

### Book Review

## *New Dimensions in Sociology: A Physico-Chemical Approach to Human Behavior*

by Mirza Arshad Ali Beg; Karachi: Hamdard Foundation Press, 1987.

Let us start with the title of the book. Its first part is hardly exciting. Several sociology publications currently carry similar titles: *New Horizons in Sociology*, *New Directions in Sociology*, *New Debates in Sociology*, or merely *New Sociology*. It seems that most people writing about sociology these days must write something new or not write at all.

What is new about this book can be seen from the second part of its title, *A Physico-Chemical Approach to Human Behavior*—eye-catching, even startling. There have been organic, evolutionary, and ecological analogies used by sociologists in the past, often with great success. However, physico-chemical analogy is something else. If, by using this title, Dr. Beg had in mind to shock sociologists into reading his book from cover to cover, he must be congratulated, for, no doubt, the title is intriguing, to say the least.

The contents do not reveal too much about the book. However, they must not be taken lightly. Wilson (1975) produced yet another “new” and asserted that human values, even customs and traditions, are genetically transmitted from one generation to another. Since then, he has won a number of adherents to his point of view. So here it is: a physico-chemical approach to sociology. If Harvard publishes treatises like Wilson’s *Sociobiology*, how can we reject Hamdard’s *New Dimensions* as being out of hand? After all, Wilson is a zoologist with hardly a flair for sociology in his dossier.

The author of this book, Mirza Arshad Ali Beg, is a trained and experienced chemist with graduate degrees from Karachi (M Sc.) and British Columbia (Ph.D.). He began in 1941 as a senior research officer at the Pakistan Council of Scientific and Industrial Research (PCSIR) and in 1985 became the director of its facilities in Karachi. Since then, he has been promoted to the secretarial rank in this organization. Dr. Beg has also held several important posts in national and international organizations.

Apparently, Dr. Beg is a qualified, experienced researcher in chemistry. As such, it is to his credit that in this book he has ventured far afield from his area of specialization. This book is a testimony to the fact that sociology is not, has not been, and must not be the exclusive domain of sociologists. All throughout its relatively brief history, sociology has benefitted from the contributions of historians, philosophers, psychologists, even engineers. Thus, if a chemist is trying his hand this time, we must not be too shocked.

With this said, we expect that someone writing about any area of investigation must have some prior exposure to the field. This exposure familiarizes him with the main body of literature, research, and, more importantly, practitioners of that field who are going to be his principal audience. When Dr. Beg is writing about sociology, however, he seems to be hampered by, among others, two major difficulties.

First, he does not speak the language of sociologists, and he does not seem to be very knowledgeable about some of the fundamental concepts in sociology. Take the concept of socialization as an example. Both Dr. Kazi, one of the preface writers, and Dr. Beg use socialization as meaning "interaction" or "association."

Man socializes because he has to interact with his fellowmen and has to avoid isolation . . . The process of socialization involves superficial contacts with a number of people who form the majority society and a simultaneous intimacy with at least a few . . . (p. 70).

Now, we know that in sociology, as well as in anthropology, psychology, and political science, socialization has come to mean the process of learning in interaction, not interaction per se. There is no doubt that Dr. Beg is entitled to define this, or any other sociological concept, the way it suits him. However, he has to redefine the concept; and this redefinition of an otherwise standard sociological terminology, on the one hand, betrays his ignorance of the field. On the other, it hinders his communication with sociologists, the intended audience of his book. In doing this, he puts us in the same dilemma he faced while listening to chemical analogies in lectures on public administration (p. vi).

Dr. Beg's second major difficulty is that he is quite oblivious to some of the highly qualified sociologists around him. His book does not have any comments by, or perhaps was not even discussed with Basharat Ali, the old guard of Islamic sociology; Arif Ghayyur, Director of Demographic Research; and Dr. Mufti, Chairman of the Department of Sociology—all of them at the University of Karachi. These eminent sociologists could have been of great help to him, but they are conspicuous in the book by their absence. A prior consultation with these and other sociologists in Pakistan would have given a sociologically more intelligible expression to this book. As it is, it appears this book is written not for the consumption of sociologists, but for the sociological education of chemists.

There is "A Foreword by a Sociologist," written by Jamil Jalibi, the former Vice-Chancellor of the University of Karachi and author of *Pakistani Culture*. While this prize-winning monograph exists, it is not certain that Jalibi has any formal training in sociology, although his literary contributions in Urdu should be appreciated.

We do not mean to chastise Dr. Beg for these weaknesses. In his own humble way, he admits that this book "is based on a layman's understanding of social science" (p. 3). Our remarks are meant mainly to show how this book could be more meaningful for the new social science colleagues with whom he wants to establish dialogue. It is in this spirit that the rest of this review should be read by him and by others.

Dr. Beg continues: ". . . but these interpretations have been attempted in order to introduce the physical concepts to the social scientist and if they are applicable at all, there is scope for quantification of ideas" (p. 3).

There is no doubt that quantification of data is a nagging problem in sociology, as well as in other social sciences. However, some sociological data is purely quantitative. For example, all demographic variables are quantitative, as are those related to income, education, voting, marriage, divorce, crime, and all those variables that can be counted as numbers. This is how we speak of crime rate, divorce rate, literacy rate, etc. In fact, if we limit ourselves only to the observation of raw behavior, we may always end up with quantitative information, with or without the help of any physical or natural science models. Sociometry, sociograms, and leadership studies in small groups can be cited as examples. Likewise, spies, secret police, and both private detectives and insurance detectives are known for making observations on patterns of behavior among their target individuals. However cumbersome, one may try to observe the weekly trip of the middle-class housewife to the supermarket, or observe how often a person loses his temper and with whom.

In short, observation of human behavior as frequencies is not an impossible task in sociological research. However, the difficulty arises when we are looking for the cause(s) of these behavioral frequencies. Around the turn of the last century, when Durkheim (1950) remarked that "social fact follows social fact," he meant to say that these behavioral frequencies are causally correlated. Thus, he was looking at social phenomena in much the same way economists do when they try to short-circuit the problem by correlating the variables like demand, supply, price, cost, and profit margins, operating in a free market system, seeking equilibrium. Sociological researchers were able to point out a long time ago that these correlations are often insignificant, obscure, and delayed, and, are seen only in the presence of other intervening variables. Now we know that classical economic models have come under serious criticism, especially during the late 1970's, much for the same reasons.

Some sociologists have tried factor analysis whereby they throw all conceivable variables into the computer in order to discover the most significant underlying associations (Wells, 1987). However, when this is done, it is quickly discovered that most sociological variables are only of dubious quantitative quality. For example, how could we quantify such variables as opinion, attitude,

fear, religiousness, identity, dignity, marginality, materialism, individuation, and, for that matter, Dr. Beg's favorite variables—affinity and assimilation?

The main question in sociology, then, is not that of any physical science analogy or modelling. The question is one of quantification of information, especially that pertaining to what lies behind visible behavioral frequencies.

This problem is basic to all social science. This is so, because man, the actor, does not act automatically. He does not seem merely to react as physico-chemical particles do. Rather, he responds by thinking or what we call perceiving—giving meanings to the actions of the other(s), sifting options, contemplating future consequences, reflecting on any hindrances and planning to overcome them—by commissioning himself to make the move. Going through these steps, the perception of the actor may be wrong, partly or completely. What is important is that with each step taken to his satisfaction, he becomes more prepared or motivated, thus coming closer to take the final step. Human motivation, then, is not merely a push or an impact varying in intensity. It is, in fact, a subjective process that develops over time in an advancing, back-tracking, tentative fashion. People start doing something but do not finish it; they start doing something and end up doing something else; when they overcome all the odds, they may finally reach the point of commitment. Let Dr. Beg reflect on this and recapture the dilemmas he considered before he finally set his mind to finishing this book.

No physico-chemical, biological, astronomical, or evolutionary model can capture this subjective and tentative character of human motivation as a process in quantitative expressions. Dr. Beg must be credited for recognizing motivation as a process (p. 167). Still, it is not the same as interaction, a process that is objective and, thus, quantifiable. Motivation remains involved in any interaction but only as a hidden and elusive entity. It is much for the same reason that Dr. Beg's equation 5.8 (p. 110) would necessarily remain unverifiable. This is so because man was created differently from all other things in the universe, whether these things are chemical particles, biological entities, or heavenly bodies.

No book on human behavior would do justice to this subject without first alluding to human nature. What makes human nature different from other things in creation is the fact that humans possess a tendency for self-centeredness and self-perpetuation, in addition to an ability to speak and develop complex language(s), all of which help them make deliberate decisions. (For details, see Ba-Yunus and Ahmed, 1985). Dr. Beg would agree that physico-chemical particles are not endowed with these traits.

This must explain why fugacity, or escape tendency, among particles is not comparable to human migration. Even under extreme distress, migration is a result of a few deliberations: to go or not to go, where to go, when to go, what to expect, etc. In helium, for example, fugacity is given. In other

gases, fugacity may be highly uniform under certain conditions.

This book, from a scientific point of view has many other problems. Dr. Beg's observations are selectively picked, not randomly. The topics he discusses fall woefully short of the full scope of sociology. Sociology as a chemical solution may have only limited use as an analogy in sociology. Social relations are far too structured, and individuals play far too many roles to be equated with particles in a solution. Modern demographic theory has gone far beyond his fugacity theory in that the former deals not only with the "push" factors, but, more importantly, with the "pull" factors, which more often give a "push" to an otherwise non-fugacious person.

Dr. Beg could easily have managed other shortcomings in his book. For example, he seems to have a complete disregard for giving proper references. His view of sociology is based on books published more than twenty or thirty years ago. Even so, we feel an empathy for him. He must be encouraged in his effort to understand society.

We believe this is a beginning effort for Dr. Beg. As such, the book has serious flaws. We suggest our comments should not be taken as a final verdict. However, they must be taken seriously if Dr. Beg wants to pursue his newly found interest in the future.

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