

# George, Pulivelil M.

---

## Psychological, Social and Philosophical Implications of Reductionistic and Humanistic Models of Man in Social Sciences

---

Organon 18 19, 17-38

---

1982 1983

Artykuł umieszczony jest w kolekcji cyfrowej Bazhum, gromadzącej zawartość polskich czasopism humanistycznych i społecznych tworzonej przez Muzeum Historii Polski w ramach prac podejmowanych na rzecz zapewnienia otwartego, powszechnego i trwałego dostępu do polskiego dorobku naukowego i kulturalnego.

Artykuł został zdigitalizowany i opracowany do udostępnienia w internecie ze środków specjalnych MNiSW dzięki Wydziałowi Historycznemu Uniwersytetu Warszawskiego.

Tekst jest udostępniony do wykorzystania w ramach dozwolonego użytku.



*P. M. George (Canada)*

PSYCHOLOGICAL, SOCIAL AND PHILOSOPHICAL IMPLICATIONS  
OF REDUCTIONISTIC AND HUMANISTIC MODELS OF MAN  
IN SOCIAL SCIENCES<sup>1</sup>

INTRODUCTION

Modern science, though it was an intellectual break-through in the history of the Western world, grew up partly as a rejection against the metaphysics of classical philosophy and the traditionalism of religions. Traditional religion was too doctrinaire, and classical philosophy too metaphysical (i.e. too non-empirical) for the new science. Modern science developed what is known as the mechanistic approach to Nature. The mechanistic model demythologized and demystified Nature; not only a new understanding, but also a new method of controlling Nature emerged with science. Each new discovery led to a new technique of controlling Nature. Moreover, there was more interest in developing the technical know-how than in understanding reality at a deeper level. Thus science and technology went hand in hand with ever-increasing interest in controlling Nature. Nature increasingly became something to be controlled rather than appreciated. This is not to deny the fact that the history of science has had its rough waters. The "Romantic Movement", for example was a protest against the cold, impersonal technical outlook of the mechanistic approach of science.

During the 19th century when social science was born, natural science was a well-established institution in the West. Thus it was natural for the new born social sciences to borrow the general outlook from the natural sciences. The early social scientists thought of society from a mechanistic point of view. Comte, for example, called his new science "social physics" before he coined the term "sociology." However, in social science, the limitations and dangers of reductionistic approach became increasingly clear; thus an antithesis to the reductionistic approach emerged in social science. The new approach is called the humanistic approach, since it

<sup>1</sup> The term 'man' is used for this article as a generic term which includes women too.

drew heavily from the humanistic philosophies of the West. Though a single, coherent philosophy could not be assigned to the humanists, they represented an alternative to the medieval theological explanations (Martindale, p. 199) and the mechanistic-reductionistic explanations of the new sciences. Reductionism is basically quantitative, analytical, empirical, environmentalistic and experimentalistic in approach; it represents an attempt to understand man as part of Nature whereas humanism is an attempt to understand man as a being who transcends her. In general, reductionism in social science emphasizes the influence of the environment on man whereas humanism the influence of man (the subject) over the environment. For details of these two approaches see the author's recent article on the topic (1979).

In social science there has been a general disinterest in human nature as a reaction against the metaphysics of classical philosophy and against the negative view of man held by the traditional religions. In other words, the pre-scientific view of men was not only too rigid (in the sense that it explained everything about human behavior) but also too negative (in the sense that man was evil by nature) for the scientists. Thus the "plastic" conception of man as the product of his environment became highly suitable for the empirically oriented social scientists. Though human nature is seldom, if ever, explicitly dealt with in social science, the question could not be avoided; a concept of human nature was implied in the concepts and theories as well as in the techniques used in social sciences. Facts and findings could not be discovered or arranged or analysed without the help of models of man in social science any more than such goals could be accomplished by natural sciences without the help of models of Nature, however implied these models might be. What Maxey says about females is applicable to the males as well. With regard to the modern understanding of woman, Maxey says that behind the fact and logic, there lies a model of woman with which facts are generated and logic applied (p. 273). It is clear that we need and use models of man in social science. Moreover, the kind of models of man we use in social science will have profound psychological, social and philosophical implications. The author intends to clarify some of the above-noted implications of reductionistic and humanistic models of man.

#### MAJOR FORMS OF REDUCTIONISM

In science as well as in philosophy reduction is unavoidable. Every model, theory or concept involves reduction of complex materials to manageable limits; but reductionism goes further; it involves an insensitivity to the other dimensions or aspects of reality. To put it another way, the reductionists confuse reality with their models and theories of reality. They assume that reality is as smooth as their models of reality are, for example. Regarding the nature of man, there are basically two kinds of reductionism in social science. They are:

MECHANISTIC-PLASTIC REDUCTIONISM<sup>2</sup>

In Western thinking, mechanistic tendencies emerged in philosophy and science as a reaction against the religious world view as I have already noted. The religious view of "mystery" was seen as an obstacle to a rational and scientific understanding of Nature. To the new "secular" thinkers there was nothing mysterious about the universe; it was like a machine. Newton thought of the universe as a watch (clock); Hobbes reduced the intellect to a central nervous system, and Descartes to a thinking machine.

No doubt for the quantitatively and empirically oriented social science, concepts such as "mystery", "soul," "self," "intellect," etc. were not useful; it looked for more empirically rooted concepts.

The conception of man as a machine has had both epistemological as well as social consequences. According to the mechanistic view, man was supposed to resemble a machine, in the sense that unless something significant is altered, he was expected to operate in a fixed fashion (Zaltman, p. 120). Thus man lost his internal, *human* dynamism and became a static phenomenon. Moreover, man was supposed to function like a machine (in the sense that he was to act according to certain fixed, universal laws, a view which created not only an optimism in reducing the complex human-social life to a few (preferably to a single law) laws, but also the arrogance to control the human social life as a mechanic would control his machine. On the other hand, the static mechanistic view of man has had highly conservative social implications. In fact in Parsons' *Social System*, the conservative implications are quite clear; every social system has a tendency towards equilibrium according to Parsons' balance model, a type of mechanistic approach which missed the inner *human* dynamism of societies; dynamism of societies was reduced to a mere adjustment on the part of societies to the forces of disequilibrium; a society in equilibrium is in a stable condition; such a society has practically no internal dynamism of its own.

The modern concepts of "rational man," "economic man," etc. are outgrowths of the old mechanistic model of man. Once man is treated as a walking calculator which adds and subtracts the units of pain and pleasure (punishment and reward or losses and profits), everything can be reduced to quantities. It is not an accident that cash became the central value in modern industrialized societies, a point which Simmel made clear, for the quantitatively oriented reductionists the new model of man as a calculator was ideal. Profit, loss, GNP, etc., are quantitative data prone to all sorts of statistical analysis. Quantity rather than quality became the key emphasis with the conception of man as a calculator. The role of any humanistic po-

<sup>2</sup> Though technically two kinds of reductionism are involved here, they are basically treated as one, since both forms reduced man to the inanimate level.



sition is not to deny the rationality (calculating nature of man) of man, but to clarify the misleading implications of viewing man as a calculator, for example. Man is not as rational as the rationalists tend to imply; moreover rationality involves more than calculating the units of pain and pleasure. Everything cannot be reduced to units of pain and pleasure and human decisions are not made with the relative ease and smoothness as the rationalists imply; man feels ambivalent, guilty, frustrated and angry as well as jubilant and unconditionally committed without any regard for the costs involved. There is more to life than adding and subtracting the units of pain and pleasure. It is the role of any humanistic model of man to make it explicit what that *more* is all about. However, the above noted task can be achieved only in the light of the particular reductionism which is prevalent in the society and in social science at a particular time. Thus humanistic models make no attempt to be ahistorical; they are rooted in history. Neither do they aim at reducing complex human social world to a few eternal laws. What the humanistic models aim at is to develop insights, preferably profound ones, about man regardless of their form; the form of the propositions are secondary to the insights they reveal about life. Neither do the humanistic models generate over-confidence in the social scientists in knowing and controlling social life. Thus humanism, unlike reductionism, in social science is associated with a deep sense of humility. In one sense, both the mechanistic and the plastic conceptions of man represented a dynamic, revolutionary approach to life compared to the approach of classical religions and traditional philosophy; however the kind of dynamism was a dehumanized, mechanistic-plastic dynamism; yet both were highly static in orientation. However, the plastic model of man is far more dynamic and revolutionary than the mechanistic model of man. The plastic conception of man represented the new, optimistic, liberal attitude towards life; it was definitely anti-traditional in outlook. The socio-political world was wide open for those who held a plastic view of man. John Locke, the English liberal, thought of mind as a *tabula rasa* at birth. B. F. Skinner in America and other environmentalists followed a similar conception of man. Plastic conceptions involve a dehumanization of man. Even what is written on the blank sheet is good, it is still the writing of others and not the authentic self-expression of the individuals as Drews and Lipson note (p. 10). A truly plastic man has no authenticity; he is a robot and not a person.

The negation of human nature as a metaphysical notion was ultimate in Lockean philosophy. Durkheim followed a similar approach in considering man exclusively as a role-playing social animal. Thus the question of what man *really* is behind all the roles he plays, is an irrelevant question for those who hold a plastic view of man. Neither could they raise the implications of playing conflicting roles for man. How long can he play conflicting roles without losing his sanity or self-respect? The plastic conception of man was supposed to indicate the highly flexible, open nature of man. The humanistic models object to the implication of a wide open conception of man. It is true that man is able to adjust to a wide range of environments; however man's

flexibility is not without limits or some adjustments not without dangerous consequences. It is the position of humanists that man cannot adjust himself to dehumanized environments without paying a heavy price in human terms.

The mechanistic-plastic conception of man has manipulative as well as fatalistic and relativistic implications. The social scientists cannot accept a truly plastic conception of themselves if they are to take their work seriously. The questions of truth and logic are meaningless within a truly plastic conception of man. So the social scientists who adopt a plastic view of man are forced to have double standards—one for themselves and another one for others. Those who looked at man as machine, thought of themselves as the mechanics with all the socio-political implications of power. If man is a machine, then mechanics who know the mechanisms of human social behavior are in a position to fix and control (run) the machines. Similarly, those who held a plastic view of man thought of themselves as the potters who had the know-how and the right to shape the clay. In other words, looking at people as things soon opened the way to treat people as things (Baum, 1979, p. 33). Those who write and program social control are not the ones to be programmed; they remain above their programming! Thus the psychological theories of *tabula rasa* fit easily with the socio-political hunger for power and prestige as Drews and Lipson point out (p. 10).

Among the general population, those who thought of themselves in mechanistic-plastic terms became highly fatalistic or relativistic in attitude. A great deal of modern indifference and pessimism towards social life is related to the reductionistic view of themselves on the part of many people. Thus reductionistic approach creates both a manipulative as well as fatalistic attitude towards life. In general the people in power tend to be manipulative and those without power fatalistic. So it is no accident that the plastic-mechanistic social science is deeply involved in the so-called establishments of power (state, multinational corporations, etc.) and working for them directly or indirectly. Psychology, psychiatry, sociology, etc. are, for the most part, attempts to help man to adjust to the status quo. A major driving theme of modern social science is that man can be made as reliable and adjusted as machines (Nordskog, p. 105). Normality, smooth function, efficiency, etc., are treated as good. Thus reductionism is in harmony with bureaucratic outlook. The plastic-mechanistic models of man cannot encourage man to be "critical" because to do so is to assume a depth to man which the reductionists are unwilling to do. The technocratic, value-free understanding of social science has brought the reductionistic social scientists to an unholy alliance with the socio-political power centers.

However, reductionism has a strong value-oriented position too. To the reductionists, science is the ultimate value. The scientific knowledge would lead to scientific morality. Not only the ends which they recommend are valid, but so are also the means, because they are rational scientific means and ends. Moreover, the goodness of the scientists is also unquestionable. Positivism is a classical example of such a view of life. Comte, a positivist, thought of sociologists as priests and

himself as the "high priest." Thus the elitism is not only intellectual but also moral. However, we have every reason to suspect the rationality (objectivity) of the solutions and the integrity of the social scientists when their solutions tend to put them on the top of the social ladder and when they do not hesitate to be involved in power politics. It is the role of humanistic models (in social science) to challenge the value-free, technocratic as well as the positivistic, value-oriented positions of reductionism.

The development of modern technology known as "behavioral technology" raises epistemological as well as moral questions. What does taste or consent of the people mean if they are being manipulated by electronic gadgets? What do social values or attitude mean if they are controlled through the mass media by the experts? The implication is clear. We can no longer take *human* data on their face value. We need to look at the socio-political power structures behind the data, before we can analyse the data. Morally, what right do we have to manipulate and control others? What reasons do we have to believe that the horrors noted in 1984 or in *The Brave New World* would not materialize if scientific reductionism is left unchallenged. This is where a humanistic model with its deep respect for man is highly useful. We need the kind of respect for the individuals' rights as Bertrand Russell made it clear, if we are to avoid the scientific horrors in this age (p. 51). Thus the humanistic conception of man puts us in touch with the classical traditions of the Enlightenment.

#### ANIMALISTIC REDUCTIONISM

When the mechanistic-plastic reductionism took physical sciences as its model, the animalistic reductionism took the biological sciences as its model. Animalistic reductionism treated man basically as an organism, rather than as a person with feelings and higher needs and capacities such as the needs for creativity, self-expression, love, etc. In psychology, what is popularly known as the "rat psychology" and social Darwinism in sociology, are some of the examples of an animalistic approach in social science. Man's instincts, drives, bio-physical needs, struggle for survival, etc. become the key areas of interest in the animalistic perspective.

Though the internal dynamism of man which got lost in the mechanistic-plastic reductionism, was brought back to a great extent, by the animalistic models; here too, the dynamism was not *human* in nature; it was basically a biophysical type. Freud, for example, thought of man predominantly as a biosexual organism. Thus as Eric Fromm points out, Freud missed the deeper significance of sex for human beings (1956; p. 31). Reductionism is not only unable to tap the human significance and depth of life, but also creates the illusion that life does not have deeper dimensions. Man becomes an organism which can be easily controlled and manipulated by drugs and other chemicals. The heavy use (and misuse) of drugs and alcohol in modern societies is not unrelated to the modern conception of man as an organism. The tragedy of the above-noted illusion is much more severe when we assume

that life can be made happy and meaningful by the use of drugs and chemicals. It is the role of any humanistic model of man to make it explicit that man cannot be happy and his life meaningful until he is treated as a person, and that all attempts to manufacture or manipulate happiness or meaning are likely to end up in destroying a good deal of human qualities, regardless of how successful it may appear from a short-perspective. If man is conditioned or programmed to be happy, he is likely to have doubts about himself when he does reflect on his experience of happiness. As long as man's reflective ability is left in man, we cannot manufacture happiness indefinitely. Thus the short-term impact of manipulation is different from its long-term impact. This is why the humanistic model separates the short-term impacts from long-term impacts in dealing with man, and pays particular interest to the long-term impact. The reductionistic approach with its experimentalistic, objectivistic orientation pays more attention to the short-term impact. Moreover, the manufactured happiness is qualitatively different from the authentic happiness of man, according to the humanistic view of man. The happiness which involves the depth of man is superior to the organic pleasure created at the animal level. The humanistic models are interested more in the truly human happiness of man rooted in his depth. Thus humanistic approach calls for a qualitative orientation to life.

Perhaps the worst aspect of the animalistic reductionism was that reductionists took the worst aspects from the animals. Animals were regarded as aggressive, competitive and destructive. It was Kropotkin (1955) who made it explicit, more than anyone else during the 19th century, that the animals were engaged in a great deal of cooperation and that cooperation had been a help rather than a hindrance in the process of evolution. Not only animals were viewed in negative terms, but so were the human beings. Konrad Lorenz makes it explicit that man is an aggressive animal. For details see Stevenson's discussion of it (pp. 106-107). The animalistic reductionism went further than portraying man in negative terms; it assumed that the competitive, aggressive struggle for survival was the moral law of Nature, the basis of evolution. The struggle was to lead the animals, including man, to higher levels of evolution. In Herbert Spencer's thinking competition was to lead ultimately to a cooperative, higher stage of evolution in the history of man! Thus the survival of the fittest (destruction of the unfit, by implication) emerged as the new philosophy of life, a philosophy which was highly suitable to the competitive capitalism of the 19th century.

Though there are modern researches which indicate that animals have what the researchers call "an explorative motive" over and beyond the biophysical needs (Zaltman, pp. 119-120), social sciences are yet to incorporate such a view of the animals to their philosophy. The manipulative implications mentioned earlier in connection with the mechanistic-plastic models are applicable to the animalistic models too. In fact reductionism, with its experimentalistic orientation, presupposes tight control over its animal as well as human subjects. This is why the reductionists



have had more experiments with inmates, mentally ill, mentally retarded, etc. (May, 1972, p. 106). Reductionism is vulnerable to exploitation of its subjects. Greater socio-political control means lesser need for moral accountability on the part of the researchers. The ultimate value in reductionism is scientific knowledge, knowledge derived under controlled conditions. In humanism, the ultimate value is the human being; thus humanism has a built-in protection against manipulative techniques and approaches. Equally important is the fact, from an epistemological point of view, that reductionism tends to concentrate on the pathological aspects of life such as aggression, social problems, etc. rather than on the positive aspects of life (Sorokin, pp. 3-4). It is not an accident that areas such as deviance, criminology, social problems, etc. are far more popular and advanced whereas areas such as sociology of art, music, etc. are almost unheard in the main stream of Western sociology.

Humanistic models are *not* against working with animals. No doubt costly and dangerous experiments have to be done on animals before they can be done on human beings. But a humanist is likely to view animals with a sense of care and concern and the human beings with still greater care and concern. Not only the techniques, but also the very attitude the scientists take is different in the humanistic and the reductionistic models. Moreover, epistemologically, humanistic models prevent one from making over-generalization from the animal to the human level since man is not reduced to an organism by the humanistic models. In the name of greater rigorousness of knowledge, the humanists are not willing to adopt techniques of manipulation and control over fellow human beings. Our modern social institutions such as recreational, educational and medical institutions, have been highly influenced by animalistic views of man, a point which the author intends to elaborate later in the article.

#### VARIOUS DIMENSIONS OF THE HUMANISTIC MODELS OF MAN HUMAN ELEMENTS IN GENERAL

The central emphasis of humanism is on *human* elements. The emphasis is not on any particular race or culture or time, and as such it is a metaphysical approach. We may study the nature of a particular person or culture empirically, but the nature of man in general is not easily applicable to empirical observations. So in humanism there is a greater understanding and appreciation of human nature at the universal level. Man should be understood as a member of a particular society, as well as a member of the human family. In general humanistic models see man as a member of the human family, whereas the reductionistic models see him as a member of a particular group. Thus humanistic models provide a link for social science to arts and humanities whereas the reductionistic models provide a link between the various fields within the sciences.

The emphasis on general human aspects of man on the part of the humanistic models has both epistemological and social implications. When we deal with elitism



or racism in a particular culture, for example, we are tempted to think that elitism is limited to that society. This is particularly so in the case of certain issues and problems. Caste system is associated with India and racism with the Negro-White interactions. But there is no reason to believe that racism is limited to the above-mentioned groups or caste system to India. We are particularly reluctant to see elitism in our own society since we do not see issues such as elitism mechanistically. Our view of ourselves, attitudes, feelings, etc., are rooted in our perceptions. It is the role of humanistic models to point out the difficulties involved in viewing social issues and to suggest ways to overcome such difficulties. In other words, elitism is not limited to a particular culture, but a general human problem and the most difficult form of elitism to detect is the one in which one is personally involved. Such a humanistic view is necessary for us to be objective in social science. Moreover, the realization that one is involved in elitism makes himself or herself humble on the one hand and united with mankind on the other. Such a realization is highly necessary for the modern elitistic social scientists.

#### MAN AS A MORAL AGENT

Humanistic perspective in social science cannot deny the effect of the environment on man; however, the effect is not treated with a sense of fatalism. The effect of the environment is not the whole story. Man is able to reflect on and modify the environment, though within limits. In other words, man is able to reflect on and modify the environment *only* according to the laws which govern human behavior. Man's ability to modify the environment is not contradictory to the impact of the environment on man. The role of the human subject (self) cannot be negated in the name of environmentalism any more than the reverse could be done in the name of humanism. The moral human responsibility is not inconsistent with the notion of a lawful universe. The belief that one can be a *creative* influence in the lives of others and that one's attempt to manipulate others can only hurt all, is the foundation of any humanistic perspective in social science, a perspective which is truly scientific though it is inconsistent with the scientism of our time.

The difference between the humanists and the reductionists in social science is not about whether or not human behavior can be understood scientifically. Both the humanists and the reductionists in social science accept the position that human behavior can be understood scientifically. However, the humanists claim (or emphasize) that man needs a human environment of certain quality to actualize his truly human potentialities and that every attempt to manufacture human qualities is dangerous. In other words, the environment does not produce or create effects, but only facilitates or promotes the evolution of the qualities. The belief that one cannot actualize human qualities in others without the help of the latter, is essential for a healthy, humility on his/her part and for a healthy appreciation of others as human beings. Mere good environment is not enough, though essential to produce good

results in human beings. One cannot deny the issue of human responsibility. For example, in the case of a "poor", student, the teacher should raise questions not only about the quality of the environment, but also about the moral responsibility of the student for a good result. In other words, the questions about the contribution of the student for a good result is to be looked into (i.e. to be discussed with the student, for example) if one is to develop good results. As Eric Fromm notes, just as man can transform the environment only according to its nature, he can transform himself only according to his own nature (1955, p. 13). The industrial psychologists knew that a happy worker was a good worker. The mistake they made was that they took it for granted that without giving the worker a challenging, meaningful job and job environment, they could make him/her a happy worker. Similarly, B. F. Skinner assumed that he could make people happy without treating them with dignity. Such conclusions are based on reductionistic conceptions of man. Money is considered as a general reward for behavioral motivation by the environmentalists for the most part in the West. No doubt money is a generalized reward in modern industrialized societies since man's animal needs can be taken care of by money. However his deeper needs cannot be met by money. Can man buy love or dignity by money? The limitations of money are most clear when one has enough money to take care of the animal needs. This is not to deny that money can represent higher needs. Money can be strictly a matter of payment for a piece of work or it can be a symbol of gratitude. The deeper human meaning (quality) of money is more important than the quantity of money. A worker who is not proud of his work or not treated with dignity cannot be a good worker. One cannot be proud of his/her work unless his/her creative energies are involved in it. It is part of the job of humanistic models to explore the human dimension (both positive and negative) of the environment.

The realization of human responsibility has profound implications to all of us. No one can hide behind the notion of "fate" as a moral escape. Those who emphasize the impact of the environment on man often tend to create an illusion that individuals are helpless; thus we fail to realize our responsibility (moral) within the constraints of the environment. Durkheim, for example, could not see much room for individual initiative and responsibility in his view of sociologism. It is the role of the humanistic models to make it clear that the socio-historical forces are not the forces of destiny however strong they might be and that the individual's freedom and responsibility cannot be negated by the socio-historical forces. For example, in a culture where to have servants is the norm, one is expected to have a servant provided he/she can afford one; however, the system does not force the rich to treat their servants as slaves. Moreover people are free to treat their servants with dignity, in such a way the latter have never been treated before, a treatment which is likely to have revolutionary impact on the system. The purpose of humanistic models is to keep the dimension of human initiative and freedom within the limitations of the environment. It is the author's conviction that under the reductionistic

influence most of our foreign aid programs, teaching, etc., tend to destroy the individual initiative in the name of scientific efficiency and professionalism. This was exactly what Weber feared was happening to modern man who according to the former was getting himself locked in an "iron cage." Social science cannot promote the notion of individual initiative without a solid foundation of a humanistic perspective; and elitist reductionism is a hindrance to the development of individual initiative on the part of the average people.

To recognize the human responsibility has scientific as well as socio-political implications. To view oneself as totally determined is to close the doors against any attempt to discover truth. We cannot talk about one theory being more valid than the other if we are nothing but the products of our environment as I had already noted before. To view ourselves as responsible parents, teachers, scientists, adults, friends, etc. for what happens to others is to be morally sensitive and alert. To be held accountable for what we have done as scientists, for example, is to have profound social implications not only to what we have done, but also to how we would do in the future as scientists. It is unfortunate that for the most part the scientists are not held accountable for the damage they have done to our environment. The point I am trying to make is not that scientists are responsible for what has happened to our environment, but that we are all responsible in one way or another for the destruction of the environment, and scientists are no exception. We cannot come to grips with such moral issues without a deep sense of moral responsibility on everyone's part.

#### HUMAN HUNGER FOR DIGNITY AND JUSTICE

At the very heart of the humanistic model of man is the postulation of a human hunger for dignity. Everyone, unless he/she is mentally ill, is hungry for dignity. In general, the 19th-century social thinkers almost reversed it. They thought of man as an animal who is hungry for power. The urge to dominate was considered as the central driving force of life. The humanists assume, in addition to the hunger for dignity, that the hunger for dignity is far more profound than all the so-called, negative drives attributed to man. In fact, the drive to dominate is, for the most part, a result of man not being treated with dignity, for example. Man is not aggressive by nature according to the humanistic perspective, but tends to be so or acts so under dehumanizing conditions. In the humanistic tradition, human nature is treated as good in the sense that man has a hunger for dignity, justice and love; however, nature does not actualize itself; it has to be nurtured; it requires a human environment consistent with the humanistic vision of man.

To take the human hunger for dignity seriously is to have wide range implications. This is why the humanists, unlike the behaviorists, are not willing to accept electric shock or starvation as a means of behavioral modifications. Only when man takes his own hunger for dignity seriously, is he in a position to be concerned about the

quality of life. The hunger for dignity is a *human* attribute and not limited to the elites. Imagine the teachers treating their students or doctors their patients with dignity! To treat a patient with dignity means, among other things, that he/she is entitled to know all about the disease, treatment etc. However, patients are treated as "cases" in modern industrialized societies under the influence of the reductionistic approach. The same thing applies to modern industrial workers, students, etc. The modern conveyer-belt mentality is inconsistent with the human hunger for dignity. In reductionistic thinking there is no place for human dignity as Zaltman points out in the case of Skinner's world view (p. 404).

The modern reductionistic social scientists operate on dual conceptions of man—one for ordinary people and the other for scientists. The social scientists tend to think of themselves as producers and others as products of the environment, as I have already noted. What they have negated in terms of *human* dynamism and depth from others, they had to give to themselves. The humanists stand for a single conception of man with all the dynamism and depth which man deserves. Accordingly, both the scientist and the ordinary people are products of their environments. To view themselves as products of their environment is to have humbling effect on the part of the scientists. Moreover, they are expected to be alert to the issues and areas which might influence them rather than claiming everything they do as valid, scientific and true. For example, we know that people with power tend to hang on to it and develop ideologies to support their position. What about the scientists who enjoy high status, prestige, and power? Thus the view of man as a product of his environment has a critical function to do in the humanistic tradition. To gain more reliable results we must refine our conceptual and measuring tools in science as the reductionists note; but the error in social-science research may also be due to an ideological distortion of the researchers' understanding of themselves (Baum, 1979, pp. 122-123). Humanistic perspective provides a framework within which social scientists are encouraged to look at themselves critically. It is equally important to view oneself as a producer of his environment. As a producer of the environment, social scientists are able to look critically at their environment and modify it; unhealthy influence of their environment can be corrected. Thus the role of a humanistic perspective is not to overemphasize the view of man as a producer, but to synthesize both views of man into a coherent, dynamic conception of man. Humanistic reductionism which ignores the view of man as a product of his environment is only a reaction, not a creative response to the mechanistic-plastic reductionism mentioned earlier in this article.

For the scientists to have an elitistic view of themselves has negative consequences, not only to all of us, but also to the future of science itself. In the modern technocratic society there is a blind and unrealistic faith in science. People tend to look up to the scientists for "miracles". The scientists have become the modern counterparts of the ancient magicians. The problem is especially troublesome in social science. The social scientists with their social engineering and behavioral



modification techniques are expected not only to control our external behaviors, but also our internal states such as happiness, meaning, etc., a task which is far more difficult than developing a technique. People expect the social scientists (who in my opinion are not happy at all for the most part) to make others happy! The social scientists, unlike the natural scientists, need the cooperation of their subjects (human beings) if they are to do what little they can do. It is this very basis of cooperation which the social scientists tend to destroy by their dual conceptions of man. Humanistic perspective is in line with a more realistic expectation about science, especially about social science and a humble spirit.

Human dignity as treated here is not an empirical concept derived out of individuals' level of education or IQ or income, for example. Human dignity is a metaphysical position, according to the humanists, a position without which not only social science, but also social life will have dehumanizing consequences. To postulate a basic human hunger for dignity is to assume that man regardless of his socio-economic position, has to be treated with dignity. It is not something to be empirically verified, as such. That man must be treated with dignity is more than an assumption in the humanistic tradition; it is a commitment to treat man (i.e., everyone) with dignity. As a value position, it regards everything which dehumanizes man as evil. Every social system or ideology or culture is to be judged not on the basis of GNP or profit or success, but on the basis of human dignity it promotes. Thus humanism provides a framework and promotes a critical look at any social system.

Though human dignity is a metaphysical position it is not an empty one. To view man with dignity is to consider that he is entitled to freedom, recognition, justice and love. And we need rigorous, empirical, quantitative analysis to make the degree of dehumanization explicit. Humanistic perspective is not anti-empirical or anti-quantification, but an attempt to give deeper meanings to quantification and empirical analysis. In other words, qualitative analysis should precede the quantitative one, for example. Moreover, they should be united into a coherent philosophy based on the idea of human dignity. However, the humanistic commitment to human dignity is not a justification to impose a value position on others in the name of humanistic values. Man is the central value for the humanists. Respect for human dignity means respect for the individuality of the individuals and groups. A commitment to a general philosophy of human dignity makes it easier for social scientists and others to tolerate a wide range of values. In other words, human dignity is a general framework within which concrete operational definitions have to be established and where there are differences in the concrete definitions, tolerance has to be promoted. A true humanistic perspective is not dogmatic, but highly tolerant even towards anti-humanistic perspectives.

It is clear by now that humanistic perspective involving a vision of life is a value position. So was the classical sociology of the 19th century. The classical sociologists had a vision of what human life ought to be like, if life were to be meaningful,



a vision which enabled them to detect the dehumanizing aspects of their society (Baum, 1975, p. 2). Marx's concept of "alienation," Weber's "iron cage," Toennies' "Gesellschaft," and Gimmel's "objectification" reflect their concern with dehumanization of modern man. Modern social scientists, in general, have taken a value-free technocratic position towards their work, a position which is a direct outgrowth of a plastic conception of man. The technocratic position of scientists has a unique political implication to our time. Technical complexity of modern life is such that no government can keep itself in power or expand its power without the help of modern scientists. An oppressive system cannot continue in power without the active support of the scientists. For the modern scientists to recognize the political significance of science is to raise serious questions about the traditional value-free technician's view of themselves. The political implications are not limited to the governments. Industrial psychologists, in general, studied the worker from the point of view of the management. Kornhauser is one of the few industrial psychologists who studied the workers from the point of view of the workers. He clearly points out the negative impact of modern industry on the mental health of the workers (1965). Humanistic position does not necessarily look at workers from the workers' point of view (i.e. as anti-management); its concern is to bring out the dehumanizing aspects of the world of work including that which dehumanizes the management. Thus humanism aims to transcend party politics of social divisions. However, in general, it ends up supporting the underdog in pointing out the dehumanizing aspects of life and suggesting radical humanizing changes.

#### NEED FOR CREATIVITY

Man is a creative animal, no doubt. However, according to the reductionists human creativity is limited to the intellectual and other elites for the most part and the ordinary people do not have much need for creativity. Here again the position that man is a creative animal is not an empirical generalization, but a metaphysical position. The central aspect of creativity is imagination. The humanists assume that every human being is imaginative and creative whether or not he/she has manifested any creativity. When we take particular manifestations of creativity as criteria for creativity, then we leave the potentiality for creativity out of our consideration. So it is important to consider the assumption of human creativity as an *a priori* metaphysical position according to the humanists, a position which does not discourage the study of particular manifestations of creativity under particular circumstances. However, the assumption of creativity is not a blind faith in man in the sense that he is expected to win or do the right thing in all critical situations. Human imagination can go wild under certain conditions, particularly under conditions of uncertainty and threat. So is with human creativity. Man is capable of creating the most destructive weapons. As one social thinker put it, man is the only animal

who is capable of destroying the entire world. So here again man's nature needs careful nurture for realization.

To believe that man is a creative animal is to assume that man needs a creative, challenging environment consistent with his nature. Such a humanistic view will have profound implications to the way we handle human beings. To treat students as creative individuals, for example is to expect them to struggle with facts, issues, concepts, models, etc., in their own way rather than expecting them to memorize them; a teacher's basic role is to stir up the intellectual imagination of the students. However, the implications of the above-noted assumption is not limited to the teaching situation. The modern conveyer-belt mentality and the fascination with quantity and bureaucracy run counter to the view of man as a creative animal. According to the humanistic position, man cannot be happy until he finds expression and meaning to his sense of creativity. If man could have been happy by fulfilling his animal needs, modern man could have been the most happy person. However, in general, people in the modern industrialized societies, where man's animal needs are mostly taken care of, seem to be the most alienated and bored. In fact, there is every reason to believe that modern alienation is directly related to the modern experience of man as being treated as a cog in the gigantic systems. Our faith in man is directly related to our assumption of human creativity. The reductionists tend to put more faith in their techniques, whereas the humanists in the individuals. Faith, appreciation, cooperation, interest, trust, etc. are human environments which are equally important as non-human environments in working with people. The modern reductionistic social scientists cannot understand why they are not appreciated by the people in the developing countries in spite of all the "help" the former have given to the latter through the so-called foreign aid programs. The elitism and the arrogance of the scientists are clear to the people of the developing countries. Only a humanistic position can open the way for a true cooperation between the scientists and the people with whom the former work. In other words, where direct contact with people is involved, only a humanistic model can bridge the gap between the scientists and the non-scientists, and where people are not involved, the reductionistic models are still highly useful and let us not forget that social scientists are not always working with people.

To assume creativity means that man has an inner depth which is not directly or easily open to observation. Man is more than what he does; he is more than the role he plays. This is why the humanists refuse the test scores, like the IQ scores, however refined and scientific they might be, as ultimate. To view man as creative is to view man in dynamic rather than in static terms. Tomorrow is not totally determined by today; the new and creative can emerge in the future. A true scientist, like a good teacher, ever remains ready to be surprised. Scientism tends to promote the ideology that reality is identical to the portrayals of reality (Baum, 1979, p. 10). Findings and theories of scientists tend to be regarded as scientific findings and theories. Test scores take on sacred significance. This is particularly damaging in

the case of children who are constantly bombarded with tests of all kinds. Their future tends to be predetermined by the test scores. For the damaging impact of tests see Rosenthal and Jacobson's (1968) work.

The assumption that man is more than what the "scientific" portrayals indicate is not a negation of portrayals at all; it is simply a challenge to go deeper and deeper with the portrayals into the human-social conditions of portrayals. Humanists do not deny the value of IQ scores, for example, but they deny the latter's ultimacy. If an individual is found to be low in his IQ scores, the humanists do not define him/her as low in intelligence; they raise serious questions about the test, including the very concept of IQ. Moreover, they look sympathetically at the individual given their assumption of man as a creative animal. Who made the test for what purpose? Did the individual have a creative environment to expect high scores on the IQ test? Is the IQ test appropriate for the individual under consideration? To raise such questions, one needs a firm foundation that man is a creative animal.

To view man as a creative animal means that man has a depth which cannot be explained away. Man's depth or creativity cannot be reduced to anything else, whether or not we use the term "mystery." The assumption of human creativity is not a negation of science as some people fear but an explication of the limitation of science. Even creativity does not happen in a vacuum. For example we can develop a sociology, psychology or politics of art, but we cannot reduce art to psychology, sociology or politics. A humanistic approach is not against science, but against scientism, the attempt to reduce man by science.

To believe that man has a depth of his own has implications to social science methodology and theory. It means that man's behavior is not to be taken at face value. What appears to be an aggression, could be a call for love or vice versa. Man is capable of wearing masks; so we need to go behind the masks to come up with truly human, valid data. Moreover, man's actions can have profound symbolic meanings, which are not directly observable to the empiricists. A kiss, for example, at the human level, could be merely a sexual act or it could be a sign of deep commitment. That is why empirically identical items such as two kisses are not identical at the level of meanings, a realization which has humanistic implications in analysing human data. For details see the author's forthcoming article.

#### COMPLEXITY AND UNITY OF MAN

To the humanists, man is a complex being. Such a view of man is a refusal to reduce man to any one particular dimension, however important that dimension might be. When man is reduced to a particular dimension such as rationality, not only other dimensions are ignored, but the rationalists tend to imply for themselves the top positions on the social ladder. Individuals as well as societies are graded on the basis of their technical rationality. This has been part of the rationale for considering the non-Western societies as inferior to their Western counterparts. To

emphasize the complexity of human nature is to be alert to the dimensions other than the one under consideration. Any unidimensional evaluation is misleading. Moreover, no individual or culture can develop all the complex aspects of human nature; so everyone has to be open, alert, cooperative in their dealings with others. Thus only a humanistic model which takes seriously the complexity of human nature is in a position to have a sense of community within and without science. Complexity like the depth of man is not an obstacle to empirical research, but an invitation to go deeper into the human data. Thus we are in a position to develop not only the biology of sex, but also the politics, ethics, sociology, psychology and economics of sex, for example, because of the complexity of man.

To recognize human complexity is to realize that man is being influenced by multiple factors. Yet this does not mean that a particular culture at a particular time may not emphasize one aspect like the religious or economic aspect to the exclusion of others. But in case such exclusive emphasis is placed on a particular dimension, then, according to the humanistic models, the individuals are to pay a heavy price in terms of human development. A good deal of modern social problems can be seen as a result of the unidimensional nature of modern technocratic society. Where man's emotional needs are left out, man is likely to find pseudo methods to fulfil these needs, since man is a complex animal with emotional needs, for example. It is not an accident that it is in the technocratic societies that we find all sorts of emotionally explosive cults, subcultures, etc.

The complexity of man leads to another dimension, the unity of man as a being. Man is supposed to be a thinking, acting, feeling unity according to the humanists. Not only the world out there, but also his internal world of feelings, thoughts, values, fears, hopes, and actions, should make sense to man. In other words, man is a meaning-seeking animal. The acting, feeling, and doing unity, is what is known as self or soul; the lack of unity is alienation. The self is not the sum total of the roles an individual plays, it is the centre of the being from where everything makes sense. The struggle for a thinking, feeling unity is human (May, 1953, p. 80). The reductionists who promote extreme specialization cannot see that in reality man is not as compartmentalized as their specialization suggests. Human beings whether healthy or sick are not divided into clear-cut psychological, philosophical, and religious entities, as Mowrer notes (p. 4).

Unity of life means that our thinking and knowing, for example, ought to be inseparable from our living. This was what the Greeks meant by the concept "wisdom." The unity of life means that social scientists should not try to separate their values from their findings and scientific tasks. The view of a unified life destroys the myth of a completely detached observer looking at the object with complete scientific objectivity (Merton, p. 298). The observed and the observer interact in such a way that they influence each other. Humanistic conception of man calls for a dialogue (multilogue) between the various aspects of life for the evolution and creation of life as a living organic unity.



The question of the kind of unity man needs is still not an easy one to solve. Man is capable of creating artificial unity or imposing unity. The unity of man which the humanists call for is not a uniformity but a unity of spirit in spite of the multiplicity of forms. True unity is the unity of spirit common to all concerned, a unity which recognizes and appreciates the diversity among the various units. Where one unit (dimension or aspect of human nature) has a monopolistic control over the others or where the various units are separated from each other, there is no unity of man. It is part of the reductionistic view that life can be compartmentalized *easily* into various units. The extreme division of labor and specialization of fields which reductionism promoted is based on the assumption of easy compartmentalization of the human self. Man's ability to compartmentalize cannot be denied by the humanists; however, in general they hold the position that extreme compartmentalization leads to all sorts of problems. In fact a good deal of modern social and psychological problems can be attributed to man's attempt to compartmentalize his life. It was Freud who made it clear that the unconscious cannot be separated from the conscious mind without paying a heavy price for such an act. Those individuals who try to play conflicting roles are basing their success on the assumption of easy compartmentalization; they are to pay a heavy price in human terms. A man who is arrogant towards his subordinates is to learn the hard way that he cannot be truly kind to his children since man is a unified being.

The recognition that man is supposed to be an organic, living unity should make us aware of the dangers of extreme division of labor and specialization of disciplines. We need to look at man as a unity. The psychologists look at man as a reflex animal, the economists as a consumer or producer, sociologists as a role-player, etc.; the question still remains, if man is more than what all these views indicate, who is to deal with the whole man. A humanistic framework tends to look at man as a unity (synthesis), whereas the reductionists tend to take an analytical approach. Both approaches are necessary in social science. Moreover, a dynamic, healthy interaction between the two approaches is necessary for the growth of social science.

#### MAN AS A COMMUNAL ANIMAL

The loss of community is a major theme in classical as well as in modern sociology. The modern society is increasingly becoming an association rather than a community. Humanistic models view man as a communal animal in the sense that man needs to be a member of an ongoing community where he is accepted and appreciated if he is to realize his needs. In other words, man's needs are not limited to the biophysical and cognitive-rational ones; he has a need to love and to be loved. Reductionists treat man as an individual. For the most part psychology, psychoanalysis, psychotherapy, medicine, etc., treat man as an individual rather than as a member of a community. In a modern hospital the patient, for example, is treated as an individual; there is very little opportunity for the relatives and friends to



interact with the patients; in fact the friends and relatives are treated as "intruders" in modern hospitals.

Man's need for love is established undeniably by researchers such as Rene Spitz. For details see May (1953, p. 40). However, modern social science has not incorporated such findings into a coherent philosophy. Sorokin, May, and Fromm, are some of the exceptions. The need for love is treated as a matter of sentimentalism in the reductionistic tradition. Competition, struggle for power, etc., gained upper hand in social as well as in the scientific circles. To take the need to love and to be loved seriously will have radical social implications. Only when we take the above noted need seriously, are we in a position to enjoy our life from the point of view of service. Man can enjoy not only a good meal as an animal but also sharing it with others. To give another example, a job could be enjoyed not only from the point of view of the opportunity it provides to know, to be creative, but also to serve others, a dimension which the modern man has almost lost. The enjoyment in sharing and caring is truly human; and we need a humanistic outlook to promote the need. All sorts of modern sects tend to develop most in the United States of America where individuation has gone the furthest. It is quite likely that these sects are a direct reaction against the modern individuated competitive life. Here again it is no accident that competitive society tends to promote an individuated concept of man.

The conception of man as a communal animal has other implications, too. It is in a community that man becomes truly human; it is in the human environment of trust, concern, respect, etc., that man opens up, unfolds, shares, and learns. Is it any wonder why our students or children do not learn to cooperate for example? Our students and children have to be part of an ongoing, cooperative social system (community) if they are to learn to cooperate. Man does not learn to cooperate by hearing or reading about cooperation. The conception of man as a communal animal has epistemological implications for social science. Understanding man is not a matter of observing and analysing him as an object; man unfolds himself in social interactions where his needs for freedom, creativity, dignity, and love, are recognized. The observer needs his senses and analytical abilities as well as his ability to relate to others, to empathize, to earn the trust of others, etc. The author's forthcoming article would provide details of such humanistic methodology. The reductionistic training is in professional, technical qualifications whereas the humanistic training is in socio-emotional and personal attributes; both types are necessary for social science. The view of man as a communal animal has further implications to science. Science is not (not supposed to be) an individualistic, competitive phenomenon. It is a communal matter. A deep sense of community among the scientists is essential for a healthy science. Scientific findings and theories are open to all the scientists who are interested in them for criticism, clarification, etc. Such cooperative approach is the basis of scientific objectivity. However, under reductionism one gets the impression that competition among the scientists is what is crucial for the development of science.

## SENSE OF BEAUTY

Closely related to man's sense of creativity is his sense of beauty. Man's sense of beauty is not limited to the artists. Man at heart is an artist, however underdeveloped the sense of art might be in some cases. Culture in the finest sense is an expression of man's artistic ability. Modern science and technology in the name of efficiency, profit, practicality, etc. have ignored man's aesthetic needs. Certain environments can be aesthetically repulsive to man. It is quite likely that people who live in modern slums are protesting against the ugliness of their environment as much as protesting against the injustices through their violent outbursts.

To recognize man as an artist is to have profound implications to our cold, engineering mentality which is based on the view of man as a problem-solving animal. But man is more than that; he is capable of producing beauty for its own sake; such an act is part of his self-fulfillment. Man is as much an artist struggling for self-expression as he is a political animal. The reductionistic thinking concentrates on man as a political, problem-solving animal. It is not an accident that artists do have a sort of marginal existence in the modern technocratic society. To recognize man as an artist is to have radical implications to the way we live in modern societies; we are likely to change the environment considerably; we are not likely to think of our leaders in dynamic, competitive, aggressive terms; we would not translate everything into cash values, to give some examples. St. Simon was pretty much the only sociologist who recognized the contribution an artist could make in building a society.

The recognition of man, every man, as an artist, is to have implications to science too. Modern science is dominated by an engineering mentality. To recognize man as an artistic creature is to view science as an expression of man's sense of artistic ability, and as such we are in a position to see and appreciate the underlying unity of science and arts. "Pure science" in the classical tradition was as much an art as a science. To the pure scientists, science was basically a matter of self-expression. They were least politically inclined to use their work for their own advantage. Thus man as an artist represents a nobility in character. In this day and age when everything is translated into cash values or prestige, our scientists could use the nobility of an artist. The modern, market-oriented business cultures are the furthest away from the nobility of an artist. It is not an accident that modern science is more and more divorced from arts, but highly associated with technology, business and politics. Early scientists such as Leonardo da Vinci were artists, too. The engineering, mechanistic mentality of modern science went hand in hand with the competitive, quantitative, technocratic society, because both the science and the society were based on a reductionistic concept of man which thought of man as a problem-solving political animal. Humanistic concept of man provides not only a bridge between science and arts but also a humanizing, ennobling impact on people in general, without denying the place of reductionistic approaches in science or society.

## SUMMARY AND CONCLUSIONS

In social science there are two major conceptions of man—the reductionistic and the humanistic. Both of them have profound psychological, social, and philosophical, implications to science as well as to society. In general the reductionists view man as part of Nature whereas the humanists concentrate on the uniqueness of man. For example, the reductionists have concentrated on the animal needs of man, the humanists on man's unique needs such as love, justice, beauty and creativity. To consider man as a creative animal is to assume that man needs a challenging environment; man cannot be happy and his life meaningful until his higher needs are met. However, to recognize the creativity of man is not a negation of science; even creativity does not occur in a vacuum; we can have a sociology or psychology of art, for example; but at the same time art could not be reduced to these fields. The reductionists with the quantitative experimentalistic approach assume that human social life could be reduced to a few universal laws; the humanists have no such illusion. Humanism with its emphasis on human creativity is in touch with the arts and humanities whereas the reductionism ties social sciences with the natural sciences. Both bridges are necessary for a healthy social science.

Reductionistic conception of man leads to a double standard on the part of the social scientists, since the reductionistic social scientists cannot afford to look at themselves in non-human terms. Humanism stands for a unified concept of man for the scientists as well as for non-scientists, a conception which recognizes the two complimentary (not contradictory) sides of man. Man is both a product and a producer of the environment. For the scientists to view themselves as the products of their environment is to raise critical questions about the influence of the environment on their scientific work; to view the subjects in social science as products is to raise serious questions about the human quality of social-science data collected from the people. To view man as a producer of environment is to make serious attempt to modify the environment for better results. The assumption that one can be a creative influence is the scientific basis of helping others. Humanism calls not only for a critical self-examination of the part of scientists with regard to their work, but also promotes a new confidence in man. The spirit of humanism which recognizes and appreciates the human-moral responsibility is necessary to save man from a sense of fatalism and meaninglessness.

Reductionism is basically manipulative in implications. Viewing man as a thing opens the way for treating him as a thing. Those who looked at man as a machine thought of themselves as the mechanics in charge of the machines. Those who developed programs for society put themselves above the programming. Reductionism gave the impression (illusion) that life can be easily controlled and manipulated. Reductionism went hand in hand with the individualistic, competitive, materialistic, quantitative approach to life. A good deal of our modern social and psychological problems can be attributed to the experience of modern man being treated as a cog

in the gigantic systems. To take seriously the view that man has a deep hunger for love, justice, beauty, and truth is to have radical, revolutionary and humanizing impact on society and science.

#### REFERENCE LIST

- Baum, G., *Religion and Alienation*, New York: Paulist Press, 1975.
- Baum, G., *The Social Imperative*, New York: Paulist Press, 1979.
- Drews, E. M., and Lipson, L., *Values and Humanity*, New York: St. Martin's Press, 1971.
- Fromm, E., *The Sane Society*, New York: Holt, Rinehart and Winston, 1955.
- Fromm, E., *The Art of Loving*, New York: Harper and Row, 1956.
- George, P. M., *Humanistic and Reductionistic Approaches in Social Science*, "Organon" 15 (1979), pp. 121-140.
- George, P. M., *Humanistic and Reductionistic Models of Understanding*, "Organon" 1980.
- Kornhauser, A., *Mental Health of the Industrial Worker*, New York: John Wiley and Sons Inc., 1965.
- Kropotkin, P., *Mutual Aid, Extending Horizons*, 1955.
- Martindale, Don, *Sociological Theory and the Problem of Values*, Columbus, Ohio: Charles E. Merrill Publishing Co., 1974.
- Maxey, M. M., *Beyond Eve and Mary*, in: Needleman, Jacob, et al. (ed.), *Religion for a New Generation*, New York: Macmillan Co., 1977, p. 273.
- May, R., *Man's Search for Himself*, New York: W. W. Norton and Co., Inc., 1953.
- May, R., *Power and Innocence: A Search for the Source of Violence*, New York: W. W. Norton and Co. Inc., 1972.
- Merton, T., *Conjectures of A Guilty Bystander*, Garden City, New York: Doubleday and Co. Inc., 1968.
- Mowrer, O. H., *The Crisis in Psychiatry and Religion*, New York: D. Van Nostrand Co. Inc., 1961.
- Nordskog, J. E., *Social Change*, New York: McGraw-Hill Book Co. Inc., 1960.
- Rosenthal, R. and Jacobson, L., *Pygmalion in the Classroom*, New York: Holt, Rinehart and Winston Inc., 1968.
- Russell, B., *The Impact of Science on Society*, London: Union Books, 1952.
- Sorokin, P. A., *Altruistic Love*, Boston: The Beacon Press, 1950.
- Stevenson, L., *Seven Theories of Human Nature*, Chapter IX, *Lorenz: Innate Aggression*, New York: Oxford University Press, 1974, pp. 106-117.
- Zaltman, G., *Processes and Phenomena of Social Change*, New York: John Wiley and Sons, 1973.