Why Unitary Social Science?

Why Unitary Social Science?

by

Ramkrishna Mukherjee

CAMBRIDGE SCHOLARS
PUBLISHING

Why Unitary Social Science?, by Ramkrishna Mukherjee

This book first published 2009

Cambridge Scholars Publishing

12 Back Chapman Street, Newcastle upon Tyne, NE6 2XX, UK

British Library Cataloguing in Publication Data
A catalogue record for this book is available from the British Library

ISBN (10): 1-4438-0212-3, ISBN (13): 978-1-4438-0212-3

For Rudrajit Banerjee

TABLE OF CONTENTS

ACKNOWLEDGEMENT

While writing this book I received assistance from many but to acknowledge them at my age of 89 would be invidious; for I may unpardonably fail to thank a few of them. Therefore I crave indulgence from all who have helped me but remain unacknowledged.

Ramkrishna Mukherjee
Kolkata, December 2008.

CHAPTER ONE

SCIENTIA AND DISCRETE HUMAN (SOCIAL) SCIENCES

In course of evolution of living organisms, humans have been endowed with several distinguishing features: the best development of brains, binocular vision, prehensile thumbs, erect posture, organs of speech, etc. As a result, humans can not only use objects from nature like some other creatures but also *produce* them for optimally moulding nature with a view to benefit humankind. Furthermore, they can then most efficiently transmit the learned process and product across space (e.g., from society to society) as well as over time (i.e., from generation to generation in the secular perspective).

Consequently technology developed and was disseminated over place, time, and people; and it preceded the same process of humans with respect to science. For example, humans made fire before they systematised their knowledge on manifestation of energy through the media of heat and light. However, soon in course of time, science overstepped technology and generated the latter more and more proficiently in order to attain four primary valuations for humankind. (1) ever expanding span of survival of the species, (2) better and better security in life, (3) evermore material prosperity for ensuring the above two valuations while enjoying further wholesome life, and (4) deeper and deeper mental peregrination for systemising the above three valuations as well as for continually unfolding the potentialities of the species.

In order to achieve these valuations – which would never be realised fully and finally so long as the life process is immanent – the inquirers among humans would conceive the universe as representing an *information space* composed of *value-free, infinite but enumerable*, and *indivisible* items of information. Simultaneously, the inquirers conceive of variable configurations of a *primary value space*, in the context of aforesaid primary valuations and in accordance with the value systems they respectively adhere to. On these dual bases they differentially select *some* of the information-items by attributing *datum* to them. This means

that some *subjectively selected* information-items by an inquirer would be regarded as landmarks on the way to comprehend the contextual reality.

Data are thus generated (and, *ipso facto*, in varied manner) by the *confounded variables* (e.g., i_jv_k) for denoting the *fused* and *inseparable unity* of certain information items (viz., i_j) with their variable valuations like v_k). The concept of "confounding" it should be noted, was propounded by Fisher (1949: 107-66) in another context.

However, this formulation of sequential relation drawn between data and information may contradict the conventional understanding of precedence of data to information in the case of Information Technology (IT). The riddle could have been resolved if it were subsumed that IT accommodates all variable value-loads of inquirers and, thus, operationally reduces the value-impregnated data-items into value-free information-items. But, whether or not such a value accommodation device is built into IT, or whether eventually IT embraces all value-loads, is moot. Alternatively, the IT experts may consider the issue discussed is out of bounds to their specialisation as technologists.

Either way, as the initial step toward appraising reality – in view of attaining the aforementioned valuations for humankind – one cannot but proceed from value free information items to the construction of value-laden data items. Otherwise the appraisal of reality would be equivocal, motivatedly precise (of which instances are not wanting), and consequently distorted and false.

Therefore, in light of his/her specific value preference, an inquirer first selects a set of data as *valid* for appraising the contextual reality. Next, as his/her explorations proceed, the inquirer collates – again in a specific manner vis-à-vis his/her colleagues – some of the validated data as *relevant* to the context. Following the same manner of selection, the inquirer forms, in sequences, a precisely defined cluster of valid and relevant data as *necessary* for the appraisal of contextual reality; and, ultimately, arrives at structuring the smallest bunch of data regarded to be *efficient* for meeting the objective. *Sufficiency* of data in this context would remain an open question so long as the scientifically established knowledge is not complete – which it would never be vis-à-vis reality.

However, conceived in this manner, the appraisal of reality would appear to be a bedlam of subjectivity in inquirers and, consequently, for inducing the primary valuations for humankind. But, if this apparent situation were real, a random display of subjectivity would have governed humankind and the concept of universe. The consequence would have been human society ceasing to exist because of the pernicious internal strife of its constituents, while the universe would have disappeared

beyond their cognition. Neither has happened. Instead, probability-densities of *singularly* uniform but *particularly* different structures of reality have been posited in conformity with the appreciation of aforementioned valuations. Envisaged in variable mass and magnitude of potential and kinetic forces, these structures are then employed for providing the backdrop for the appraisal of social reality.

Thus, from theoretically conceived (or enforced) *null* point of subjectivity, objectivity rules the world of knowledge. This transformation is a matter of mundane observation, deduction, and inference with respect to the appraisal of any phenomenon; i.e., a thing of which the form and/or content are, as yet, rudimentarily or fragmentally known and not precisely, unequivocally and comprehensively recognised but which are amenable to a very high probability of the same appreciation by the multitude of individuals. This point on objectivity may be illustrated by a few examples.

A microscopic minority of humans respond to what the overwhelming majority sees as red to be green (and, *vice versa*, green to be red). This condition is interpreted as contra-colour perception; the cause of which is not within the terms of reference to the present discussion. However, this condition illustrates different subjective valuations of the same thing by means of the confounded *iv* variables. Yet red and green colours are universally employed as traffic signals because of their very high probability density to be perceived as of the same distinctive colours.

Consumer goods are produced in different admixtures of colours in the *vibgyor* spectrum, varied combinations of geometric designs, etc., in order to meet the consumers' choice. The designers' inspiration to produce "class" goods, the sales workers' dexterity to "market" them, and the buyers' intention to make "unique" choices from the articles displayed, are all, in the ultimate analysis, subjective. But, if subjectivity governed the consumer society, that society would not have come to fruition because market cannot operate in a random situation. There must be commonality in the productive, distributive, and purchasing processes. In other words, the consumer society must transcend subjectivity and, more and more, enter into the field of objectivity.

Viewed from this perspective, one finds that the production of consumer goods in "medieval" times was the resultant of meticulously garnered experience of artisans of what would sell; of traders of where to sell: beyond the home and neighbouring markets, by means of land routes, or coastal navigation, and later by establishing merchant companies like the East India trading companies and, thus, entering into the "modern" world society – always the goal being the commonality of buyers of the

same consumer goods. In the "modern" and presently globalised world society, "consumer research", "sales workers training", etc., are in vogue to augment and perpetuate consumer choice. The consumer in his/her turn, "unique" in intention for making purchases, is governed: firstly, by the "exclusive" mass-production of consumer goods in the national and international establishments; secondly, by propagation of these goods by corresponding media; and, thirdly, by their availability in affiliated sales stores. Where, then, is subjectivity left for the consumers' world?

In fact, commonality in valuation – leading from absolute (if ever possible) subjectivity toward more and more objectivity (of which the end-point may never be reached) is the essence of life. The course includes also the commonly considered esoteric evaluation of what are known as the objects of fine arts. Otherwise the appreciation of these objects would have been restricted to their creators and the latter ones' few initiates. It would not have generated enthusiasm among throngs of people (irrespective of place-time variations) for rushing to art galleries, museums, sites of architectural monuments, etc., and to "consume" these objects in pursuance of the fourth sequential primary valuation of mental peregrination of humans – mentioned at the beginning of this essay.

Evidently, thus, in respect of all aspects of life, humans are more and more commonly bounded by a scale of valuation of the items of information according as these are treated to be desirable (i.e., the traits are positive as plus +) or the items are detested (i.e., the traits are negative as minus -). And, in between these two extreme value points, the scale passes through the *null* point of neither desirability nor detestability of the trait(s) under reference (i.e., the traits are at the 0- point) in the value-scale.

The scale may be more and more finely graduated by expanding the two nominal points of plus and minus to gradation of pluses and minuses, provided the values can realistically register the graded distinction of more and more intensive desire and detest, respectively. This is not a matter of artificially enforcing an increasingly graded 5-7-9-11 point value-scale, as is often found in attitude and opinion studies. It must belong to the natural course among humans to proceed along successive stages of registering the mental and physical process of (a) awareness of a thing to (b) aspiration for wanting to possess or reject it and, finally, to (c) achieving the desired and rejecting the detested thing in the perspective of enhancing the quality of life (*vide*, Mukherjee 1989).

This is the *mot juste* of the evolutionary process; namely to release the encapsulated energy in a living organism up to its inherent potential and, then, proceed beyond that organism but continue with the evolution of life.

In conformity with this process it should ultimately be possible to transform the ever-extended nominal scale into an ordinal scale of equidistant points representing the degrees of desire and detest, in order that the exhibition of the range of "want" and "do not want" of the items of information for turning them into data becomes more and more precise, unequivocal, and comprehensive.

This may be one of the ways by which Lord Kelvin's provocative statement can become usefully meaningful in the context of processually maximising knowledge from the miasma of subjectivity to transparent objectivity. "When you can measure what you are speaking about and express it in numbers, you know something about it; but when you cannot measure it, when you cannot express it in numbers, your knowledge is of a meager and unsatisfactory kind" (Kelvin's quote in Mahalanobis 1950:7).

Thus, by traversing the path from a subjective to an objective appraisal of the primary value space for the constitution of the data space, and the consequent construction of *facts* from the information space, the objective evaluation of reality always tends to became more and more complete while holding an asymptotic relation with reality *per se*: namely, the gap between the constructed and the real becomes less and less but never disappears.

However, this path of limitless advance of scientific knowledge by removing the quandaries it meets on the way may be nullified by avoiding the trajectory altogether and holding the theoretically envisaged terminal point of progression constant. Such an attempt in the quest of humans for realising reality has led humankind to perennially access the spiritual idealist view of life, irrespective of place-time-people variations. In the Hindu version of this viewpoint in India, this is emblazoned in the agonizing cry of Maitreyi: *jé nāhom amritā syam tenāhom kimā kuriyām (brhadāranyakopanishad*. II, 4.3), which is translated into English as "What should I do with that by which I do not become immortal" (Max Müller 1884).

In this perspective the sensory materialist appreciation of knowledge is regarded to be unreal; at any rate, as the appreciation of para- knowledge. For, that is knowledge (=gy*ā*nam), according to Hindu spiritual-idealist philosophy, which relates to salvation (=moksa) and the rest is false or para-knowledge (=vigy*ā*nam) – the last sanskrit term commonly translated as science: *mokse dhirgyānamanytra vigyānam silpasāstryoh*.

Most of the spiritual idealist philosophers, however, did not (and do not) eschew the material comforts of life while preaching salvation. For example, the Hindu sage Yāgnavalkya lived a prosperous material life with two wives while preaching the "other worldly" outlook in the court of

kings. However, at the time of dividing his wealth between the two wives, he expanded on the idealist view of knowledgeable reality by employing inductive logic (*brhadārankyopanishad. sloka* 2.3.6, 3.9.27, 4.2.4, 4.4.42, 4.5.15); namely, all sensory assertions of reality are false, viz., neither this (*néti*) nor thus (*néti*) – because *iti* (which is real) is in the realisation of the supreme being (Hume (tr.) 1958:97, 125, 132, 143, 147).

Likewise, Shankara – a famous Hindu philosopher – who is given the epithet of *prachahannaboudhya* (masked Buddhist), and acclaimed for reviving *aryadharma* (=Hinduism) by demolishing Buddhism - preached that the world is *maya* (illusion). But he established monasteries at four corners of his world, which was Bharat (i.e. undivided India), in order to propagate the spiritual-idealist viewpoint of knowledge resting with the realisation of social reality enshrined in the Supreme Being.

Similar examples are not wanting in other oriental philosophies (e. g., the Chinese) and the European philosophies (e.g., the German) of the spiritual-idealist viewpoint. All of them forfeit the never-reaching end-terminal of appraising reality and, consequently, abjure the relevance of the initial point in the path of procuring scientific knowledge. The upshot is that the subjective-objective controversy of antinomy or complementarily in the pursuit of knowledge also vanishes.

Contrariwise, from the same time as the emergence of idealist philosophers, materialist philosophers appeared on the social scene irrespective of place-time variations. For, the inquiring mind of humans raised the point of perceived, perceptible, and perceivable phenomena concerned with defining and encompassing the scope of scientific explorations for apprehending the immanent reality.

One such trend in Hindu philosophy, designated as the Sānkhya School, pointed that "germinating, decaying, and again germinating denotes the course of scientific knowledge of what is reality – only which is true and everlasting". For, "*sarvamgyanam sabisyam*", is to be established by sensory proof: and, on that count, it can be asserted that *iswarasiddha* – God is non-existent (*sankhyadarshanam*. Chapter 1, *sutra* 92).

This assertion rings a topical note in the more recent reply of Marquis de Laplace to Napoleon's query about the absence of mention of God in the former's treatise on celestial mechanics: "*Sire, je n'avais pas besoin de cette hypothese*", which in English translation (quoted by Wallerstein 2004:70) reads as : "Sire, I have not found any need for that hypothesis".

Likewise, whether or not an individual is personally a theist, an agnostic, or an atheist, the eclectic energy of humans has kept the field of scientific enquiry ever open. This is illustrated by the translation of Article

10 of *Kenopanishad* by the theist physicist-statistician P.C. Mahalanobis (1972: unpublished) as: "I do not think that I Know very well, nor that I do not Know. He Knows who knows this that I do not Know and I Know".

Thus, Mahalanobis is seen to refer to "knowledge" *per se* by capitalising its apposite letter "k" in Know, in order to convey the meaning of ever seeking explorations in the field of knowledge – which is the motto of science and not of any religious dogma. Obversely, Rammohun Roy – who was a religious reformer and social activist of the nineteenth century, and is acclaimed as the father of Indian renaissance - translated the same article 10 of *Kenopanishad* as: "Not that I suppose that I know God thoroughly, nor do I suppose that I do not know Him at all; as, among us, he who knows the meaning of the above-stated assertion, is possessed of the knowledge respecting God, viz. 'that I neither know Him thoroughly, nor am I entirely ignorant of Him'". (Nag and Burman 1945-58, II: 19).

However, in the pursuit of scientific exploration, the apparently opposite personal viewpoints may not be a hindrance. This point seems to be underscored when Albert Einstein is purported to have written to Max Born in 1944 (Quoted in Born 1956: 90): "In our scientific expectation we have grown antipodes. You believe in God playing dice and I in perfect laws in the world of living existence as real objects, which I try to grasp in a widely speculative way."

Finally, in the ultimate analysis, one underlines the pithy statement made by the poet-philosopher Rabindranath Tagore (whose attribute as a theist, an agnostic, or even an atheist has been hotly debated) in the first line of a song he composed: *shes nahi jey, shes katha ke bolbe* – which in English would pose the question: "As there is no end, who will say the last word?".

In sum, skirmishes of objective (scientific) appraisal of reality continued with the spiritual ideologues. These were succinctly summed up by Bertrand Russell in the light of contrasting the Roman Catholic Inquisition of Galileo Galilei with the persistent scientific exploration of reality (Russell 1931: 33 ff). However, beyond or along with this debate, the term *scientia* was introduced in Europe in the sixteenth century, in order to denote empirically validated secular knowledge on reality.

But, after crossing the first hurdle, the inexorable endeavor of scientific inquiry faced a formidable opposition from secular ideographers vis-à-vis the nomothetic ambition of science in the form of the Newtonian-Cartesian dichotomy. Newtonian science was characterised as indicating exactitude; namely, enactment of laws for appreciating symmetry among the past, present and future operations of a phenomenon. Contrariwise,

Cartesian dualism contested for a fundamental distinction between Nature and Human.

The Cartesian viewpoint followed from the impression that the relation between a researcher (the subject) and what is being researched (the object), in order to acquire knowledge on phenomena, is discrete and relatively constant in the case of natural things as objects. However, the relation between researcher and researchee as subject and object in the case of human beings at both ends is conditioned severally (or compoundedly) by their distinctive – although variable – culture, economy, and polity. Therefore, the Cartesian viewpoint would hold that Natural Science (as also Biological and Earth Sciences) should not be equated with Humanities Studies.

Thus, a seemingly inevitable barrier in the quest for knowledge to appraise reality was planted under the labels Science and Humanities (Arts) in Europe from the seventeenth-eighteenth centuries. Nevertheless, subject to the construed distinction drawn between Newtonian versus Cartesian viewpoints, Faculties of Sciences and Arts (Humanities) flourished in European Universities and both became active media for the cultivation of objective (scientific) knowledge from late eighteenth century.

In this context it may be of significance to record that henceforth Divinity or Theology became a departmental concern of university for the dissemination of spiritual knowledge, in place of the latter being the ruling concern for securing knowledge, unless the university or the equivalent institution itself was meant for Theology. Also, a Divinity/Theology Department may be absent from a university. Either way, however, and under both categories of Science and Humanities, disciplines emerged for demarcating skilled concentration on separate spheres of reality – including the disciplines of medicine, law, etc.

It is also worthy of record that at this juncture of the onward march in Europe for an objective (scientific) exploration of reality, the upheaval created by the French Revolution (1789-99) is commonly acknowledged for planting the idea of Social Science in respect of some disciplines so long ensconced in the Humanities; and, concurrently, new disciplines emerged or profound changes took place in the content of a discipline (*vide, The Report* of the Gulbenkian Commission on Reconstructioning of the Social Sciences – Chair: I. Wallerstein, 1995:8-9; Braudel 1980: 25-64, 205-7).

For instance, history tended to shred off its character of hagiography as merely narrating the exploits of the ruling powers in succession, and began to orient itself to what in Germany was characterised as *Geschichte*, i.e.,

the perspective of chronicling what happened with the people and their societies from the hoary past to present times. To be sure, the pursuit has not yet met with total success; but the attempt is on to elevate History as Geschichte to the status of a social science discipline in place of remaining relegated to the amorphous category of Humanities. That the attempt is meeting with success is attested by history being recognised as one of the subjects for study at *Ecole des Hautes Etudes en Sciences Sociales* in Paris, by the Centre for Historical Studies in the School of Social Science, Jawaharlal Nehru University, New Delhi, and by similar appellations in several other institutions and universities in Europe, America, Asia and elsewhere.

Also for many other disciplines concerned with the operation of human society, minting the label "social science" was not immediately universal, although some disciplines within the orbit of Humanities asserted to be nomothetic like Newtonian natural science. Such as, Auguste Comte (1798-1857) declared Sociology to be "social physics", and economics and politics (also nomenclatured Government) were sometimes declared to be nomothetic disciplines. However, these assertions for Sociology, Economics, and Politics were not widely acknowledged.

On the other hand, psychology became a borderline case with "Social Psychology" pertaining to Humanities, and its other aspects moving toward Science with a capital S – *via media* Physiology and Medicine – in view of analytical (or applied) Psychology sliding along the incline of Psychoanalysis, Psychopathology, and Psychiatry. The same was the situation with Geography which fell under Humanities and/or Earth Science (like Psychology under Humanities and/or Biological Science).

Correspondingly, Geology was regarded akin to Physics, and placed under the category of Earth Science. Botany, Anatomy-Physiology, and Medicine were affiliated to the category of Biological Science – which was considered nomothetic like Physics and Chemistry. Kaleidoscopic changes were thus taking place in the allocation of disciplines – fragmented or not – under one or other category of Science and Humanities at their frontiers.

Briefly, the categorization of natural, biological, and earth sciences was more or less clearly acknowledged. But, barring the amphibian designation of some disciplines as belonging to the University Faculty of Humanities or Science (e.g., anthropology), the recognition of what are presently designated as social sciences under the "science categories" was rudimentary in the nineteenth century and sparse even up to the first half of the twentieth. The spectre of nomothetic versus ideography controversy

generated by the Newtonian–Cartesian dichotomy operated openly or insidiously.

Even so, an impetus to proliferation of disciplines was accorded by the sea-change in world affairs in conformity with a qualitative alteration in the release of energy in society because of a drastic change in its structure, function and process. Immanuel Wallerstein calls and describes the new as *The Modern World System* (1974); Rila Mukherjee entitles it *Europe Transformed* (2003) in view of other less successful attempts from beyond Europe at that period [*vide*, Frank 2005: 73-114; 135-192; Mukherjee (Rila) 2006; etc]. Nevertheless, Wallerstein's label was appropriate for denoting the contemporaneous springboard of world capitalism under the guise of the "modern world system". Anyhow, given the scenario, West Europe – led by Britain – pursued ruling the waves of the globe; and this drastically new social process necessitated an expansion of "human (social) sciences" for unfolding, crystallising and systematically ordering the intricacies of empirically ascertained knowledge.

Such as, the scope of geography was extended. Its curriculum included information on newly considered or freshly stressed matters (see, for example, Braudel 1980:17-8, 56-8, 105-119). As a result, the newly opened vista of "human geography" was located in the orbit of Humanities, while physical geography, cartography, etc., fell within the ambit of Science.

Similarly, Ethnology cum Anthropology emerged on the horizon of knowledge from the last quarter of the eighteenth century and flourished until the first half of the twentieth. But while anthropology as a whole claimed to present a holistic view of life, from the beginning of the twentieth century, at any rate, "physical anthropology" clearly veered toward anatomy, physiology, and biology (*via* anthropometry, biometry, and human genetics); "prehistory" to earth science (*via* stratigraphy and archaeology) as well as to history for the pre-writing stage of humanity (see, for example, V. Gordon Childe's *What Happened in History*, 1946); and "Social anthropology" on which fell the White Man's burden to civilise the Natives. Accordingly, this last fragment of erstwhile anthropology clung to its holistic moorings (*vide, Notes and Queries in Anthropology*, published by the Royal Anthropological Institute of Great Britain and Ireland) while pursuing, in its own way, the appraisal of social reality of the colonial "natives" and of those recently emancipated – in the context of their culture, economy and polity.

Sociology, with its antecedents in "moral philosophy" developed in West Europe and while owing allegiance to the British precursors John Locke (1632-1704) and David Hume (1711-1776), hovered between

Nomothetic Science and Humanity studies. It emerged first in France and Britain mainly, at about the same time as (or a little earlier than) anthropology. It was led by Saint-Simon and Auguste Comte in France, and by J.S. Mill and H. Spencer in Britain. The discipline was pre-occupied with "civilised" society, complementary to anthropology's concern with the "primitive" society, while the distinguished presence of "oriental" society was in incubation – to emerge later along the forward march of the "modern world system" under labels like Sinology and Indology.

In these and similar ways, the division of labour in the pursuit of knowledge on human society went on unabated – with each discipline asserting its prerogative to rule exclusively its demarcated territory which might fall under the umbrella of Science or Humanities (Arts) as Human (Social) Sciences. However, this state of affairs faced another qualitatively different situation after the end of World War II.

In 1945 the United States of America dropped atomic bombs on Hiroshima and Nagasaki in Japan. It was a momentous, not a momentary, decision on the part of the US war machine; but it is not directly concerned with the present discussion. Nor is the discussion involved with the issue whether the dastardly act was a geopolitical matter because the Soviet Red Army was reported to have had reached the northern threshold of Japan and, therefore, there was the apprehension of a repeat performance of the Fall of Berlin in 1944 to be witnessed by the U.S.A. Basically, the incident signaled, in the context of the present discussion, the triumph of science on one side and on the other an unfathomable disgrace in its pathological manhandling by a coterie of humans for furthering its vested interests.

This signifies that one is concerned with two successive value spaces for the appraisal of reality, of which the primary value space has already been discussed for yielding the primary data space from the infinite but enumerable information space. That was required for producing data to answer the first three sequential questions regarding the phenomena under examination: (1) *what* are they (as perceived), i.e., their specificity in structural form; (2) *how* are they ordered and *how* do they operate (as perceived), i.e., their functional instrumentality; and (3) *why* do they operate in specific manner, i.e., their causality (as the question is deductively answered). Now, in order to proceed logically, one should pose two more sequential questions: (4) *What will be* of the phenomena – probabilistically, no doubt – in the near future perspective, as inferred from the available information and data spaces (for details, see Mukherjee 1979); and (5) *what should be* of the phenomena—prescriptively (and, therefore, essentially subjective in content) – for evermore fulfillment of

the existence of humankind. Subsequently, therefore, one should construct a *secondary value space* for structuring apposite data space for appropriately answering the last two sequential questions or await the destruction of humankind and beyond (for details, see Mukherjee 1989).

However, with respect to these perennially prolonged and painstaking pursuits, science in itself is innocent of the use made of its path breaking outcomes. For, that is the prerogative of society: its culture, economy and polity. Possibly bearing in mind these complements and antinomies of science and society – the dialectic of which was not lost to him, as substantiated by some of his "non-scientific" writings (e.g., Einstein 1949:4-12) – the revolutionary stage attained by science at the time of the atomic explosions in Japan led Albert Einstein to declare that the world would not be the same again.

The transformation affected the human (= social) sciences in as much as the wide world of Science. It was in sync with what, after proposing his general theory of relativity in 1915, Einstein wrote in 1916 (17:101):

> Concepts which have been proved to be useful in ordering things easily acquire such an authority over us that we forget their human origin and accept them as invariable. Then they become "necessities of thought", "given a priori", etc. The path of scientific progress is, then, by such errors, barred for a long time. It is therefore no useless game if we are insisting on analyzing current notions and pointing out on what conditions their justification and usefulness depends, especially how they have grown from the data of experience. In this way their exaggerated authority is broken. They are removed if they cannot properly legitimate themselves; corrected, if their correspondence to the given things was too negligently established; replaced by others, if a new system can be developed that we prefer for good reasons.

J.R. Hicks had voiced a similar opinion in 1942 while introducing his widely read Economics Primer entitled *The Social Framework* (1972:1):

> Economics (is) one of the branches of that great systemic study of the world we live in which we call Science with a capital S. The division of Science into sciences – is largely a matter of convenience; …. This means that we cannot tell where the frontiers of a particular science will prove to be until we have developed that science; and we need not expect that these frontiers will always be found in the same place.

P.C. Mahalanobis, founder director of the Indian Statistical Institute, Kolkata, India, from the 1930s, designated all the research channels of ISI in the 1950s as "units" in place of the usually adopted designation of "departments"; such as, units of statistics, mathematics, physics,

chemistry, biology, genetics, economics, sociology, history, demography, computer technology, etc.,

The idea behind forming such a wide and ever-expanding network of diverse "unities" was that more of them may be formed, homologous ones may coalesce, analogous ones may confederate, and the course may go on: the notion being the formation of bigger and bigger mass and ever greater magnitude of forces reflecting the many facets of reality. Thus, all activities of ISI were geared to convey and establish the point that the unit is science (not sciences) and the cementing bond among the "science unities" is the probability–principles of "Statistics as a Key Technology" (Mahalanobis 1965: 43-46):

We may look upon science education and scientific research as the effort to know nature more adequately. We may also consider technology and technological research as the effort to use scientific knowledge for the fulfillment of specific purposes either of a practical or a theoretical nature.

This perspective had also been clearly recorded by Max Born who in 1926 had established the statistical probabilistic interpretation of Erwin Schrödinger's wave functions – pertaining to quantum mechanics, and in 1956 (pp. vi-vii) candidly stated:

> In 1921 I believed and I shared that belief with most of my contemporary physicists – that science produced an objective knowledge of the world, which is governed by deterministic laws. …In 1951 I believed in none of these things. *The border between object and subject had been blurred; deterministic laws had been replaced by statistical ones* (emphasis added RM). ….. In this way the classical philosophy of science was transformed into the modern one, which culminates in Niels Bohr's Principle of Complementarity.

Years later, referring to Werner Heisenberg's "principle of uncertainty" (1927) and later to the works of other scientists, Stephen W. Hawking summed up the ongoing progression of scientific outlook (Hawking 1988: 59-60):

> The uncertainty principle had profound implications for the way in which we view the world … In general; quantum mechanics does not predict a single definite result for an observation. Instead, *it predicts a number of different possible outcomes and tells us how likely each of these are*. (emphasis added – RM).

In sum, from the second half of the twentieth century the gamut of science unities is viewed as composed of "probability sciences", and *not* "exact" with respect to some and "subjectified" for others. The upshot is that the nomothetic-ideography dispute in science was turned into a mirage

while the Newtonian—Cartesian dichotomy on subjectification of the object disappeared into oblivion. The hurdle in the path of pursuing scientific knowledge on reality was removed.

Yet, to date, some social scientists – usually labeled social anthropologists or sociologists – indulge in the *mystic* specificity of "human" sciences (e.g., Winch 1958); a few have thrived on its esoteric explanations (e.g., Saran 1996). On the other side, the idea of *unitary* social science was mooted (e.g., Mukherji 1955 in his Presidential Address to the First Indian Sociological Conference – published in 1958 and 1961), but it hardly even generated a debate among the social scientists.

Possibly the persevering resilience of the discrete disciplinary unities for holding on to their exclusivity was not lost. Even so, in order to muster their strength in case of exigencies, they unified as a conglomerate of social science unities which are commonly denoted as social sciences: a nomenclature in vogue in the U.S.A from earlier times which was universally accepted from the second half of the twentieth century (along with the shift in the centre of gravity of international economy and polity from the U.K. to the U.S.)

The agendum of unification of a chosen assortment of social science unities would be to conduct interdisciplinary explorations of reality by means of collateral transactions of information and data among them, without disturbing their separation at the grassroots level of society. The designing and operation of the agendum were dictated by what was evaluated as a crisis situation in the local, regional, or world society – in the context of its culture, economy or polity. Accordingly, one of the social science unities assumes the leading role to dictate over the other unities in the assortment.

Anthropology, perhaps because of its professed holism in its salad days and even the curbed holism asserted by social anthropology alone, has been rather hesitant to subscribe to inter-disciplinary explorations and thus, to the concept and operation of unified social science unities: its confederates have not been that adamant. Bearing this distinction in view, chapter 2 of this book will examine the question: *Whither Anthropology*? After that, chapter 3 will be devoted to *Unified Social Sciences*: the rise of and the contemporary debacle of the attempt in advancing and applying social science knowledge for the benefit of humankind. Finally, the last chapter, chapter 4 will deal with the need for a precise formulation and apposite application of the concept of *Unitary Social Science* at the crossroads of the contemporary global social landscape.

* * *

CHAPTER TWO

WHITHER ANTHROPOLOGY?

In the second half of 2006, at my request, Dr. Saran Ghatak of Keene College, New Hampshire, U.S.A., collected information from publications on degree-awarding universities and allied institutions concerning how many of them awarded the degree in Anthropology as a separate discipline, or in combination with some other discipline(s) in the UK (once the bastion of anthropology), the U.S.A (the new centre of the subject from the second half of the twentieth century), and Canada (placed in-between these two points). From the raw data and their primary analysis sent me and their subsequent treatment, it has been found that out of all anthropology teaching educational establishments in the U.K., the U.S.A., and Canada, respectively, 63, 63, and 77 percents teach and confer degrees in the discipline separately; 14, 29, and 18 percents do it in combination with sociology; and 23, 8, and 5 percents in combination with other subject(s). This is an indicator of the way the once flourishing discipline of anthropology is heading now-a-days.

The specter prompts questions on the future viability of anthropology – in form and content as well as in its scope and limits. In order to reflect on these issues, one should recapitulate, however briefly, the genesis and travails of the subject matter of anthropology to date.

In so far as is presently known, profound changes were taking place in the social organisms identified as the Orient and the Occident from the middle of the fifteenth century. In both, primary production of crops and cattle, handicraft production and internal trade had almost reached saturation point and external trade by land routes and coastal navigation was also reaching its limits. The social need was for long-distance trade by the sea-route, in order to amass wealth by buying goods as cheap as possible from remote countries – to the point of looting and plundering them, and selling them at home and neighbouring countries as dear as possible.

On this point of trading across oceans (viz., the Atlantic, the Pacific, and the Indian Ocean in the main), changes were faster from the threshold of the fifteenth-sixteenth centuries in the Occident than in the Orient: in

fact, the Occident was represented by the north-Atlantic seaboard of Europe – extending eastwards to northern Italy; and the Orient came up to the eastern Mediterranean and was represented by Rome, Venice and Aleppo-the old Levant-reached from the east and chiefly represented by merchants and navigators of the Arab world, India, and China. The rest of the globe – represented by the New Continent, Africa, beyond the southern coastal fringe of the Mediterranean and the hinterland of Asia and the Pacific – was still a mystery. The Americas were not yet known. Australia had not entered European geographical knowledge.

The desire for unfolding this mystery as well as to penetrate into the Orient was heightened by tales of adventurers and explorers traveling hazardously by land and undertaking the occasional coastal navigation. The need of the hour, therefore, was for building such sea-worthy vessels as could undertake voyages for months across the Indian, Atlantic and the Pacific Oceans, improve the nautical compass and other such accessories for undertaking long distance voyage, continually advance upon cartography, acquire essential astronomical knowledge for voyaging days and nights, and so on. Conjointly, these varieties of needs were met faster in the Occident (viz., the Atlantic seaboard of Europe) than in the Orient (viz., China and India in the main).

As a result, Columbus discovered America in 1492, Vasco da Gama reached India by the ocean-route in 1498, the first British expedition to China via Cape of Good Hope took place in 1582 and the second expedition – carrying Queen Elizabeth I's letter to the Emperor of China – in 1596, the English East India Company was formed with a Royal Charter in 1600, and a Royal order was received from the Indian Emperor to open trade in Surat in 1613. The Dutch East India Company was also formed at about this time, in 1602, and concentrated its "trade" in Southeast Asia. In 1664, after several earlier attempts, the French East India Company appeared on the Asian scene; as did in a minor key the Danish and the Ostend companies, and the more ephemeral Prussian and Swedish East India Companies.

Revealingly, the Directors of the English East India Company wrote to its agents in India in 1680 (*vide*, Mill 1858:I.87-88):

> The increase of our revenue is the subject of our care, as much as our trade – 'tis that must maintain our force… 'tis that must make us a nation in India; and upon this account it is that the wise Dutch, in all their general advices which we have seen, write ten paragraphs concerning their government, their civil and military policy, warfare, and the increase of their revenue, for one paragraph they write concerning their trade.

Mere trade to securing "concessions" and, then to conquering the vulnerable territories went in succeeding steps and, by the 1780s, Asia came under the control of West Europe – mainly, the English, French, and Dutch – as colonies or "spheres of influence" (i.e., semi-colonies like China, Siam, and Afghanistan). Meanwhile, Britain, Spain, Portugal and France, in the main, had conquered the New Continent and Australasia, exterminated or driven the original inhabitants to inhospitable regions of their territories, and "peopled" the habitable regions of these territories by sending pioneers and undesirables (e.g., the convicts) from their motherland as well as by forcibly importing Africans as slaves from, mainly, the West Coast of Africa.

Thus, the motto of "Gold God Glory" of the sixteenth century Occident could garner huge wealth from beyond Europe, which was transformed into a primary accumulation of capital in West Europe. This happening, transfused with the intellectual transition of the Renaissance and the consequent advances in scientific knowledge and methodology, led to the industrial revolution in Britain and West Europe in the second half of the eighteenth century.

Industries produced goods faster and in much greater bulk and varieties than could be consumed in their places of manufacture and neighbouring countries at the highest possible prices desired by the manufacturers – the owners of capital. Colonies and semi-colonies became, in this context, the ideal places for (a) extracting raw materials for these industries at the cheapest prices and (b) providing a market for the finished goods at the highest prices. These territories and their inhabitants, therefore, were studied extensively and in depth, in order to adjudge the potentialities of new market conditions.

Consequently the indigenous peoples of these countries were meticulously examined from the second half of the nineteenth century, and those in as yet unexplored areas were also singled out and identified for future study. Such as, in Africa, in 1876, only 11 per cent of the territory was ruled by the West European colonial powers; in 1900, only 10 per cent of the territory was not so held (Mukherjee 1985:116). Coincidentally, ethnology and anthropology emerged as a distinctive body of knowledge.

It may not be fortuitous that the Ethnological Society of London was established in 1843, transformed itself into the Ethnological and Anthropological Society in 1863, and was again retransformed as the Anthropological Institute of Great Britain and Ireland in 1871, and this last received the Royal Charter in 1907. Similar bodies for institutionalising

studies and research in anthropology and ethnology emerged in France and the other nation-states of West Europe as well as in the U.S.A., etc.

Also, in order to pinpoint the subjects for these studies, *tribes* were identified, especially in the Asian, African, and American continents: to the point of "retribalising" some of the ethnic identities which had passed beyond the tribal state of undifferentiated or rudimentarily differentiated state of *social formations*. This is ascertained from such studies as Leo Frobenius's *Das Unbekannte Afrika* (1923) and his *Kulturgeschichte Afrikas* (Zurich 1933). J. Roscoe's monographs on the Baganda (1911), Banyankole (1923) and Banyoro (1923), and K. Oberg's paper on the Banyankole (1948) in Uganda; and so on – as against later studies of these "tribes", such as those recorded by reputable anthropologists like R.H. Lowie in his *Social Organisation* (1950).

One should bear in mind, in this context, the profound distinction drawn between *societus* and *civitus* as indicators of the tribal-metatribal dichotomy. Enunciated by L.H. Morgan, the distinction was readily accepted by anthropologists like L.A. White, A.L. Kroeber, etc. Even A.R. Radcliffe-Brown, who was anti-evolutionary by stance and otherwise also virulently against Morgan's standpoint on anthropology, agreed to the dichotomy (*vide*, Mukherjee 1985:48-54).

The study of human society was, in consequence, distinguished under three categories: sociology for the civilised West, oriental studies for the grudgingly accepted "civilised segment" of the East, and anthropology for the "tribal world". This is the first moment of the colonial heritage of anthropology as a body of knowledge.

The upshot was that monographs like *Division of Labour in Society* by Emile Durkheim (in French, *Division du travail sociale*, 1893) falls by common understanding under the jurisdiction of sociology; but the same author's *Elementary Forms of the Religious Life* (in French, *Les Formes Elementaires de la vie Religieuse*, 1912) under anthropology; while such efforts as editing or organising the series under the steermanship of F. Max Mueller, entitled *Sacred Books of the East* (in the late nineteenth-early twentieth centuries), were relegated to the jurisdiction of oriental studies. However, the point may not be missed that Durkheim's *Elementary Forms of the Religious Life* brought religion down from the realm of metaphysics to the mundane sphere of culture: culture was defined as valorisation of capital in human achievement and perception.

Following the "we-they" distinction drawn between the civilised and the tribals, the device of field work was devised, like Mozart's creation of *Zauber Flötte*, so as to rouse resonance in the minds of the tribals and open-up their hearts for the purpose of expounding on their past and the

present to the enlightened ethnologists and anthropologists. This was the second moment in the emergence of anthropology as a distinct body of knowledge.

Accordingly, the anthropologists' task began with conducting fieldwork. For this purpose, the experts prepared directives like *Notes and Queries on Anthropology* (published by the Royal Anthropological Institute of Great Britain and Ireland) which underwent several revised and enlarged editions. Also, similar "guide books" were published in the U.S.A. and other dominant nation-states of the West.

The third moment in the heritage of anthropology was concerned with an *ensemble* of the past and the present of the communities which were actually living at the tribal stage of social formation or were impressed upon as so living. Therefore, anthropological studies were segmented into three components: 1) prehistory, 2) physical anthropology, and 3) social anthropology. At the then state of accumulation of societal knowledge on archaeology, early human proto-history, genotypical and phenotypical variations in human beings, and their symbiotic manifestations of culture, economy and polity, this kind of *holistic* approach to these little known communities – inhabiting mostly well-demarcated territories up to the second-third decades of the twentieth century – was valid, largely relevant, and more or less necessary.

But the situation altered with the beginning of the commodification of the land and crops in their midst, the dwindling away of subsistence living, the penetration of a labour market into their society – these bursting asunder the compact frontiers of their life course. All such fruits of capitalist exploitation began to penetrate and transform the tribal societies and to bring them into the mainstream of life of the relevant nation-states. The world-renowned anthropologist B. Malinowski's advocacy of colonial rule in East Africa by providing extra incentives to the loyal native chiefs proved pernicious and futile (*vide*, Malinowski 1945; Mukherjee 1985: 267-269).

By the time of the Second World War, the tribal world was on the verge of extinction and anthropology as a distinctive body of knowledge began to lose its usefulness. As a North African told me in Paris in 1948: "Today we are 'tribals' and the 'anthropologists' study us, but tomorrow we shall attain independence and, then, we shall be 'people' and the 'sociologists' and 'political scientists' will come to study us".

Indeed, by the end of the twentieth century there has hardly been any "tribe" left even in remote corners of the world. In 1950, I could discern a few ethnic communities in the Uganda Protectorate (e.g., Karamajong) in a disintegrating tribal state. Later, Idi Amin, reportedly, emerged from this

community and, in the 1970s, led the nation-state of Uganda into severe political turmoil. In the 1980s I could not identify "tribe" as a distinctive social category anywhere in Uganda.

Such examples of the disappearance of "tribals" as a distinctive social category are not lacking in the historical perspective in the Indian Republic from the 1950s; in the Asian and African hinterlands; in the Pacific and the New Continent – in fact, the differences have disappeared from all over. Such as, in 1956, I failed to discern a Lapp (who call themselves Sames) from a "civilised" Swede even in the most remote town of Sweden that was served by the railways – named *Fathmemarke* – and beyond in the Arctic. Evidently, the Sames, who occupied the arctic land of Scandinavia, had become citizens (of first or second order) of Norway, Sweden, and Finland.

Briefly, in present times, a few so-called "tribes" may have remained as isolated cultural identities – bereft of their previous symbiotically intertwined culture, economy, and polity. But mostly they have acquired new political identities – which have given a microscopic few of them considerable economic power – in the nation -states formed from 1947 onwards. One finds this from the 1950s: for example, from the deposing of Cheddi Jagan from the topmost position in the political hierarchy of erstwhile British Guyana (Jagan 1950); the happenings in Fiji and several other nation-states in the Pacific and South America in the last quarter of the twentieth century; the emergence from about the same time of so-called "tribal" leaders – along with many such "civilised" unscrupulous "leaders of the people" in the Republic of India and several other nation-states in Asia.

Evidently, the we-they dichotomy as tribal-metatribal is lost forever and replaced by the enlarging sphere of major-minor, have – have not groupings in the cultural – economic – political landscapes of the world. And, with this profound change in the *social world*, the first moment of anthropology as a distinct body of knowledge was lost forever.

The second moment of this so sanctified "fieldwork" has also lost the power of its *mantra*: for one does not enter into virgin fields anymore when presently studying any ethnic community. Some *a priori* knowledge, which may not always be adequate, is available on them. The call of the hour, therefore, is to undertake rigorously designed, scrupulously executed, and meticulously analysed statistical survey data on these communities; bearing in mind that sometimes, and as a prelude to macro-studies, micro-studies – with which the "anthropological" fieldwork would be concerned – may be useful as pre-pilot studies. Otherwise, the much