CHAPTER THREE

METHODOLOGICAL INDIVIDUALISM IN SOCIAL SCIENCES

The principle of methodological individualism (hereafter, MI) in the social sciences owes its origins to Hobbes, who stated, "it is necessary that we know the things that are to be compounded, before we can know the whole compound" for "everything is best understood by its constitutive causes", the causes of the social compound residing in "men as if but even now sprung out of the earth, and suddenly, like mushrooms, come to full maturity, without all kind of engagement to each other". It could be credited with formulating the idea first, followed by other thinkers of the Enlightenment, especially those who sought to provide a contractualist and hence an individualistic explanation of society. Even during the Italian Renaissance, individuals became aware of themselves separately from a general category. In contrast, in Comte's words, a society was "no more decomposable into individuals than a geometric surface is into lines, or a line into points". However, for John Stuart Mill, the earliest systematic exponent of methodological individualism, "the laws of social phenomena can be nothing but the laws (actions and passions) of individual human nature".

2 A. Comte (1968) cited in S. Lukes Ibid., p. 119.
MI is seen in the anti naturalist world of Dilthey. According to Dilthey every single human expression represents something, which is common to many and therefore part of the objective gesture or form of politeness, every work of art and historical deed is only understandable because the person expressing himself and the person who understands him are connected by something they have in common; the individual always experiences, thinks, acts and also understands in this common sphere. 4 Weber for whom the individual is “the upper limit and the sole carrier of meaningful conduct”, 5 attempted to place himself, delicately, between Mill and Dilthey and emphasised upon both causal generalisation and autonomous human understanding. He believed that MI was the surest way of exorcizing “the spectre of collective conceptions that lingers among us”. 6 This debate has surfaced in many different guises—in continuous debates among philosophers of history and between sociologists and psychologists, and above all in the celebrated controversy between Durkheim and Gabriel Tarde. Durkheim believed in the social determinism of individuals, where the individual is reduced to a body, and all supra-organic phenomena are understood as social in origin, in contrast to the postulates of Gabriel Tarde. Many others, like Simmel, believed that “a society may be informed by an extraordinary multiplicity and variety, but this is no reason to hypostatize or autonomize it”. 7 Moreover, the countless individuals taken together give rise to the “stuff” of social science. Simmel further

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says, "Society exists where a number of individuals enter into interaction; society is interaction".\textsuperscript{8} Gurvitch and Ginsberg also tried to resolve the issue, but it constantly reappears, for example, in reactions to the profligately macroscopic theorizing of Parsons and his followers\textsuperscript{9} and in the exceptionally muddled debate provoked by the wide-ranging methodological polemics of Hayek and Popper.\textsuperscript{10}

In the first place, we attempt here to distinguish what is considered the central tenet of MI from a number of different theses. In the second section, we would like to highlight MI in psychology, which is considered an individual centric discipline. In the third section, we would discuss how neo-classical economics set its task in accordance with MI.

**Methodological Individualism in Sociology of Knowledge**

The expression "methodological individualism" was coined by Schumpeter, who claimed it to be an exclusively scientific strategy according to which "in the description of certain economic processes one had better begin with the actions of individuals".\textsuperscript{11} Schumpeter influenced Hayek, Karl Popper, Watkins and many others. Their contention was that social phenomena must be seen as resulting

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\textsuperscript{8} G. Simmel, Ibid.


\textsuperscript{11} J. A. Schumpeter cited in R. Bhargava, *op. cit.*, p. 2.
from human action and, "we should never be satisfied by an explanation in terms of so-called collectives".\textsuperscript{12}

According to MI, social phenomena can be adequately explained by showing that they are outcomes of individual behaviour. For example, Hayek writes:

\begin{quote}
[Social phenomena] are accessible to us only because we can understand what other people tell us, and can be understood only by interpreting other people's intentions and plans... the elements from which we reproduce them are always familiar categories of our own mind.\textsuperscript{13}
\end{quote}

The reference here to "our own mind" is to be taken seriously. Hayek has elsewhere written:

\begin{quote}
When we speak of mind, what we mean is that certain phenomena can be successfully interpreted on the analogy of our own mind, that the use of familiar categories of our own thinking provides a satisfactory working explanation of what we observe.\textsuperscript{14}
\end{quote}

In addition, he further writes on the scope and limitations of this approach:

\begin{quote}
It is the only basis on which we can ever understand what we call other people's intentions, or the meaning of their actions; and certainly the only basis of all our historical knowledge... as we pass from men of our own kind to different types of beings we may, of course, find that what we can thus understand becomes less and less. And we cannot exclude the possibility that one day we may find beings who, though perhaps physically resembling men, behave in a way which is entirely unintelligible to us. With regard to them we should indeed be reduced to the "objective" study which the behaviourists want us to adopt towards men in general.\textsuperscript{15}
\end{quote}

Similarly, according to Popper:

\begin{itemize}
\item \textsuperscript{12} K. R. Popper cited in Ibid.
\item \textsuperscript{14} \textit{same author} (1979) \textit{op. cit.}
\item \textsuperscript{15} \textit{same author} (1948) \textit{op. cit.}, p. 59.
\end{itemize}
... all social phenomena, and especially the functioning of all social institutions, should always be understood as resulting from the decisions, actions, attitudes, etc., of human individuals, and... we should never be satisfied by an explanation in terms of so-called 'collectives'...  

According to this view, society may be regarded as the result of observable individuals making choices in response to the actions of others and acting on these choices. Watkins provides more ground for the "principle of MI":

According to this principle, the ultimate constituents of the social world are individual people who act more or less appropriately in the light of their dispositions and understanding of their situation. Every complex social situation, institution or event is the result of a particular configuration of individuals, their dispositions, situations, beliefs, and physical resources and environment.  

Watkins further writes:

There may be unfinished or half-way explanations of large-scale social phenomena (say, inflation) in terms of other large-scale phenomena (say, full employment); but we shall not have arrived at rock-bottom explanations of such large-scale phenomena until we have deduced an account of them from statements about the dispositions, beliefs, resources and inter-relations of individuals. (The individuals may remain anonymous and only typical dispositions etc. may be attributed to them.) And just as mechanism is contrasted with the organicist idea of physical fields, so, methodological individualism is contrasted with sociological holism or organicism. On this latter view, social systems constitute 'wholes' at least in the sense that some of their large-scale behaviour is governed by macro-laws which are essentially sociological in the sense that they are sui generis and not to be explained as mere regularities or tendencies resulting from the behaviour of interacting individuals. On the contrary, the behaviour of individuals should (according to sociological holism) be explained at least partly in terms of such laws (perhaps in conjunction with an account, first of individuals' roles within institutions, secondly of the functions of institutions with the whole social system.) If methodological individualism means that human beings are supposed to be the only moving agents in history, and if sociological holism means that some superhuman agents or factors are supposed to be at work in history, then these two alternatives are exhaustive.

Watkins’s “rock bottom” explanations of “large-scale social phenomena” mark involves an approach towards understanding complex social phenomena, involving long-lived institutions and affecting the lives of many people that are the objects of investigation for social scientists, particularly sociologists, historians and cultural anthropologists. Watkins further says that no statements compatible with MI can explain reflex-like group behaviour in which “some kind of physical connection between people’s nervous system... causes automatic and perhaps in some sense appropriate, bodily responses”. But he remarks, “such actions are not a sufficient basis for typical long lived institutions, like a bank, or a legal system or a church” and do not “endure... through generations of men”.19

As Watkins makes clear at several junctures in his essay, “rock-bottom” does not mean “final”.20 To adopt an example of Watkins, an individualist while explaining a population pattern like tribal marriage customs, must depend on an individualistic analysis of those customs, perhaps in terms of beliefs and dispositions concerning incest. But the existence of beliefs and dispositions are not devoid of larger society and cannot be and need not be wholly individualistic. Even Watkins, as earlier said, noted that the reflex-like, purely automatic behaviour has no explanation on a purely individualistic basis. By way of citing examples of such non-individualistic phenomena he says, “I think that a man may more or less literally smell danger and instinctively, back away from unseen


20 Ibid., p. 280.
ambushers; and individuality seems to be temporarily submerged beneath a collective physical rapport... among panicking crowds". It may be true that sometimes panic behaviour has no individual mental cause, not even the sudden onset of fear in the panicking individual, but Watkins denies such a possibility. A crowd’s flight from fire, no matter how automatic, could be explained as due to their disposition to run away from the vicinity of intense heat and smoke. There is also a further reason to suppose that the relevant sense of “disposition” is narrow. Otherwise, philosophy of social science will lapse into triviality.

It can be culled from the above discussion that MI, as Lukes says, is a “prescription for explanation, asserting that no purported explanations of social (or individual) phenomena are to count as explanations, or (in Watkins’s version) as rock-bottom explanations, unless they are couched wholly in terms of facts about individuals”. "In MI all social phenomena are analysed in terms of what individuals think, choose and do." The logic behind it is that the explanations of social phenomena remain deficient if the current orthodoxy (holism) in social sciences is followed. Holism ignored the agent’s own point of view of the world. Holism, in contrast with MI, explains social phenomena by invoking the behaviour or the properties of entities which are irreducibly supra individual, such as culture or institutions. In “holistic collective grammar- a Durkheimian

21 Ibid., p. 273.
22 S. Lukes, op. cit., p. 121.
23 R. Bhargava, op. cit., p. 12.
conscience collective, a Marxian infrastructure and superstructure, a Saussurean langue, a Baudrieuvian habitus holds sway”.24

Durkheim’s collective consciousness is something more than a mere epiphenomenon of its morphological basis, just as individual consciousness is something more than a simple efflorescence of the nervous system.25

The collective consciousness does not totally disappear. But it is gradually reduced to “very indeterminate ways of thinking and multitude of individual differences”. It cannot grow in extent and strength parallel to the rise of the individual consciousness: “the two terms vary in a sense inverse to each other”.26

Durkheim clearly conceives of individual consciousness. He frequently refers to that as well as an individual’s thoughts and feelings. Individuals have their own “opinion, beliefs and aspirations”. Durkheim says that all consciousness “is not the same, even in the minds of one’s society”.27 There is a “psychic life in the individual”, which co-exists with the psychic life of the society. For Durkheim the individual is the locus of originality, initiative and innovation. Durkheim’s individualism of the individual - individual consciousness, individual originality, individual freedom, individual behaviour, and individual difference- is “personality”.28

27 Ibid.
A final way in which Durkheim has tried to strike a balance between a social deterministic philosophy and individualism is through his concept of the cult of individual. Collective consciousness and individualism are not incompatible because individualism becomes the active content of collective consciousness. Thus, individuals, as Lehmann says, "merged, in identical, and unified, on the very basis of individual distinction, difference, and autonomy. Individualism becomes the collectivizing religion of the modern, individualized collectivity".29 Durkheim sees the resolution of "antagonism between individual and society" in "moral individualism", itself a social creation.30 In the Durkheimian perspective, individualism itself is the product of society, like morality and all religions. The individual receives from society even the moral beliefs, which deify him.

Durkheim's individualism is similar to Kant's and Rousseau's. It is, as Lehmann says, not a religion of either utilitarianism or egoism but of "man in abstracto", "man in general", the human being. It is "individualistic" only in the sense that it has "man", not society as its object; "individualism thus understood is the glorification not of the self but of the individual in general".31 Conclusively when Durkheim explains individualism in terms of the fact that each individual "embodies something of humanity ... the divine ... the sacred and inviolable", it seems he is no longer discussing individualism. Individuals became sacred

29 J. M. Lehmann, op. cit.
31 J. M. Lehman, op. cit.
because they each embody something of "society... the divine...sacred inviolable". It is the cult of "the individualized forms of collective forces".\(^{32}\)

Weber, in contrast to Durkheim's individualised holism, argues for individualised treatment, and maintains, that, interpretative sociology must be "treated as solely the resultant and modes of organisation of the particular acts of individual persons...."\(^{33}\) Weber said, collectivities may be said to have characteristics independent of the individuals, which make them up, those characteristics are to be explained in terms of individual actors and their actions.\(^{34}\)

By focusing on actions rather than on individual dispositions or social structures, Weber implicitly deconstructs the polarity of individual and society from an explanatory perspective, while retaining its normative significance. For Weber, what makes an event in space and time an action is its reflective element, the understandings and goals that individual attach to their behaviour. He presumes that the abilities of humans to evaluate external situations and internal motivations endow them with capacities for agency.\(^{35}\) This is why, relations must show how agents relate these capacities to their situations. Thus, his MI has to do with conceptually constituting the kinds of objects that could be of significance for social science. Things that are not actions—like natural events, biological stimuli, cultural rules and norms, and even social structures—are not intrinsically


interesting for sociology; they are not in the final analysis, they are not what social explanations are about. But this does not mean that such non-individual phenomena are not explanatory, since they are always conditions of action. This logic can be culled out from Weber’s most definitive statement on M1:

Action in the sense of subjectively understandable orientation of behaviour exists only as the behaviour of one or more individual human beings. For other cognitive purposes it may be useful or necessary to consider the individual, for instance, as a collection of cells, as a complex of bio-chemical reactions, or to conceive his psychic life as made up of a variety of different elements, however these may be defined. Undoubtedly, such procedures yield valuable knowledge of causal relationships. But the behaviour of these elements, as expressed in uniformities, is not subjectively understandable …. On the contrary, both for sociology in the present sense, and for history, the object of cognition is the subjective meaning complex of action …. For still other cognitive purposes—for instance, juristic ones—or for practical ends, it may be convenient or even indispensable to treat social collectivities, such as state, associations, business corporations, foundations, as if they were individual persons. Thus they may be treated as the subjects of rights and duties or as the performers of legally significant actions. But for the subjective interpretation of action in sociological work, these collectivities must be treated as solely the resultants of modes of organization of the particular acts of individual persons, since these alone can be treated as agents in a course of subjectively understandable action.  

Several interpretations of Weber’s statement on M1 have been offered by various scholars like Warren, Miller, Elster and Lukes. Warren’s viewpoint differs significantly from that of the others. He argued that the last sentence of this statement is often misunderstood to mean that social structures must be explained solely by the beliefs, intentions, and other properties of individuals. Instead, he said, this statement should be situated in Weberian sociology where social structures must be accounted for in terms of the actions of individuals, but


what explains these actions are not simply properties of individual subjects. For
sociological purposes, there is no such thing as a collective personality, which
“acts”. 38

Generally, Marxism is considered scientific, materialist, holistic, anti
empiricist, anti positivist, dialectical and historical, whereas bourgeois theory is
considered individualistic, empiricist and positivist. But some scholars like Jon
Elster, John Roemer, Adam Przeworski and G.A. Cohen have challenged this
standard perspective about Marx. Jon Elster’s influential and controversial
argument is that MI guides acceptable aspects of Marx’s thought. 39 Elster’s claim
is interesting not just because it breaks with the widely held notion that Marx’s
thinking does not involve MI, but also because he uses it to focus on the “micro
foundations” of Marx’s claim about social causality. 40 Marx provides an
exemplary account of how to unravel the complex maze of relations between
situated individual actions and their unintended outcomes, relations through
which social and historical forces gain their quasi-independent logics. By taking
this approach, Elster writes, Marx was able to transform the insight of his
predecessors from Vico to Hegel “that history is the result of human action, but
not of human design... from a Weltanschauung into a scientific methodology”. 41

Further, Elster argues that Marx did not always follow through on his
methodology, often failing to elaborate relations between individual actions and

38 M. Weber (1978) op. cit., p. 54.
40 Ibid.
41 Ibid., p. 27 and K. R. Popper (1966) op. cit., p. 93.
social outcomes. This in part accounts for the fact that so many Marxists use concepts that refers to collective actors such as classes or states as if these actors had aims and intentions with an autonomous explanatory power. Warren argues that Elster’s project is to provide a theoretical account of the implicit micro foundations of Marx’s work through rational actor theory, and this is what motivates him to read Marx in the light of MI. MI in Elster’s words is:

The doctrine that all social phenomena—their structure and their change—are in principle explicable in ways that only involve individuals—their properties, their goals, their beliefs and their actions. Methodological individualism thus conceived is a form of reductionism. To go from social institutions and aggregate patterns of behaviour to individuals is the same kind of operation as going from cells to molecules.

The reason Elster provides for applying the principle of reductionism to the properties of individuals, however, is the desirability of reforming explanations to sequential events, i.e. MI of events, which he elaborates in the epistemology of mechanistic realism:

The rationale for reductionalism can be briefly be stated as follows. If the goal of science is to explain by means of laws, there is a need to reduce the time-span between explanans and explanandum—between cause and effect—as much as possible, in order to avoid spurious explanations. These risks are reduced when we approach the ideal of a continuous chain of cause and effect, that is when we reduce the time-lag between explanans and explanandum. This again is closely associated with going from the aggregate to the less aggregate level of phenomena. It is not only our confidence in the explanation, but our understanding of it that is enhanced when we go from macro to micro, from longer to shorter time-lags. To explain is to provide a mechanism, to open up the black box and show the nuts and bolts, the cogs and wheels, the desires and beliefs that generate the aggregate outcomes.

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42 Ibid., pp. 27-37, Elster particular concern here is with “unelaborated functional explanations, which explain the existence of some social phenomenon in terms of consequence of its existence for reproducing the social system of which it is part. According to Elster if individual is not shown as seat of the functions and the phenomenon, in that case one depends on the concept of collective actors. Elster, Popper and Agassi have same position in their different writings.

43 J. Elster (1985) op. cit., p. 5.

44 Ibid., p. 5.
Among these “nuts and bolts” are, in Elster’s view, the rational intentions of agents, the reasons behind what they do. For Elster, these are by way of an analogy to natural science, the “molecules” of social explanations; the ultimate reality to which explanations of intentions ought to refer.

Elaborating the micro foundations of macro-social explanations not only improves confidence in theories; it also deepens them. The relevance of micro foundational analysis for macro-structural theory can be illustrated by Elster’s discussion of class formation. Class formation is the process by which classes are constituted as collective actors of class struggles. Marxists have been interested in sorting out the relationships between different kinds of class formations. Elster holds that the key to understanding class formation is, understanding the mechanisms that facilitate or hinder the development of class consciousness in individuals. To explain these mechanisms, Elster deploys a range of concepts derived from the theory of rational strategic interaction (or “game theory”). For Elster, the process of class formation may be understood in terms of ways of solving the familiar “free rider” problem, the problem of motivating individuals to contribute towards some “public good” that redounds to everyone’s advantage, regardless of individual contribution. Elster describes this problem as follows:

Clearly, whatever anyone else does, it is in my interest to abstain. If all others engage in collective action, I can avoid the loss from unilateralism by abstaining, and if everyone else abstains, I can avoid the loss from unilateralism by abstaining too. Since the reasoning applies to each agent ... all will decide to abstention and no collective action will be forthcoming.45

45 J. Elster (1985) op. cit., p. 36-51.
Elster holds that many of Marx’s own analyses of working class formation can be interpreted in this light. For example, Marx ascribed considerable importance to the concentration and interdependence of workers in large factories. These factors are important because of the way they increase the level of information among workers about the likely preferences and behaviour of fellow workers. Marx’s clearest statement to this effect is in *The German Ideology*, where he suggests that the German idealists have not thought through what is conceptually implied in historical activity and which should therefore enter into explanations.\(^{46}\) He identifies at least five such implications: the “first premise of all human existence” is actively oriented towards the material requirements of life - that is productive activity aimed at satisfying the immediate need of the external nature. The second is the “production of new needs” - that is, a reflexive relation to internal nature.\(^ {47}\) The third set of relations is the rudimentary social relations of the family, relations that must exist for the propagation of the species. A fourth set is of social relations “by social we understand the co-operation of several individuals, no matter under what conditions, in what manner, and to what end”. Finally, these relations are


\(^{47}\) K. Marx, *Grundrisse*, (KMSW), Ibid., p. 92, that production thus not only creates an object for the subject, but also a subject for the object. Thus production produces consumption (i) by creating the material for it; (ii) by determining the manner of consumption; and (iii) by creating the products initially posited by it as objects, in the forms of a need felt by the consumer in *The German Ideology*, KMSW, p. 166.
conditions for language and self-consciousness, which develop through these historically situated relations to become intrinsic properties of practices.  

In the case of Elster, the important implication is that concepts of the self, including selves that behave in an instrumentally rational manner, must be explained as products (not presuppositions) of individual activities situated in specific contexts. A similar point holds mutatis mutandis with respect to Althusser’s and Poulantza’s view that social structures are conceptually fundamental. In contrast, Gramsci’s prison euphemism for Marx as the philosopher of praxis makes the right point: praxis, and not maximising behaviour or class structure, is the most encompassing concept in Marx’s thinking. These other concepts are secondary elaborations of conceptually constrained relations.

It seems that the real difficulty with Marx is that he created his ontology of practice on the basis of productive activities, but not aesthetic, moral, and linguistic ones. This is what left room within Marx for misunderstanding about the logical status of social structures, such as one finds in Althusser and Poulantzas. They are, as Susan James puts it, “absolute holists.” They understand that Marx refused to reify individual needs and capacities; this is clear enough. But they also believe that rejecting MI requires the opposite, namely, conceiving individuals as nothing but the effects of social structures. As Foucault

notes, "social relations of power often involve attributes of subjectivity as part of power relations themselves".\textsuperscript{52}

In contrast to Elster and the structuralists, Marx's position involved seeing attributes of subjectivity, including capacities for rational action as possibilities developed through social intercourse. For Marx, the polarity of social determination and free individual agency is a product of a specific kind of society, as are other polarities of self and society.\textsuperscript{53} In criticising Max Stirner's contrast of personal and general interests, Marx writes:

He should have realized that individuals have always started out from themselves, and could not do otherwise, and that therefore both the aspects he noted are aspects of personal development of individuals; both are equally engendered by empirical conditions of life, both are only expressions of one and the same personal development of people and are therefore only in seeming contradiction to each other....\textsuperscript{54}

Marx's theoretical point is that one ought to use concepts that can account for the polarity of self and society, and not treat self and society as axiomatic concepts.

\textbf{METHODOLOGICAL INDIVIDUALISM IN PSYCHOLOGY}

Psychology is a very fragmented field—cognitive psychology, mathematical psychology, and social psychology for instance; have little in common although


\textsuperscript{53} J. Elster, \textit{op cit}, p. 9. This is also the case for other polarities that Elster treats as \textit{a priori} In contrast, see S. Avineri (1971) \textit{The Social and Political Thought of Karl Marx}, Cambridge, pp. 94-95 and C. Gould (1978) \textit{Marx's Social Ontology}, Cambridge, Mass., pp. 33-38.

\textsuperscript{54} K. Marx (1977) \textit{op. cit.}, p. 183.
they share a common heritage. This can indeed be seen in historical accounts of psychology and its progression towards individualism. When psychology was taking shape, Wolf said, “It is an inductive science that leads to empirical generalisation about the soul and its activities.” In contrast to this, he argued in his *Psychologia Rationalis* (Rational Psychology), that rational psychology is the science of all that is possible to the human soul (as opposed to all that actually happened to it). It is a branch of metaphysics, a demonstrative science that provides necessary time statements regarding the nature and essence of the soul. Briefly, it gives rational explanations for the facts accumulated in empirical psychology. Thus, rational psychology complements empirical psychology; and conversely, empirical psychology (along with metaphysics and cosmology) is one of the foundations of rational psychology.

**KANTIAN PARADIGM OF PSYCHOLOGY**

Immanuel Kant challenged Wolff’s view that psychology could be a science. The nature of soul, or the “I” subject of everyday apperceptive judgement is a function of the organisation of our experience. It cannot however be a science, since it is the transcendental condition of every science. All arguments about the soul’s substantiality, simplicity, identity and relation to the physical world ultimately

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56 Ibid., pp. 227-39.
begin with the single proposition “I think”. And this proposition is empirical rather than rational. It is based upon \textit{a posteriori} experience rather than \textit{a priori} reason. Further, experience can never provide a basis for a purely rational and certain proof of the nature of the soul. Just because there is an empirical “I” in every act of thought, for instance, does not prove that this “I” is substantial, or that it is identical from one thought to another, or that it is simple. Kant therefore concluded that since rational psychology is a “science surpassing all powers of human reason”, there is nothing left for us “but to study our soul under the guidance of experience, and to confine ourselves to those questions, which do not go beyond the limits within which content can be provided for them by possible inner experience”. It can be said, Kant concluded, that psychology could only be an empirical science.

With this conception, Kant entered the second phase in which he analysed the scientific status of empirical psychology. He published the result of this critical analysis in the preface of his \textit{Metaphysische Anfangsgrunde der Naturwissenschaft} (Metaphysical Foundations of Natural Science), a work in which he elaborated his own “Newtonian” concept of natural science. It was against the same conception that Kant measured the possibility of a scientific psychology. Again, his conclusion was negative:

\textit{Psychology- or “the empirical doctrine of soul” - can never become “a natural science proper”; it can “never become anything more than a historical ... natural doctrine of the internal sense”. As a consequence, it can only provide “a natural description of the (phenomena of the) soul, but not a science (i.e., demonstrative

\textit{\textsuperscript{57}} I. Kant (1965) \textit{Pure Reason}, translation by N. K. Smith, St. Martin’s, New York, p. 329. \textit{\textsuperscript{58}} Ibid., p. 353.}
knowledge) of the soul.\textsuperscript{59}

The reason psychology could never become a "natural science proper", according to Kant, was that it could not be based upon \textit{a priori} principles and thus could not yield apodictic or certain knowledge. More specifically, psychology could not utilise mathematics, which provides the necessary means for the \textit{a priori} construction of concepts of science. According to Kant, "in every special doctrine of nature only so much science proper can be found as there is mathematics in it". Mathematics is the "pure (\textit{a priori}) part (of science), which lies at the foundation of the empirical part (of science)".\textsuperscript{60} In other words, all true science must have a rational as well as an empirical part. Experience provides the empirical data; mathematics provides the inherently rational relationship between these data. But according to Kant, psychology could never utilise mathematics, because its empirical data do not have spatial dimensions and therefore exist only in the single dimension of time. Therefore:

"Unless one might want to take into consideration merely the law of continuity in flow of ... internal changes, mathematics could not be applied to purely mental phenomena. As a result, psychology could "become nothing more than a systematic art ... never a science proper; for... (it is) merely empirical".\textsuperscript{61}

By "merely empirical", Kant meant that psychology had to depend entirely upon an inductive or \textit{a posteriori} collection of data. Such a procedure can never yield apodictic knowledge because it contains no \textit{a priori}, necessary


\textsuperscript{60} Ibid.

\textsuperscript{61} Ibid.
elements. Instead, it can lead only to tentative "laws of experience".\textsuperscript{62}

Further, Kant said that psychology is not "merely empirical"; it is not even a good empirical discipline. He noted:

Because in it the manifold of internal observation is separated only by mere thought, but cannot be kept separate and be connected again at will. In brief, psychology cannot control its phenomena; it cannot be "experimental". Furthermore, psychology suffers from the poor quality and restricted range of the observations that are available to psychologists. On the one hand, "the (act of) observation itself alters and distorts the state of the object (i.e., the mental phenomenon) observed"; on the other, "still less does another thinking subject submit to our investigations in such a way as to be conformable to our purposes." Thus, psychologists can only report on their own mental phenomena, and even then they cannot be completely accurate in their reports.\textsuperscript{63}

For Kant, psychology could never become a true rational science, based upon mathematics and yielding necessary truths, nor could it become an experimental science. However, he did see a way in which psychology could at least become a better empirical science. Psychology should, he said, make use of a different methodology based upon observation of the external rather than internal sense. He set forth this thesis in his \textit{Anthropologie in Pragmatischer Hinsicht} (Anthropology from a Pragmatic Point of View), claiming that psychology, although remaining "merely empirical," could become useful to humanity if it could forsake its traditional introspective method and begin to make systematic observations of men and women "in the world" as they behave and interrelate with their fellow citizens. This was a sufficient justification, in Kant's opinion, for developing an empirical psychology based upon external rather than


\textsuperscript{63} I. Kant (1970) \textit{op. cit.}, p. 8.
It is ironic indeed that his own psychology, as presented in the *Anthropologie* (Anthropology) as well as in other works, relied so heavily on traditional introspectionist data. In fact, the entire first part of the *Anthropologie* (by far the larger of its two parts) was concerned with the classification of mental phenomena. Further, Kant did not believe that it is possible definitively to describe the transcendental, or ultimate, nature of the mind, but he did contend that the existence of the "I" (or ego) is guaranteed, since it is the necessary "formal condition" that makes possible "the logical unity of every thought..." Kant said that whereas the ego in and of itself cannot be an object of thought, some of its attributes can be known insofar as the ego is "the vehicle of all concepts." Indeed, the very existence of concepts presupposes the activity of the mind, and in particular the mind's capacity of instantaneous apperception. For Kant, apperception referred to the special type of synthesis that is brought about by the faculty of thought, or understanding. Kant did not agree with the empiricists who felt that higher mental phenomena, such as concepts, are merely the final products of random and essentially passive process of association of sensations. He could not conceive how disparate sensations could, by chance, come to coalesce in a unified, structured manner. Instead, he viewed concepts as the basic, original "given" of consciousness. Their existence, he said, rather than

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64 I. Kant (1974) *Anthropology from a Pragmatic Point of View*, translation by M. J. Gregor, Nijhoff, Hague, pp. 4-5.

65 I. Kant (1965) *op. cit.*

66 Ibid., p. 329.
the existence of unorganised and thus meaningless sensations, is primary. One is first aware of unified states of mind; one never knows these elements except as abstractions from one's concepts. This was the reasoning behind Kant's doctrine of the primary "unity of consciousness".\textsuperscript{67} Kant, however, did not limit his psychological vision to the realm of consciousness. In opposition to the empiricists, he endorsed the existence of unconscious ideas. Indeed, his discussion of the "degrees of consciousness" had notable historical consequences. In addition, Kant discussed various cognitive "deficiencies" and "talents." Among the deficiencies, he discussed mental illnesses, particularly, though not entirely, as it reflects the improper working of the rational mind; among the talents he discussed, were wit and the nature of genius.\textsuperscript{68}

The central irony of Kant's thought is that although he posed a brilliant argument for the \textit{a priori} freedom of the human being, he was equally adamant in his insistence that this freedom is a function solely of practical reason, or will, and can never be comprehended by pure reason, or understanding. After all, as Kant has argued, in the \textit{Kritik der reinen Vernunft} (Critique of Pure Reason), one of the basic categories of comprehension is causality. Human beings necessarily comprehend antecedents and consequences as causes and effects: our minds simply work that ways.\textsuperscript{69} As a result, since every act, even every free act, occurs in the context of a sequence of events over time, complete comprehension will

\textsuperscript{67} Regarding apperception and the unity of consciousness, See I. Kant (1965) \textit{op. cit.}, pp. 133-50 (A), 151.

\textsuperscript{68} Regarding Unconscious Ideas, Cognitive Deficiencies and Cognitive Latent, See Ibid., pp. 16-18, 73-89, 89-97 respectively.

\textsuperscript{69} I. Kant (1965) \textit{op. cit.}, pp. 111-15.
always involve the specification of cause-effect relations. By arguing that these cause-effect relations are products of mental analysis and do not necessarily describe the true state of nature, Kant was able to leave room for freedom in the world of human affairs. But this same argument also led him to present two diametrically opposed images of the human being - as free and as determined.

THE AFTERMATH OF KANT AND THE RISE OF HEGELIAN PARADIGM

In the ferment of thought that occurred in Kant's wake, idealism came to the fore and dominated philosophical speculations in Germany for half a century. The most prominent among them- Johann Gottlieb Fichte, Friedrich Wilhelm von Schelling and Georg Wilhelm Friedrich Hegel- emphasised different aspects of Kant's thought and developed forms of metaphysical idealism that far exceeded the narrow bounds of their predecessor critical idealism. Like Kant, they believed that psychology was a "merely empirical" science; but unlike Kant, they believed that this tentative preliminary science could be transformed and completed by philosophical thought, thus disregarding Kant's strictures about the limits of rational psychology. To some extent, then, they revived the spirit of rational psychology. But, nonetheless, they helped to propagate many of Kant's psychological doctrines, primarily through the publications of their psychologist disciples.70

Fichte's elaboration of the concept of consciousness led him to an

idealistic view of consciousness as an ever-active, striving ego, which is ultimately manifested as will. His basic principles of egoism, activism and voluntarism, deduced originally as principles of absolute reality, were used in psychological analyses by a number of his followers, including G. E. A. Mehmel and Karl Fortlage. They influenced Hermann von Helmholtz particularly as regards his historically important theory of the active role of mind in perception. When Wilhelm Wundt characterised his psychology as voluntaristic in nature, he clearly indicated the extent to which his "New Psychology" was premised on an acceptance of the Fichtean revision of traditional Leibnizian intellectualism.

Schelling's considerations of consciousness led him to discussions of the unconscious as a necessary antecedent and corollary of consciousness as well as to discussions of the concepts of personality and genius. Fechener's study of the relationship between conscious experience and physical stimulation came from the Naturphilosophie (Natural Philosophy) of Lorenz Oken. Oken, in turn, had been inspired by Schelling.

Hegel had a more developed and formalised psychology than either Fichte

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or Schelling. His psychology is part of his *Philosophie des Geistes* (Philosophy of Mind).\(^7^6\) His psychology, with its reliance on, and reverence for, Aristotelian psychology, had a profound impact on Wilhelm Dilthey, Franz Brentano, and other notable contributors to the development of psychological thought.\(^7^7\)

Hegel’s conviction of psychology is that it can only describe the empirical conditions and experiences of mind. In this, he is in agreement with Kant. Nevertheless, beyond Kant, he argued that the study of the “subjective” mind can and must be transcended, and develops beyond mere sense-dependence, by immersion in a larger “objective,” or “group mind”. In other words, the study of the “I” must be followed by the study of “we”, which, in turn, leads to the study of the Absolute Mind. The important point is that Hegel formalised an insight that was implicit in the work of Johann Georg Hamann, Johann Gottfried Herder and others: the social level of analysis, he claimed, transcends that of the individual. Beyond that, he prescribed the study of the social or objective mind by means of its products, such as language, law, custom, and myth. This Hegelian doctrine was an important influence upon the development of the social psychological perspective, especially as formulated in *Volkerpsychologie* (cultural, or “folk,” psychology).

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Wilhelm Wundt agreed with Hegel when he claimed that the higher mental processes, involving the truly human, symbolic aspects of experience, could only be understood within a social context, using a non-experimental methodology. For Wundt, the task of experimental psychology was the analysis of consciousness. However, his attitude towards consciousness left some room for ambiguity. He explicitly talked about mental process, not mental contents: “As a matter of fact ideas, like all other mental experiences, are not objects, but processes, occurrences.”

Wundt’s overall contribution to psychology was that he made psychology independent of philosophy and established it as an experimental science. “Before Wundt... established his laboratory, psychology was little more than a waif knocking now at the door of physiology, now at the door of ethics, now at the door of epistemology.” Despite this, there were various psychologists who took positions, sharply different from that of Wundt. For instance, mention may be made of Franz Brentano and Carl Stumpf who vigorously and vehemently opposed Wundt. For Wundt, the subject matter of psychology was consciousness that can be understood by analysing it into contents like sensations and feelings. But for Brentano mental acts or processes rather than mental contents are the subject matter of psychology. For Brentano, act always refers to objects. Brentano

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divided mental acts into three types -ideating, judging and feeling. Ideating refers to having an idea, whether real or imagined, past or present. Judging is determining affirmation or denial of objects. Feeling refers to having certain attitudes towards the object.

Carl Stumpf, a disciple of Brentano, pointed out that mental acts are the fundamental subject matter of psychology. He further said, psychology studies "functions" or acts such as perceiving, desiring, willing etc.

Wundt's spiritual successor, Titchener's structuralism, may be regarded as a rigorous simplification of Wundt's paradigm. Mental states are made up of sensations, images and feelings. But the only "simple" feelings are pleasantness and unpleasantness, other feeling states being in reality, compounds or "sense feelings." "Apperception" is discarded, but "attention" is the process by which sensations or images take on greater "clearness." Titchener rejected the tri-dimensional theory of feeling of Wundt, but later eliminated even the last remaining attribute of feeling. Wundt held that there were two primary attributes of conscious experience, quality and intensity, but Titchener extended the number of attributes to four by adding duration and clearness or clarity. For both men, quality has its usual meaning of a difference in kind. Intensity is synonymous with clarity for Titchener, except that it is a type of clarity that varies with attention

rather than with objective characteristics of the stimulus. Intensity, with its usual meaning of strength and propensity, refers to duration in time of sensation or image.

Again, Wundt considered only two elements of conscious experience, sensations and affections, but Titchener added one more to it, namely images. Although Wundt did not consider images as an independent category of conscious elements, he considered it to be occurring due to a blend in sensations.

Wundt and Titchener, with their similarities and dissimilarities, provided the basis for the experimental method in psychology and the structural school succeeded in winning academic recognition for psychology as an independent science. Psychology was regarded as an empirical science with some features of natural sciences and some of the social sciences, in the Wundtian scheme. Structuralism was criticised primarily for its methodology and the narrowness of its conception of psychology: animal and applied psychology were ignored in practice if not in principle. One of the strongest critics of structuralism was William James, who described it as narrow, artificial and pointless.

**The Functionalism in Psychology**

James was not merely a clever critic of elementalism and Wundtian introspectionism, but on the contrary, he had an extensive positive programme for psychology and can be regarded as one of the principle proponents of functionalism. His emphasis was on pragmatism, which implies that the validation
of any knowledge must be in terms of its consequences, values or utilities. Useful knowledge for psychology, James felt, would come from the study of behaviour as well as generalised principles of emotion and non-rational impulses as well as intellectual abilities.\footnote{M. H. Marx and W. A. Cronan-Hillix, \textit{op. cit.}, p. 115.}

The general assumption was that psychology must study functions- that psychology is part of a biological science and that human beings must be considered in their adaptation and readaptation to the environment.\footnote{Ibid., p. 115.} Further, he argued that thought and feelings exist and are vehicles of knowledge. He contends that psychology, when it attains the empirical correlations of various sorts of thoughts or feelings with definite conditions of brain, can go no further, that is, as a natural science.\footnote{W. A. James (1890) \textit{The Principle of Psychology}, Vol. I, Henry Holt, New York, p. vi.} James thus tackled at the very outset the problem, which the parallelistic views of Wundt and Titchener were designed to avoid: the relationship between mind and body. As to his own philosophy, James is quite explicit:

The psychologist's attitude towards cognition will be so important in the sequel that we must not have it until it is made perfectly clear. It is a thought going dualism. It supposes two elements, mind knowing and thing known, and treats them as irreducible.\footnote{Ibid., p. 218.}

The brain, he suggested might not be the basis for mental life, but merely the agency, which transmits psychic realities into the terms that organisms use in their relations to the environment.
The crux of James's psychology is to be found in his "stream of consciousness." James argued that consciousness does not exist as an independent category of knowledge, as if it were just another subject for science to study and philosophers to analyse. Consciousness does not exist as a complex function of the object and the perceiver.87

In this context, Jamesean psychology is a person-centred science. Consciousness could be conceived as only what was within the present field of waking awareness. It could be considered on the totality of possible states, whether visible or hidden, beyond the view of immediate attention, or it could be seen in terms of the phenomenological reality of the individual, known across a range of experiences from pathological to transcendent, intimately connected in both habitual and creative ways to the objects of its perception.

One of James's most famous theoretical contributions is the James-Lange theory of emotion. Prior to that, the common and popular explanation was that after perceiving an object, emotion is experienced and then, appropriate emotional behaviour takes place, but the James-Langean paradigm reversed the sequence. James argued that after perception of emotion providing stimulus, emotional behaviour occurs. James made crystal clear that emotional behaviour or response includes the external as well as internal reactions. This theory of James's thus outlined his position on mind and body.

There were numerous detractors of Jamesean position, who had passed

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from the Leipzig laboratory of Wilhelm Wundt and either emigrated or returned to found laboratories at various American universities. Chief among them were G. Stanley Hall, James McKeen Cattell and Lighter Witmer.

These figures sought to establish psychology as an experimental science, patterned on a German scientific ideal, under the banner of quantification, laboratory apparatus and positivist rhetoric. They chastised James for introducing philosophical conceptions into the discussion of its method or its subject matter. They also derided James for his interest in psychical research, believing psychic phenomenon to be false and, at the very least, an inappropriate topic for a legitimate science. However, despite all the criticisms, James contributions to psychology in general and functional psychology in particular cannot be ignored.

Another extremely important personality of the functional school of psychology is Dewey. In fact, a short paper by Dewey, "The Reflex Psychology," was a significant landmark in the beginning of the functionalist movement. According to "reflex arc schema", the behaviour-chain can be broken down into an afferent or sensory component initiated by the stimulus and mediated by the sensory nerves; a central, or associative, component mediated by the spinal cord, and the brain; and an efferent or motor component mediated by motor nerves and culminating in a response. Dewey viewed behaviour as total coordination, which adapted the organism to a situation. It appears that he followed in the spirit of James’s view of the continuity of consciousness. As Dewey said, "stimulus-

response distinction is artificial; it is a result of the holding over the old mind-body dualism."  

The essential arguments of Dewey's paper are thus that behaviour should be considered in relationship to its function and that molar units of analysis should be used. The first point marked the beginning of the Chicago School of Functional Psychology, and the second was the Gestalt view. The Chicago School's pioneer, Angell considered functionalism as a psychology of mental operations in contrast to a psychology of mental elements. This viewpoint is the antithesis of the structuralist viewpoint. For functionalism, psychology might be considered as the fundamental utilities of consciousness. Angell's viewpoint is thus similar to that of James, with the mind functioning to mediate between the organism and its environment and becoming active primarily in adapting to situations. Further Functionalism is the psychology of the total relationship of organism to environment, including all mind-body functions.

Another pioneer functionalist, Carr's central theme is organismic adjustment. He argued that psychology is the study of mental activity, which is a generic term for adaptive behaviour.

For Carr, the adaptive act is the key concept for psychology. It involves three essential phases: a motivating stimulus, a sensory situation, and a response

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90 J. Dewey, *op. cit.*


92 Ibid., p. 128.

that alters the situation to satisfy the motivating conditions.

Carr regarded consciousness as an artificial abstraction: "that has as much independent existence as the grin of a Cheshire cat". Thus, consciousness was an unfortunate reification, something that was supposed to exist; whereas all that exists in reality is a set of processes. The concept of consciousness is similar to other abstract concepts like intelligence will power and crowd mind. Since it is a mere abstraction, consciousness can not play an active role in adapting an organism to the environment. It can not account for behaviour. It seems, then, that Carr's position is between the functionalists and the behaviourists.

Another functionalist, but a bit different in his perspective, was R.W. Woodworth who belonged to the Columbia School. His system is like that of the other functionalists, but his functional eclecticism is extreme, as he tried to take the best features from all systems. His dynamic psychology has led to less protest against Titchenerian structuralism than did the Chicago School. He accepted introspective techniques and sometimes defended them. His psychology is not just S-R (Stimulus Response) but is S-O-R (Stimulus, Object and Response). The heart of Woodworth's system is his concept of mechanism, which has more or less the same meaning as Carr's adaptive act. Mechanisms for Woodworth were purposive responses or set of responses.

Functionalism, especially as represented in the psychologies of Carr and Woodworth, relied heavily on experimentation. It was more concerned with

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94 Ibid., p. 8.
functional interrelationships of variables than with theoretical superstructures. It accepted both introspective and behavioural data, stressed adaptive behaviour and purposive, motivated activity within either S-R (Carr) or S-O-R (Woodsworth) framework. Furthermore, it was always systematically eclectic while taking a tough-minded approach to experimental problems.95

Before commencing on a discussion of the most objective and individualistic system of psychology that is behaviourism, it is important to digress into a discussion of associationism, which is synonymous with the orthodox interpretation of science.

ASSOCIATIONISM IN PSYCHOLOGY

The origin of associationism can be traced to British empiricism, which used the same principles of association suggested by Aristotle. He suggested that items, which are similar or contiguous, tend to be associated with one another. The only principle of association, which was added to Aristotle's list by British empiricists, was the principle of causality suggested by Berkeley and expanded by Hume. Thomas Hobbes, though he was very deterministic and mechanical, followed the Aristotelian tradition and said that reason was the dominant guiding factor in human behaviour. John Locke, usually regarded as the founder of British empiricism, in his famous work, *An Essay Concerning Human Understanding*, said, "All knowledge comes from experience, through either reflection or sensory

This was extreme empiricism, which was an attack on Descartes' belief in innate ideas. In Locke's imitation, Berkeley, Hume and Mill made subsequent formulations. Hume characterized it as a "gentle force", and James Mill considered it as an inexorable principle of connection.

Locke started a trend with his special theory of primary and secondary qualities, which he thought were the basis for sensory "ideas". Primary qualities are those, which inhere in the body and are inseparable from the object. Secondary qualities are those, which are not of the object, but are considered a function of the mind itself.

Berkeley rejected this distinction outright and showed that there were no "primary" qualities in experience except those qualities, which Locke had already described, as "secondary" or subjective. Berkeley was a subjective idealist and for him, the mind was the ultimate reality. Berkeley's main problem was not how the mind was related to matter (Descartes), or how matter generated mind, but how mind generated matter. For him, the Latin phrase esse esse percipti (to be is to be perceived) was cardinal. In other words, material substance is not real.

Another empiricist David Hume's central contribution to psychology was the analysis of the stream of thought into one endlessly changing kaleidoscopic series of experiences. Berkeley maintained that a soul is needed to bring all these experience together, but Hume argued that there was no need to consider the soul for examining consciousness. Hume denied the validity of Berkeley's assumption.

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of soul and of God as an active cause of experience and offered a psychology, which was nothing but the study of a series of experiences, combining and recombining, through the natural force of association. For him, the principle of cause came into being as an idea only if the cause had been contiguous with effect. Hume believed that the principle of cause and effect retained its independence despite its close relationship to temporal and spatial contiguity.97

As has been said, associationism, in the hands of Hume, was a means of dissecting and describing experience dispensing with any unifying agency, whether physical or mental.98

Associationism was founded out of empiricism by David Hartley, who postulated the existence of vibratory actions within the nervous system corresponding to ideas and images. The more intense vibrations were sensations, and the less intense ones were ideas. Hartley furthered the development of analytic, mechanistic and reductionistic psychology. There are so many names, which are very important in the development of associationism as a system, such as Brown, James Mill, John Stuart Mill, Alexander Bain, Ebbinghauas, Pavlov, Bekhterev, Thorndike and so on. But the work of Pavlov and Thorndike contributed most significantly to the development of individualism in psychology. Pavlov's "conditioned reflex" was the product of the environment. Sechenow first pointed to the reflex act as the cardinal element of behaviour. But the conditioned


98 G. Murphy, et al., *op. cit.*, p. 34.
reflex of Pavlov provided a tool with great power in deductive inquiry. Pavlov represented a shift in the concept of association from its historical application to ideas, to the relations between stimuli and entirely objective, highly quantifiable glandular secretions and muscular movements. He was not just an associationist; he was also an extremely important antecedent of behaviourism.

Thorndike, another important pioneer of associationism, produced a complete associationistic learning theory and, in the application of quantitative measures to socio-psychological problems, contributed to the development of new techniques in the field of lexicography.

The associationism of Pavlov, Thorndike and many others played a pivotal role in the development of psychology as an independent science in general and behaviourism as an objective system in particular.

**BEHAVIOURISM IN PSYCHOLOGY**

Behaviourism was based on an aggressive objective methodological or even a meta-methodological revolution. The foundation of behaviourism, then, was an anti-mentalist methodological objectivism, which attempted to base psychology on the methods of physical sciences. It was, in other words, an entirely legitimate dissatisfaction with introspective psychology. Watson's programme was mechanistic, elementalist, associationistic, peripheralistic,

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99 Ibid., p. 242.
environmentalist and correspondingly anti-teleological, anti-purposive, anti-nativist and anti-emergent.\textsuperscript{101}

Behaviourism, nicknamed the "second force" in psychology, is a completely objective psychology. Diserens described psychological objectivism, as "any system in which the effort is made to substitute data and the special method of introspection with the method of observation".\textsuperscript{102} The introspective method was judged to be unreliable because the result obtained was not replicable at different laboratories. Watson argued that the introspective method is unrealistic because of the crippling flaws inherent in it. Objective psychologists rejected introspection because they were anti-mentalistic; the rejection of mentalism and the affirmative side of behaviourism's quest for objectivity was the acceptance of a loose "physicalism". Wundt's distinction between physics and psychology in terms of "mediate experience" and "immediate experience" was abolished. Behaviour alone became the subject matter of psychology. Weiss went even further to Watson to show that both the methods and the content of psychology could be formulated in terms, which would approximate to atomic physics.\textsuperscript{103}

Avoiding Weiss's reductionalism, Skinner was the first psychologist to

\textsuperscript{103} A. P. Weiss (1925) \textit{Theoretical Bases of Human Behaviour}, Adams, Columbia and Ohio.
recast psychology along Bridgman's operationist principles. Hull chose detailed cases from the history of physics and astronomy to provide examples of how science should be carried out.

Although Tolman's reintroduction of purpose into behaviourism took place only six years after Watson began promoting conditioning principles, Tolman continued to abjure mentalism as such, but made free use of cognitive concepts such as expectancy. In this way, he repudiated elementalism by insisting on the primacy and irreducibility of molar behaviour and minimised the implication of associationistic and mechanistic linkages between stimuli and responses by stressing the organism's selective control over its environment.

Watson, on the mind-body problem, proposed that the mind did not exist. This position on the mind is called metaphysical or radical behaviourism. In the controversial mind-body debate with McDougall, Watson said that consciousness "has never been seen, touched and smelled, tasted or moved. It is a plain assumption just as improvable as the old concept of the soul". McDougall rejected both the denial of consciousness or mind and the rejection of introspective methodology. Watson thus eliminated a great deal of valuable and legitimate data in psychology.

Woodworth complained that the early behaviouristic emphasis upon strict objectivity hindered the development of sensory and perceptual research because it turned attention away from this problem. Gestalt psychologists have been vociferous in their complaints against the allegedly molecular brand of S-R psychology. Bergmann, dismissing Watson as metaphysical, argued "Watson's particular mistake was that in order to establish that there are no interacting minds, which are true, thought that it is necessary to assert that there is no mind, which is not only false but silly." Bergmann wanted to keep out of philosophical trouble because he saw himself as a champion of the revolt not only against structuralism but also against functionalism.

Nevertheless, most behaviourists such as Gutherie, Hull, Krechevsky, Lasley, Miller, Skinner, Spence etc. continued to regard themselves as behaviourists and felt that there is a definite continuity and cohesiveness, which confirmed behaviourism as constituting what Kuhn called a "normal scientific tradition". But this tradition is in question. Kuhn's "normal science" is entirely cumulative and consists in building up the body of science by accretion, by adding more and more bits to what is regarded as the common store of knowledge. There may be disagreement but at least they agree on fundamental and background matter. In contrast, in behaviourism, there has never been an agreement upon a body of background knowledge. For instance, the Laskley jumping stand, the demonstration of new experimental phenomena (e.g. sensory

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preconditioning, the reward value of saccharin) and modifications to existing theory (e.g. Hull’s and R.G. Tolman’s “motor pattern” learning). The various dimensions of these differences.

Thus, behaviourism as a whole never possessed the unanimity of outlook necessary for the practice of normal science, and the individual schools within behaviourism were never sufficiently free of serious external challenges to devote themselves without distractions to articulation of their various theoretical positions. Despite all these, behaviourism is considered as the epitome of physicalism, methodological individualism, reductionism, elementalism, mechanicalism, and anti nativism.

**SOCIAL PSYCHOLOGY**

There is therefore an urgent need to look for another stream of thought where the social milieu is considered important. The other branch within the purview of psychology is social psychology, which under the influence of sociology and anthropology started taking into account the social fabric of life.

Around the beginning of the twentieth century the subject matter of psychology fluctuated between notions of “group mind,” on the one hand, and “instinct”, on the other. Durkheim, Lebon, Ross, Taine and Wundt theorised in various ways about collective representations, group mind, collective mind, and collective consciousness, which is composite of... “those mental products created

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by the community of human life and are therefore inexplicable in terms of merely individual consciousness".\textsuperscript{111} The most familiar proponent of the social instinct view was Mc-Dougall. However, one of the most predominant paradigms of social psychology was Floyd H. Allport's vision of social psychology that was to prevail and produce an individual centred sub-discipline of psychology.\textsuperscript{112} Allport argued that social psychology does not have a distinct identity, but is a branch of general psychology. "Its centre of emphasis is the person".\textsuperscript{113} Though the theoretical foundation of social psychology is based on the supposed explanatory repertoire of hedonism, egoism, irrationality-rationality, sympathy and imitation, there are separate vigorous and autonomous traditions both of an experimental and of a non-experimental nature within the discipline. Early experimental social psychology was indistinguishable from general experimental research. Bartlett's work on remembering\textsuperscript{114} thereby influenced both the methodology and theoretical orientation adopted by Allport and Postman in their studies of students. It also influenced Prasad\textsuperscript{115} and Sinha's\textsuperscript{116} work on the circulation of rumours at the time of the Indian earthquake in 1934, after the occurrence of other natural disasters in

\textsuperscript{111}W. Wundt, op. cit., p. 3.


\textsuperscript{113} F. H. Allport (1924) Social Psychology, Houghton Mifflin, Boston.


the subcontinent. In those early days, both in Britain and in America, a separate and autonomous experimental social psychology could scarcely be said to have existed. It was part and parcel of a more general experimental psychology, but in the last 35 years, social psychology has witnessed an increasing concern about "socializing" social psychology.

James House distinguishes three domains of social psychology, identified primarily by the level of analysis within the new practice. The first, christened "Psychological Social Psychology" (hereafter, PSP), is dominated by the experimental tradition, which anchors itself in the experiences and behaviours of individuals and attempts to understand these in terms of the immediate milieu. Such an approach, by definition of the scientific paradigm within which it operates, is ahistorical and encourages concentration on nomic behaviours. PSP is concerned with the search, elicitation and application process. In PSP, the "social" is regarded as one of a number of ways in which cognitive processes can be studied with a rigorous and precise procedure in controlled laboratory conditions. Like all other methods, it also has its strengths and weaknesses, the latter seemingly outweighing the former. This is not only due to the experimenter's bias or demand characteristics, but above all to the fact that the external validity is often ignored and when examined, often found wanting because the social side of the interaction has not been analysed for its psychologically relevant features.

Experimental social psychology (hereafter, ESP) seems unnecessarily imprisoned within the confines of laboratories. Even here, however, only the

immediate influences of individuals on the behaviour of one another in dyad or groups are taken into consideration. Lawful connections between the recorded influences and resulting behaviour are treated as ahistorical invariances, and the societal, historical dimensions of the observed “social” behaviour are excluded.118 Alternatively, if they are brought into consideration, they are translated into the language of variables and thus stripped of their societal historical concreteness. Treated as variables, the societal, historical dimensions of individual activity become indistinguishable from and irrelevant to psychological laws, which are presumed to have an existence independent of them. The interpersonal relational structures investigated by social psychology are thus understood as constructed from independent, immediate and reciprocal influences of individuals upon one another (and their lawful transformation into behaviour patterns) and as isolated (or in principle isolable) from the condition of actual societal life.119 Social psychology does not challenge the limits imposed upon it by an ahistoric, nomothetic variable model.120

The second face, symbolic interactionism, is a recent position in sociology, which adopts a more phenomenological basis. It focuses on the dynamics of human interaction in the development of the mind. The foremost proponent of this face of this social psychology is G. H. Mead. As C. W. Mills remarks that in Mead we find, “a theory of mind..., which conceives of social

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119 Ibid., pp. 41-42.
120 K. Holzkamp cited in Ibid., p. 41.
factors as intrinsic to mentality but realises fully the selective character of mentality". Mead's thinking revolves around a vigorous effort to shatter a deterministic conception of man, a conception that sees man marvellously but mechanically fashioned before the conditions and forces of an overwhelming universe. He desired to reformulate mind and self in the light of behaviouristic and pragmatic methods to integrate the individual. For Mead, both the self and the mind are clearly social in nature; the self enabling the human being to carry on a process of communication with himself and the mind being the behaviour that takes place in this intercommunication. Mead's view is that the self and the mind are products of participation in group life. Individuals are dependent upon one another for the satisfaction of their needs, thus necessitating a commonality of expectations. This occurs through symbolic interaction, which is aimed at achieving common interpretations. In this way, individual needs are brought into the social sphere and causes modifications of interpretations, which, through compromise, achieve reciprocity of understanding that makes possible an optimal satisfaction of participants' needs.

Symbolic interactionism has attracted much criticism; for instance, that it tends to be ahistorical and noneconomic, especially in its approach to social problems. Symbolic interactionism either ignores or has a faulty conception of

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social organisations and social structure.\textsuperscript{124}

Another criticism is that society is reduced to individual processes of interaction and communication. In so far as it is not subjectified as a supra-individual system of interpretations, society functions solely as the negative side of the personal interpretative system, and thus appears as a kind of foreign, blind and meaningless resistance to the meaning-giving activity of human subjectivity. The total separation of subjective and social determinants is consequently reproduced but, as it were, from the other side, the restriction and obstruction of subjective and inter-subjective systems of interpretation and expectation by society consequently appears as an inexplicable accident.\textsuperscript{125}

Holzkamp concludes that although symbolic interactionism and similar positions make some interesting and important moves of a phenomenological sort, they do not bring us significantly closer to a scientific understanding of the relationship between society and subjectivity.

The third face of social psychology that is called psychological sociology, anchored in classical sociology,\textsuperscript{126} begins with social structure and explores its relationship to individual experience and behaviour. The analysis, even in this avatar, does not begin at the level of societies but at the level of organisations, institutions and communities. Psychological sociology is anchored in the writings

\textsuperscript{124} Gouldner cited in Ibid., p. 38.
\textsuperscript{125} C. W. Tolman, \textit{op. cit.}, p. 45.
of Karl Marx, Emile Durkheim and Max Weber with contemporary contributions from such researchers as David McClell, Robert Blauner and Melvin Kohn. Marx saw man as basically a rational purposive producer. Marx’s understanding of man and society was a thoroughly sociological one, which viewed man’s primary social relationship in the process of production as conditioning the structure of society. Thinkers such as Fromm, Reich, Osborn, Marcuse and Sartre have made attempts to combine Freudianism with Historical Materialism, but how much they succeeded is debatable. In contrast to Marx, Freud saw man as dominated by unconscious and irrational instincts, with the non-productive death instinct being predominant. In Freud’s view, society was mostly a product of his own psychologising. For him, the structure of society is derived from the working of various psychological mechanisms e.g. Oedipus complexes, instincts etc. The contrast occurs here, on the one hand Marx places the emphasis on social factors, on the other hand, Freud on psychological ones. It is alleged that while psychological sociology is sensitive to macro structures, it is weak on the psychological side. Henri Tajfel has pointed out repeatedly that all these various interpretations of the social, have one thing in common: the result of such studies are invariably expressed in terms of individual responses or the average of such responses (which comes to the same, with the only difference that averages disguise as much as they reveal, even if a sigma is added). As a rule, the social is introduced in such studies as an independent variable, whose meaning is taken for

127 M. C. Taylor and M. P. Johnson, op. cit.
granted and remains unanalysed.\textsuperscript{128} While institutions, processes or events are, of course, the result of human actions, once established, they exist independent of their originators, empowering or constraining others.

Two themes especially emerge, when one looks back over the various approaches to social psychology. One is the waxing and waning of naive empiricism/positivism and its association with the rise of experimental social psychology and the second is psychological sociology with its scathing attacks on the former approach. All the paradigms within social psychology such as symbolic interactionism, ethno methodology, ethnogeny, social constructivism have in common a protest against positivism. Taken together, they offer a powerful critique of social psychology practised in the past. However, the dominant practice of social psychology continues to forge along old pathway using positivism/empiricism as the guiding methodology.

It is apparent that mainstream social psychology concentrates on individual responses, which do not enable us to go beyond the individual. This of course means that generalisability is limited. In conclusion, modern psychology is found to be practiced as “a science dealing with alienated man, studied by alienated methods”.\textsuperscript{129}

\textsuperscript{128} K. Holzkamp (1972) \textit{op. cit.}, pp. 80-81.

METHODODOICAL INDIVIDUALISM IN NEOCLASSICAL ECONOMICS

Economics, like other social sciences and psychology in particular, was also heavily influenced by "scientism", especially mechanics. The mechanistic view had brought to the natural sciences possibilities of prediction using new mathematical tools (calculus) of considerable power. Of all the social sciences, the impact on economics was the greatest and this continues to live on, although in physics Newtonism has passed its hour of glory.130 Roegen remarks, "no other sciences illustrate better than economics the impact of the enthusiasm for mechanistic epistemology upon its evolution".131 Two major trends in neoclassical economics viz. MI spearheaded by the Austrian School and later, positivist economics championed by the Chicago School, marked a departure from the holistic approach of the classical political economists like Smith, Ricardo and Marx. In this section, we shall analyse the methodological underpinnings of neoclassical economics as opposed to classical political economy.

Classical political economics evolved in direct response to the challenges faced by capitalism as it emerged out of the feudal and mechanistic past. Smith and Ricardo built up the basic framework within which to analyse the problems of political economy and Marx forged ahead to draw up a comprehensive structure based on the historical dialectical approach. The classical political economists

therefore analysed the problem of advancing capitalist economy in terms of growing productive forces e.g. division of labour, technological progress, changes in methods of production etc. and in terms of the rate of accumulation of surplus and its distribution between the different social classes viz. landlords, capitalists and workers. In other words, the enquiry in the realm of economics rested on social relations and social groups as the prime movers of economic change.

A major shift introduced by the neoclassical theory was in the unit of analysis. "In Marx, the individual enters analysis mainly through his social position in production relations, most importantly as a member of a class. The notion of class is subordinate in the neoclassical theory and society is treated as basically a conglomeration of individuals. Social events are seen mainly as resulting from the autonomous private actions; the collective effect of the decision making free and independent individual."\textsuperscript{132} Hayek, one of the major proponents of the Austrian MI school, observed that what can be scientifically observed and analysed are the actions and decisions of individual agents (both as a consumer and producer). Thus, the basic unit of observation and analysis must be the free decision-making individual and social phenomena are the cumulative effects of such individual actions.

MI in economics, although focussing on decisions of individual, has tried to distinguish itself from "psychologism", subjectivism and crude form of utilitarianism advanced by the pioneers of marginalism like Jevons. Jevons, for example, encourages the development of measurement techniques that can

\textsuperscript{132} K. Bhardwaj, \textit{op. cit.}, p. 64.
quantify utilities and disutilities (pleasures and displeasures) just like heat and pressure. This has been countered by MI through the assumption of preference ordering of consumption bundles by individuals. The hypothesis that an individual prefers a "situation" or a consumption basket to another is perfectly plausible. But the fallacy lies in MI's total refusal to take account of the social factors that determine the feasible choices open to the individual and the objectives he pursues. Secondly, it ignores the qualitative differences that arise in behaviour due to the individual's location in a particular social group. These two major problems with the MI approach restrict its treatment of economic behaviour to a mere pseudo-engineering problem. The illustration of the influence of mechanistic premises on the description of the economy's functioning can be found in the Walrasian "General Equilibrium Theory".

In the Walrasian economy, all individuals be they producers or consumers, are price takers (i.e. cannot influence price directly except through their collective impact on the aggregate demand and supply curves) and quantity adjustors. Each producer, given his initial resource endowment, feasible technologies and prices, chosen his production plans so as to maximise profits. The consumer, given his initial budgetary resources, preference mapping and prices, similarly chooses that consumption basket, which gives him maximum satisfaction. Individual supplies and demands generated through this process, when aggregated, give the collective or aggregate demand and supply in the market. Such phenomena occur in every product and factor market in the economy and equilibrium prices are those that clear all markets. Such a description of the functioning of the economy apparently
gives a picture of harmony where decisions of individuals are independent of each other. The notion of change or the attainment of a new equilibrium involves a change of the initial given conditions, often exogenously. The hysteresis effect is completely ignored i.e. every time the parametrically given prices change, the producers and consumers change their optimal plans instantaneously irrespective of the impact of his past actions. Moreover, all decisions are reversible.

Such assumptions like each individual autonomously and atomistically maximising his objective, the reversibility postulate, the additivity assumption and the absence of hysteresis effect are imitative of the mechanistic method as applied to freely moving particles. There is no historical dimension and it is this ahistoricism that gives the theory a semblance of universality. As mentioned earlier, the picture of the society is one of social harmony achieved through balancing interpersonal market forces. Walrus said:

In the last analysis it is the utility curves and the qualities possessed that constitute the necessary and sufficient data for the establishment of current or equilibrium prices. 'Values come from scarcity'... the theory which traces the origin of value of labour is a theory that is devoid of meaning rather than too narrow, an assertion that is gratuitous rather than unacceptable.133

Apparently, no class conflicts arise even in the realm of distribution because each factor (land, labour and capital) receives as income, naturally, what it adds to the production of output. But some glaring inconsistencies occur in such an analysis. According to this view, at any given moment of time, the endowments, the sphere of feasible choices and the objectives pursued are exogenously given. It is essentially a problem of allocating scarce resources with

alternative uses to optimally satisfy certain given objectives. But many social processes engage in changing these given set of objectives themselves and changing the distribution of resources through conscious struggle. Worker's struggle for better wages, the producer's moves to monopolise markets etc. are economic processes that usually do not emerge through the normal market processes. Such processes, however, are completely ignored by this approach.

The Austrian School marks yet another shift from Walrus. The methodological roots of MI and its proponents like Menger, Mises, Schumpeter and Hayek can be traced back to Aristotle. Interestingly, it is said that the German School with its chief luminary Marx, also owes a lot to the Aristotelian stream of thought. These two schools of economic thought viz. German and Austrian, though deriving inspiration from Aristotle, have moved in completely opposite directions, one towards methodological holism and the other towards MI. It is interesting to analyse how the Aristotelian influence worked in diverse directions in these two schools of economic thought.

Certain basic doctrines of Austrian Aristotelianism penetrate the works of Menger, Brentano, and their immediate followers: First, consider the thesis that the world exists independently of our thinking and reasoning activities. So, although it may be possible to shape the world through our thoughts and actions, detached and objective theorizing may be done. The second thesis is that there are in this world certain simple "essences", "natures" or "elements" as well as laws, structures, or connections governing these, all of which are strictly universal. This implies universality, irrespective of time and space. "The fact that the simple
esses and essential structures do not themselves change or develop implies in addition that historical change is a matter, not of changes in the basic building blocks of reality, but of changes in the patterns of their exemplification and in the way in which they come together to form more complex wholes. Menger calls propositions expressing universal connection among essences, "exact laws". According to Menger, it is exact laws that constitute a scientific theory in the strict sense. In this respect, they are comparable to laws of geometry or mechanics. The aim of the "exact orientation of research" is, as Menger puts it, "the determination of strict laws of the phenomena, of regularities in the succession of phenomena, which not only present themselves as exception less, but which, we have come to know them, in fact bear within themselves the guarantee of their own expectations".

The third thesis that the experience of this world involves in every case both an individual and a general aspect, was interpreted by Menger as the conception that general does not exist in isolation from the individual. As Menger puts it, "the goal of research in the field of theoretical economics can only be the determination of the general essence of and the general connection of economic phenomena." The theoretical scientist then has to learn to recognise the general recurring structures in the flux of reality. The fourth thesis is that one can know

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136 Ibid., p. 37.
what the world is like, at least in principle, from the detached perspective of an ideal scientific observer. This implies that the general structures of reality are not only capable of being exemplified, in principle, in different times and cultures, but also like the basic laws of geometry or logic they can be grasped by individuals from widely different backgrounds. The final thesis or doctrine states that the simple essences or natures pertaining to the various different segments or levels of reality constitute an alphabet of structural parts. Thus, theoretical research for Menger, "seeks to ascertain the simplest elements of everything real, elements, which must be thought of as strictly typical just because they are the simplest."\textsuperscript{137} The theorist must determine those elements whether or not they are present as independent phenomena or can be at all presented in their full purity. Scientific theory would then be able to map out the composition of such simple and prototypical constituents in larger wholes. For example, in the case of Brentano, the theoretical science of psychology, "seeks to display all the ultimate psychic components from whose combination one with another the totality of psychic phenomena would result, just as the totality of words is yielded by the letters of the alphabet"\textsuperscript{138}

These doctrines mark off Austrian Aristotelianism from all idealist doctrines, forms of historicism, and also from the positivistic, the empiricistic methodology of the Chicago School. Positivism has its roots in atomism, the view that all exists in atoms associated together in accidental and unintelligible ways.

\textsuperscript{137} C. Menger (1985) \textit{op. cit.}, p. 60.

The origin of the struggle between atomists and Aristotelians in ancient Greek has been well summarised by Meikle:

On the one hand there were Democritus and Epicurus who thought of reality as atomistic small bits that constitute and repel in the void and who had a hard job accounting for persisting natures of things, species and genera on that basis. On the other hand, there was Aristotle, who realised that no account of such things could be possible without admitting a category of form (or essence), because what a thing is, and what things of its kind are, cannot possibly be explained in terms of their constituent matter (atom), since that changes while the entity remains its nature and identity over time.\(^{(139)}\)

As mentioned in the beginning of this discussion on Austrian Aristotelianism, this played a crucial role in the philosophy of German thinkers like Marx.

Though both Marx and Menger shared the Aristotelian antipathy towards atomism, the holism or collectivism propounded by Marx and others was radically different from Menger’s position. First of all, Menger’s doctrine of the strict universality of laws was case specific to “a given social organism”. Secondly, Menger, in sharp contrast to Marx, considered value to be accounted for exclusively in terms of satisfaction of human needs and wants. Thirdly, Austrian Aristotelianism, leaving aside the rather special case of Wiesser, did not believe in “social wholes”. So they enhance a doctrine of ontological individualism, which implies a concomitant MI, according to which, all talk of nations, classes, etc. is to be treated by a social theorist as an, in principle, eliminable shorthand for talk of individuals. Economics is methodologically individualist when laws are seen as being made true in their entity by patterns of mental acts and actions of

individual subject, so that all economic phenomena are capable of being understood by the theorist as the results of combinations and interaction of the thoughts and actions of individual.\textsuperscript{140} Fourthly, Marx focussed on the task of establishing the general laws of development, which govern the transition of society from one stage or form to another. He “treats the social movement as a process of natural history governed by laws”\textsuperscript{141} Marx, therefore, accepted both methodological and ontological collectivism. In contrast, Austrian school views the exact method as being restricted to certain simple essences and essential connections. In fact, “the MI of the Austrians has indeed been criticised by Marxists as a branch of atomism”.\textsuperscript{142}

The contrast between methodological holism and MI is however not complete without mentioning Hayek and his concept of human liberty. Hayek values liberty as the absence of coercion. Coercion, according to Hayek, refers to intentional human interference with someone else’s action. There is a sharp difference between Marx’s attitudes towards a situation of inequality caused by “unjustified” natural-social endowments. Marx forged ahead in creating a theory of social change where this initial distribution is radically transformed through conscious political action. For Hayek, the problem arises regarding which facts should be treated as coercive and hence should be fought against by the body politic. Natural social disadvantages should be removed; this means a rejection of

\textsuperscript{140} B. Smith, \textit{op. cit.}, p. 273.
\textsuperscript{142} B. Smith, \textit{op. cit.}, p. 274.
the individual entitlement to assets received by chance. However, Hayek dismisses the legitimacy of such a procedure, stating that natural and social endowments are like lottery and not a form of coercion. In fact, he believes that the infringement of the individual’s liberty by the collectivity is no more justified than the random distribution of constraints-resources by chance.

The view of the marginalist school and the MI school received a rude shock at the time of the Great Depression of the 1920s. Keynes questioned the complacent orthodoxy with its blind reliance on atomistic laissez faire competitive system. He challenged the basic premise of MI that the macro-functioning of the economy could be reduced to individual action. The foundation for macro-economics, which views the economy in the aggregate as more than a mere conglomeration of autonomous individuals, was laid by the “Keynesian Revolution”.

The Chicago School was vehemently opposed to the ideas developed by Keynes. Milton Friedman, the main exponent of the Chicago School, reacted by advocating a positivist approach to economic theory. The main pillars of the positivist approach rest on the assertion that the adequacy of an economic theory must be judged by the empirical validation of its predictions and not by the realism of its assumptions. Friedman’s view that realist assumptions are not necessary for a workable theory is inspired by physics, for example, the use of patently unrealistic assumptions like the existence of vacuum in the derivation of laws of falling bodies. To draw an analogy between the methodology of physics and economics is by itself fallacious as has been explained earlier. What is further
more alarming about positivist economics is its emphasis on econometric testing of the empirical implications of theory. Friedman himself recognises the fact that the same set of empirical observations may be explained by a number of alternative hypotheses. Friedman suggests that the choice among alternative hypotheses must be based on “simplicity” and “fruitfulness”, which again involves subjectivity and thus negates the claim of objectivism of the positivist school. Secondly, statistical function fitting to empirical data has problems of its own. In fact, there are certain functions like the Cobb-Douglas function, which appear to give universally good fits to widely divergent sets of data. This may give rise to a sort of indiscriminate and mindless empiricism.

To conclude, social sciences in general and economics in particular have been largely dominated by mechanistic and atomistic views. This has arisen out of mistaken analogies drawn between the natural and social sciences. Social sciences, rooted in social relations, cannot break away from a holistic view of society. Individual beings located in certain social settings cannot be treated like free atomistic particles of physics. However, neoclassical economics, be it in the form of MI or empiricist positivist economics, propagate the mechanical approach devoid of a holistic treatment of agents as social entities, operating within social relations. This is not of course to deny the value or worth of an individual’s acts, desires, and agency, but to contextualise it.
CONCLUSION

There is a current orthodoxy in social sciences that explanations of social phenomena are deficient if they fail to take into account the agent's own point of view. Such an orthodoxy is the reflection of a commitment to MI. According to MI, propounded by, among others, Hobbes, Mill, Weber, Schumpeter, Popper, Hayek and Elster, all social phenomena must be explained wholly and exclusively by individual human actions. In contrast, Methodological Holism emphasises social determination and materialist macro structural explanations, which have been largely ignored in the development of contemporary social sciences.

In the field of psychology, the historical progression from empirical to rational psychology along the footsteps of Wolf, Kant, Schelling, Wundt, Titchener, James and Watson, involved a reduction of the subject matter of psychology to individual behaviour. The behavioural school of psychology can be regarded as an epitome of physicalism, methodological individualism, reductionism, elementalism, mechanicalism and anti nativism. In fact, Weiss claimed that psychology could be framed in terms that approximate to atomic physics.

The other social science, which has had immense influence on public health, economics, also display a similar progression towards individualism through the Walrasian, Austrian and finally Chicago schools. The shift away from classical political economics broke the link of economic discourses with holism. The conception that emerged was that of a "free" rational agent facing a set of
choices in the open market. This conception was by its very nature, ahistorical and ignored the constraints against choosing.

The impact on public health of the transition of these branches of social science towards methodological individualism was overwhelming. Market fetishism and behaviourism strengthened the case for biomedical and individual centric approaches in public health. The result was an overemphasis on the determination of specific etiology, development of curative medicines and preventive vaccines and promotion of the notion of behaviour modification. It also meant that the sphere of the state’s responsibility shrank progressively away from the social sector in general and public health in particular.

The neglect of the multifactorial approach in public health has led to growing health inequalities in both the developed and the underdeveloped world. The irony lies in the fact that the response to these health inequalities, which are structured by methodological individualism, are also located in the same paradigm of individualism.