explanatory research, these sub-systems should constitute a predetermined and specified set within the closed circuit of place-time coordinates of the field of observation, since explanatory research (ending with the question "why is it") cannot be undertaken otherwise. Therefore, the inductive-positivistic orientation would be adequate for this kind of research, with the application of inductive techniques as a necessary condition of its methodology to ascertain objectively the nature and degree of variations among the sub-systems. For diagnostic research, on the other hand, whether the system of variation under reference would remain as it is in the perspective of "what will it be", or enlarge itself into a system with sub-systems, or become a sub-system within a other system, or assume a new form and content, is a matter of probabilistic inference and not of data or deduction as in the case of explanatory research.

Therefore, the conceptual and methodological distinctiveness of the diagnostic approach to social research would hold ground even though the scope of explanatory research may be enlarged on infrequent occasions.

7. Within its limited scope, the descriptive approach to social research can be applied to any situation: historical or contemporary, i.e., at a specific point or closed circuit of the place-time coordinates of the system of variation under examination. Because of the nature of the task involved, the explanatory approach can be applied to any time-bound or historically accomplished situation, i.e., when the place-time coordinates of the system are fixed and they form a closed circuit. Correspondingly, the diagnostic approach is to be applied when the place-time coordinates of the system are free in the contemporary perspective and the purpose of research is to describe, classify, explain and predict "what will it be" of the system by means of probabilistic inference. This need of social research cannot be fulfilled by either the descriptive or the explanatory mode of research.

In this brief communication, it is not possible to elucidate the above points and discuss the conceptual framework and methodology of the three modes of research. The landmarks of such a discussion, however, are given in the following three inter-related diagrams.

It is also not possible here to discuss the need to consider the strategy of diagnostic research. For the "developing societies" it is obviously a felt-need since "what will it be?" is the key question in their context. For the "developed" societies also it may be pointed out that the issues, like, social change, social development, nation-building and state-formation are no less relevant to them as they are to the "developing" societies, provided we bear in mind that the crucial question "what will it be" is as much applicable to the former as to the latter. Moreover, I may suggest that the issues, like, the Black movement in the U.S.A., the students' upsurge in France and Germany, or the "nonconformism" of the Hippies throughout the world, can be more comprehensively ascertained by diagnostic than explanatory research. Indeed, social research is mostly "tailing" behind social events because we do not unequivocally ask the question "what will it be", which is the kernel of the diagnostic approach. The host of descriptive and explanatory researches failed to indicate, in the recent past, "what will it be", in Indonesia, Nigeria and East Pakistan, or "what will it be" now in Vietnam. The point is valid also regarding many "social" issues we face in the international arena or within respective "developed" and "developing" societies. I would submit, therefore, that the diagnostic approach is not only appropriate to any particular branch of social research (like, "welfare sociology" or the "sociology of development") and the "developing societies", but also to social research as a whole and to all societies.

Diagram 1

Mode of research	Descriptive	Explanatory	Diagnostic
"Object" of research	A constant phenomenon or a system of variation	A system of variation	A system of variation
Place-time coordinates of field of observation	Specified at a point or forms of closed circuit	A closed circuit	An open circuit; free at the contemporary terminal
Scope of research	Description, classification	Description, classification, explanation	Description, classification, explanation, prediction
Terms of reference to answer questions:	What is it? How is it?	What is it? How is it? Why is it?	What is it? How is it? Why is it? What will it be?
Orientation	Deductive-positivistic	Deductive-positivistic	Inductive-inferential
Methodology:			
a) role of theory	None	Yardstick for causal explanation: singly or in a predetermined finite series	Produce alternate hypotheses in an infinite but enumerable series for causal explanation and probabilistic prediction
b) role of empirical findings	Ascertain internal characteristics and classify via-analogous constant phenomena or systems of variation	Characterize, classify, and formulate hypotheses for causal explanation - singly or in finite series	Characterize, classify, and produce alternate hypotheses in the same manner and for same purpose as re: theory
c) procedure	Deductive and descriptive (see Diagram 2 in p.101)	Deductive and descriptive; and also inductive-analytical to test theorized or hypothesized explanations (see Diagram 2 in p.101)	Cyclical (strictly, spiral-like) and phase-wise within cycle, interaction of deductive and inductive techniques (see Diagram 3 in p.102)

Diagram 2

Organisation of activities to answer the fundamental questions

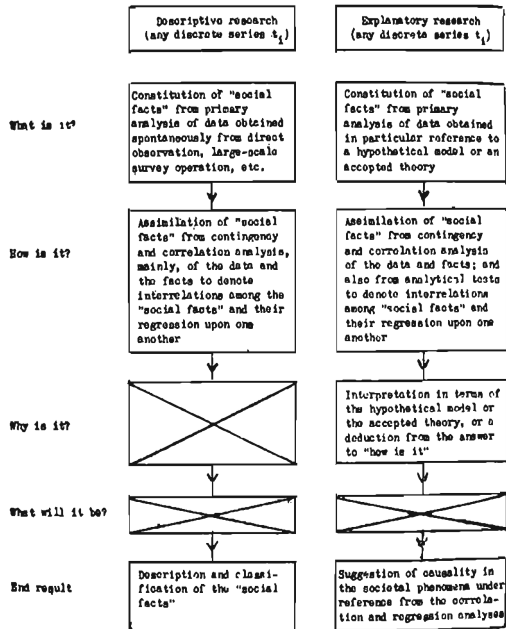
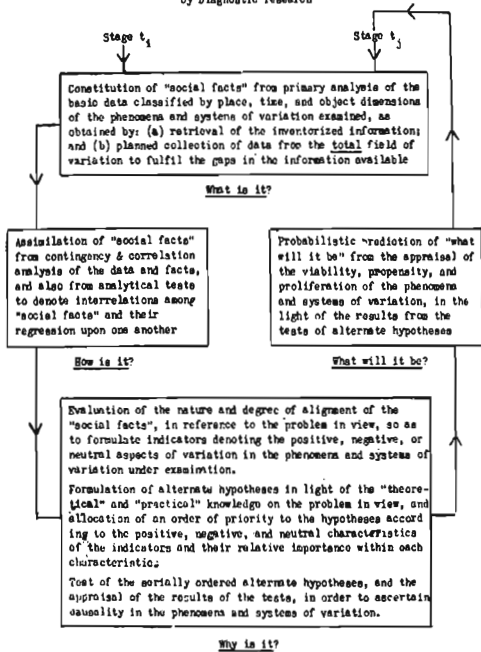


Diagram 3

Organization of activities to answer the fundamental questions  
by Diagnostic research



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