Journal of Indian Council of Philosophical Research

is a tri-annual philosophical journal published by the Indian Council of Philosophical Research (ICPR). It is devoted to the publication of original papers of high standard in any branch of philosophy. One of the objectives of the ICPR is to encourage inter-disciplinary research with direct philosophical relevance. Accordingly, contributions from scholars in other fields of knowledge, dealing with specific philosophical problems connected with their respective fields of specialization, would be highly welcome. However, good and original contributions pertaining to any branch of traditional philosophy would be equally welcome.

Each regular issue of the journal will contain, besides full-length papers, notes and discussions, notes on papers, book reviews, information on new books and other relevant academic information. Each issue will contain about 160-180 pages (Royal 8vo).

Annual Subscriptions

	Inland	*Foreign*	
Institutions	Rs. 150	U.S. $ 20	(Surface Mail)
Individuals	Rs. 100	U.S. $ 15	-do-
Students and retired teachers	Rs. 50	U.S. $ 10	-do-

Bonafide students and retired teachers are requested to ask for special subscription forms.

Air mail cost will be charged extra to those subscribers who want to get the Journal by air mail. Request for air mail delivery must be made in writing.

For subscription and all other business enquiries (including advertisement in the JICPR) please contact directly:

Subscription Department
CENTRAL NEWS AGENCY
23/90 Connaught Circus
New Delhi 110001, India

All subscriptions must be prepaid.

All contributions to the Journal, other editorial enquiries and books for review are to be sent to the Editor, Indian Council of Philosophical Research, Rajendra Bhavan (4th Floor), 210 Deen Dayal Upadhyaya Marg, New Delhi 110002.

ISSN 0970-7794

Journal of Indian Council of Philosophical Research

JICPR

Editor DAYA KRISHNA

VOLUME VIII NUMBER 1
SEPTEMBER-DECEMBER
1990

Journal of Indian Council of Philosophical Research

VOLUME VIII NUMBER 1 SEPT.–DEC. 1990

Editor DAYA KRISHNA

Indian Council of Philosophical Research
Rajendra Bhavan (Fourth Floor), Deen Dayal Upadhyaya Marg, New Delhi 110 002

Printed in India
by Jainendra Prakash Jain at Shri Jainendra Press, A 45 Naraina
Industrial Area, Phase I, New Delhi 110028
and Published by Member Secretary
for Indian Council of Philosophical Research,
Rajendra Bhavan (Fourth Floor), 210 Deen Dayal Upadhyaya Marg
New Delhi 110 002

Contents

Rationality, culture and values

D. P. CHATTOPADHYAYA
Raj Bhavan, Jaipur

I

In this paper I propose, first, to examine the correct relation between rationality and culture. In the process I offer arguments to disprove the claim that there is a unique and universal relation between culture and rationality. Positively speaking, I defend the thesis of culture-bound rationality, a sort of relativism. Second, I briefly examine three different concepts of rationality as developed by three branches of human knowledge—economics, evolutionary biology and psychological behaviourism. For the sake of brevity I call these concepts REM (Rational Economic Man), REB (Rationality in Evolutionary Biology) and ROB (Rationality of Behaviour). Third, I argue to show the limits of each one of these concepts of rationality. I particularly highlight their inability to capture the normative aspect of economic action, evolutionary adaptation and behavioural reinforcement. Fourth, I indicate briefly how normative considerations can be plausibly accommodated within the frameworks of REM, REB and ROB. Finally, I briefly and critically discuss some allied concepts of rationality defined in terms of (i) appropriateness of the end-means relationship, (ii) universalisability, and (iii) enforceability.

II

Economics, etymologically speaking, is concerned with the members of the management of the household. Management is to be distinguished from mismanagement. In order to manage a household what is basically required of the manager, the effective head of the family, is that the person must be rational. Rationality, rooted in the Greek word *ratio*, means proportionality. The apportioning of goods and services among members of the household must be based on certain principles. The head of the family should earn, protect and provide food and shelter to the family members; the housewife should manage the domestic chores; the children should be properly brought up and accultured by the parents. Scrutiny of the jobs of the members of the household reveals a sort of exchange between their services. The duties and rights of all members are not equal and equally demanding. For example, infants, minors and weaker members are exempted from certain responsibilities and treated leniently or charitably.

The anatomy of the household shows, among other things, that its

management involves certain principles of give-and-take. He who successfully uses these principles is recognized not only as an *economic* man, but also as a *rational economic* man. Strictly speaking, efficient management of the household requires its head not only to be rational (in his acts of *apportioning* the available goods and services among the family members), but also moral (in the sense that he must take special care of the minors and the weaker members). Two concepts of man emerge within the confines of the household—the *rational* man and the *moral* man. The relation between these two concepts of the economic man is so intimate that disregard of the moral aspect of the issue means mismanagement of the household. That partly explains the close connection between *arthaśāstra* (economics in the broad sense) and *dharmaśāstra* (ethics in the broad sense) in the Indian tradition. A comparable trend of thought is discernible in the West as well. Its most clear and classical formulation may be found in the works of Adam Smith.[1]

The principles of rational management which are somewhat inarticulate in their use in the household become articulate in the larger context of the market. If principles of *management* are a guide to the understanding of the household, principles of *exchange* are the main defining characteristics of the market. An economic market is a collection of rational economic actors engaged in maximizing their self-interest. Although, for the sake of analysis, the market is taken to be autonomous in its operation, in fact it is very much influenced by the State and larger social considerations. The rationality that is attributed to the market is due to its supposed *free* and *competitive* character.

Freedom is due to the actors' motivation to maximize their self-interest. Since, at least to start with, the actors try to behave in their own independent ways, competition becomes inevitable. Inevitability is symptomatic of the market's independence from such principles as charity, self-sacrifice and goodwill. Every actor in the market exercises his freedom to gain the highest possible prices for the goods or services he is selling and, while buying, he tries to pay the minimum possible prices for the same. Determined by the resulting competition between buyers and sellers, the market throws up a sort of balance or equilibrium between demand and supply. Thus, the 'invisible hand' of the market brings forth a favourable situation acceptable to otherwise selfish individuals.

If the actors in the market are free to compete, why does their competition, motivated by greed and need, not turn out to be dangerously combative or mad? Why, despite competition, does the market mechanism work? The answers to these questions seem to lie in the other aspect, the moral aspect, of free human nature. Freedom does not articulate itself necessarily in competition, still less in mad competition. Rational man knows that mad competition is suicidal and that unbridled greed is self-defeating. This commonsensical truth is dramatised in the form of the

paradox of hedonism, namely, 'to get pleasure one must forget pleasure'. The same insight is captured in the idea of *niṣkāma karma*, unselfish action.

It is not only the competitive spirit but also the spirit of cooperation that holds together the economic actors in a more or less unified cultural life. Love, sympathy, friendship and gratitude are also native to human nature. Once this moral aspect of man is borne in mind, the inadequacy of REM becomes clear. When the roles of labour and leisure are taken into account, the inadequacy of REM becomes even more clear. Oversupply of labour creates one sort of problem. It tends to bring down the wage structure to subsistence levels, resulting in exploitation, malnutrition and poor living conditions. Undersupply of labour creates another sort of problem. The demand for goods and services cannot be met, resulting in high prices, which cannot be borne by the market beyond a point. The problem of oversupply is sought to be tackled by unionization and minimum wage laws, while the problem of undersupply is sought to be contained by laws against monopoly, cartelization and the public distribution system. All these measures, it is to be noted, more or less curtail the free character of the market. Freedom beyond a point proves a hindrance, not help, to the self-interest both of the producer and of the consumer.

Leisure, rightly understood, also proves incompatible with the underlying ideal of REM. One works not only to earn a living but also to enjoy oneself. If all of one's time is spent in working, one is not left with the state of body and mind minimally necessary for enjoying life and leisure. Creation and innovation are impossible without leisure. These are among the main ingredients of human resource development, without which industrial culture in general and productivity in particular are bound to suffer.

In a way, social welfare is necessary for sustaining the rationality of the market and saving it from sliding back into irrationality. Analogously, REM cannot be sustained without suitable constraints and opportunities. Besides the supposed autonomy of the economic market being limited as it is by custom and tradition, cultural do's and don'ts, it is obliged to strike a balance between its existence and operation, on the one hand, and the needs and values of the concerned culture, on the other. No society can afford to allow its rich people to become increasingly rich, and its poor people to become increasingly poor. Both pauperization and polarization, beyond a point, need to be arrested.

There is a notional state of social equilibrium in which the rich cannot be allowed to become richer without entailing the further impoverishment of the poor. The *Pareto optimal criterion* tries to capture this desirable state of equilibrium. In brief it says: a social optimum is there when no one in society can be made better-off without someone being made worse-off. Maximum profit laws and minimum wage laws are addressed to and expressive of this Pareto optimal.

A moral defence of the market rationality is available in various types. Of

these I propose to mention only two which have proved very influential in recent times.

First, people are entitled to retain the results of their labour and have a right to property. Given the equality of opportunity, the free market system is uniquely fair and just. The outcome of free exchange in the market may not be desirable for the initially disadvantaged or the poor. But rectification of the situation, the unintended misery of the less lucky and less shrewd, involves forced redistribution of the fruits of labour of all concerned. This means State intervention which may deny the hard-working labourer and the imaginative entrepreneur their deserts, reward the lazy and the inefficient, and encourage bureaucratization which entails a slow decision-making process, corruption and low profit. This seems to be the central line of Nozick's argument in *Anarchy, State and Utopia.*[2]

But the question is: does the unrestricted extension of property rights promote (i) the prosperity, pleasure and leisure of the individual? (ii) the prosperity and peace of the society?

Is not the very idea of providing equal opportunities to those who are highly unequal in the initial position itself unfair to the poor and the weak? If the conflicting interests of the competing groups representing the factors of production like labour and capital are allowed to fight out their cause in the free market without inviting any State-like mediatory or intervening authority, would it not encourage social tension and leave the poor at the mercy of the rich? Since the competitive spirit of the market itself does not favour the ideal of mercy, it is difficult to visualize how the market, keeping the State as a silent spectator, can possibly remove social tension and conflict and promote cooperation among all those involved, directly or indirectly, in the market.

Second, there is another moral defence of the market which dispenses with the sovereignty claim of market rationality and allows at least a limited role for State intervention. Rawls's theory of justice seems to offer a welfarist defence of the market. The just system of distribution, distributive justice, requires that the people in it, while choosing must do so in a random way. Choosing from this 'original position' of ignorance about the chooser's own place in society is taken to be the proper test of what is just. The Rawlsian 'original position' argument is both expository and justificatory. He describes the conflicting parties and conditions of the 'original position' in such a way that he first feels justified in asserting that it is the ideal initial choice situation and then he comes forward with the claim that the choice of the principle of justice made therein is indeed most rational and justifiable. His first principle recommends that every individual should have an equal right to the most comprehensive system of equal basic liberties compatible with a similar system of liberty for all. His second principle leaves room for social and economic inequalities, but with the stipulations that (i) these are to be arranged in such a way that the greatest benefit of the least advantaged proves consistent with the just savings principle, and (ii) the least advantaged also has access to offices and positions under the conditions of fair equality and opportunity.

It is to be noted, first, that Rawls's libertarianism is not totally unrestrictive in character. Liberty, he concedes, can be restricted for the sake of liberty. Simultaneously, it is also to be noted that Rawls is not ready to compromise on the matter of principles like liberty and equality on the utilitarian ground that it would result in aggregative benefit unless his priority rules are satisfied.

Rawls's claim that his theory is free from the 'blemishes' of substantial relativism seems to me untenable. The Rawlsian theory of justice is individualistic in its formulation of both the original position and the principles of justice. To minimize the effects of individualism, different psychological propensities, value- and preference-schedules, reference has been made to an Archimedean point from which the institutional arrangement necessary for distributive justice is appraised and also to the ideal of a person whose rational plan of life and demand for goods are accepted as typical of that of others and as the basis for agreements between all leading to the principles of justice. In spite of Rawls's protestation to the contrary, it is clear that his concept of the ideal of a person is *a priori*, and his reference to Kant on this point does not prove very helpful, for Kant's own concept of the rational self is open to the charge of *a priorism*. Open to the uneven influences of social institutions, the demand for goods of different individuals are not really alike. Naturally this leads to conflict and competition. Rawls's attempt to legitimize the same in terms of the principles of justice chosen randomly from the original position of ignorance also seems unsound to me.[4] It is instructive to note that these days the moral defence of REM comes mostly from philosophers and not from economists themselves. This is mainly because of the fact that most modern economists are in favour of conceiving economics as a positive science and try to formulate its concept of rationality in some or other value-neutral manner.[5] But have they succeeded in their misconceived task?

The economist's conception of REM is basically strategistic. According to him, rational action results from planning and foresight. He is committed to maximize his self-interest in the long run but not without being prepared to be opportunistic in the short term even while remaining consistent to his envisaged goal.

To put it differently, primarily concerned with pleasure, he does not mind occasional pain (undergoing surgery or suffering losses, for example). Primarily interested in profit maximization, he takes risks and occasionally suffers losses.

REM (of the opportunistic type), like animals, is guided by short-term needs and interests, has no clear conception of long-range goals and the means leading to the same, and behaves more or less randomly (of course in

the light of remembered experiences or organically in-built information in the form of instincts and habits). Unable or unwilling to foresee the sequences and consequences of his actions, he concentrates mainly on what seems immediately attractive and advisable.

The *strategist* REM seeks the *best* of alternative courses of action and its possible outcome. The *opportunist* REM is content with a *better* one of alternative courses of action and its outcome. Scrutiny reveals that the strategist's approach rests on some questionable assumptions. (i) Details of the alternatives are never completely available. (ii) The possible outcome of every chosen alternative course of action is more or less uncertain. (iii) What exactly goes into the making of the choice is not entirely known to the chooser (the strategist) himself. (iv) To rectify the miseffects enumerated under (i), (ii) and (iii), the strategist is required to invest so much time, money, interest and energy that the total cost of all these is likely to outweigh the potential benefit to be accrued by following the ordinarily recognized premises/assumptions of the strategist.

Herbert Simon's argument against over-emphasizing the difference between the strategist's approach and that of the opportunist deserves serious consideration.

The third model of REM may be designated as *evolutionist*. The evolutionist's approach is a judicious blend of the approach of the strategist and the opportunist. The evolutionist aspires for nothing more than what seems to be *good enough* for him. He is neither glued to the ideal of *maximum profit* nor averse to the risk of *minimum loss*. Of the cognitively available alternatives he tries to move from bad to not-so-bad, from not-so-bad to good, from good to better and avoids the desire for the best. The gradualism of the evolutionist incorporates within it (i) the biologically inherited information of his system, (ii) the psychologically acquired information of his environment, and (iii) the sociological utilization and organization of what he can possibly have in defining his goal. Avoidance of the abstract ideal of maximizing (self-interest) and remaining faithful to his experience and modest expectations are the hallmark of his approach.

In order to bring out the fuller implications of the differences between the different models of REM, the different and related notions of *work* need to be taken into account. First, work is *disutility*. Nobody wants to do it. In order to induce one to work, one has to be paid or rewarded (in one form or other) so that one overcomes one's unwillingness to work. Wage is the measure of work disutility. Hazardous, socially disapproved or berated and strenuous work is usually sought to be avoided. The concerned workers, therefore, are to be suitably compensated or motivated, if not coerced. This view of work rests on the assumption that work fetches a wage and that the wage is for consumption. Rejecting this view, the socialists, notably Marx, regard work as being for production and creation and not mere consumption. Consumption is ancillary to and an input for production. The wage,

food, and collaboration in the process of production do have in them elements of joy. However, when the principle of the division of labour/work is stretched to an absurd extent, workers are deprived of the joy of work, collaboration and creativity. They are alienated from the process of production, from fellow producers and even from their own work/labour. In that case (i) commodity becomes a fetish and (ii) labour gets delinked from the labourer.

Modern evolutionary biology provides an interesting framework in which to understand the behaviour of REM. It suggests that the different kinds of behaviour of REM, including work, leisure, cooperation, competition, aggression and altruism, are continuous with and analogous to the determinants of similar behavioural patterns found in non-human beings. Both are driven by the logic of maximization of individual fitness. Given this theory, matters of good and bad, rational and irrational, decision-making are basically factual, not normative.

III

The evolutionary biologist, somewhat like the economist, offers his own conception of rationality. He wants to show the kindred character of the basic concept of rationality as evident from man's economic behaviour and animal's natural behaviour. 'Rationality', as defended by the Evolutionary Biologist (REB), may be indicated as follows. 'Rule of the jungle' and 'law of civil society' differ in degree, not in essence. The analogy between natural law and social law, viewed in the biological evolutionary context, is striking. To establish this point the socio-biologist has marshalled an impressive number of facts and array of arguments.[6]

Animal behaviour is to be understood as aiming at maximizing utility, and here utility is to be defined in terms of reproductive fitness. This basic claim underlying REB is questionable on many counts.

First, it is extremely doubtful whether animals can master the *best possible strategy* necessary for utility maximization or, given constraints, are forced to remain content with the *best strategy*. Constraints are partly inherited by their evolutionary history and partly by their changing natural circumstance as determined by laws (of which they are not effectively informed). Without knowledge of these laws their 'best strategy' cannot be raised to the level of 'best possible strategy'.

Second, all capacities and characteristics of animals are not necessarily helpful to their being selected by nature. At least some of them are evidently neutral—neutral in relation to utility-maximization efforts or perfection-seeking. The fact of the existence or survival of animals does not prove their selection *by* nature *for* a particular purpose, say perfection (as value) or utility-maximization. Expressions like 'selection *by* nature' or 'selection *of* nature' are merely figurative, ascribing an inarticulate agency to nature.

Third, adaptation, to a great extent, is hindered or facilitated by evolu-

tionary spacing spread over a long time. A particular set of behaviour which proved to be maximizing at one time under certain circumstances may turn out to be non-maximizing at other times under different circumstances. This law to which animal behaviour is largely subjected, can be considerably neutralized by human beings in terms of their cultural competence and linguistic behaviour. While humans as cultural beings can create artificial environments for themselves, biological animals substantially depend upon the environments given to them; what seems to be more disturbing for them is that they find their naturally selected capacities do not prove optimal under artificial circumstances. This is one of the main points highlighted by lovers of wild-life in the industrial society.

Fourth, adaptation is a costly affair. Every form of adaptation carries with it its own cost. Adapted for long to a particular environment, animals tend to lose some of their inherited characteristics which had earlier facilitated their adaptation to a higher level. For example, when, in search of safety, animals move away from an otherwise favourable environment (favourable in terms of ready availability of food/water), their ability to defend themselves against predators tends to go down. Its human analogy is instructive. There are accounts in ancient history of how settled and civilized people of India, Greece and Rome were repeatedly invaded and defeated by 'barbaric' aliens of the nomadic type. This brings out the points of similarity as well as difference between animal settlement and human settlement: *similarity* in respect of benefit of settlement, and *difference* in terms of costs. Because of historical change and cultural exchange it is now possible for settled civilizations to have the joint benefits of enjoying the fruits of industrial culture and the ability to fend off the unsettling effects of attacks by enemies (predators).

Finally, animals, uninformed as they are of the laws determining the ups and downs of their environmental history, can only follow a *dim* analogy of what is called an opportunistic strategy in the context of REM. Animals can only move step by step and their steps are determined by limited information of what lies ahead, inclusive of imponderables. Because of unknown constraints and the inability to make use of risk-avoiding strategies, they cannot maximize their utility or attain perfection.

The basic weakness, if not fatal flaw, of REB is that one cannot distinguish between (i) o_1 (organism) adapting itself to e_1 (environment) and (ii) to e_1 with o_1 adapted within it. Without a defensible distinction between positions (i) and (ii), it is difficult to ascribe rationality to the behaviour of organisms. Nature or environment is not rational. It may be intelligible. Intelligibility is partly due to human ways of understanding/exploring it and partly due to the 'hard' facts of nature/culture. Adaptation, in the case of the adult human organism, is not necessarily due to its rational behaviour. Examples are easily available to show that even by steadfastly resorting to a rational (utility-maximizing) strategy an organism fails to adapt itself to a

particular environment, whereas another organism, allowing itself to be guided by an opportunistic strategy (inclusive of idleness, withdrawal and lack of enterprise), may find itself well adapted to the same environment. This is to be explained in terms of the fact that nature does not really select except in a metaphorical sense. What happens is this. Selection or adaptation *takes place* according to laws or trends which do not necessarily leave room for cultivated rationality marked by utility-maximizing efforts and calculation. It is not at all surprising that even exceptionally rational persons are found to be highly individualistic, if not non-conformist, and often at odds with their immediate environment and contemporary time. Epoch-makers are breakers of contemporary rules and norms.

Positively speaking, the primary locus of rationality is the individual human being, not larger social aggregates like consumers' protection groups, producers' guilds, trade unions, the community and nation. Perhaps with much less plausibility *rationality* may be attributed to nature or natural kinds or environmental segments.

Rationality must not be confused with *rationalizability* or *intelligibility*. The scientific or epistemic efforts of humans aim at understanding culture and explaining nature. Success in these efforts need not be taken as proof of any cooperation extended by an 'obliging' environment to us. Still less does it indicate (essential) isomorphism between the human mind, on the one hand, and nature and culture, two inseparable segments of environment, on the other. In fact, culture exhibits some mind-like attributes and some natural attributes. Therefore, it is often regarded as a *tertium quid* between man and the natural environment. Strictly speaking, extensions of these three terms are continuous and overlapping.

This brings me to the heart of the concept of rationality.[7] Individuals act according to their own understanding of the game of social life, its rules, pay-offs and penalties. This understanding is inclusive of misunderstanding. Individuals, as affiliated to this or that culture, never cease to interact among themselves. This shows a minimum *sort* of cooperation or, more cautiously speaking, certain *patterns* of the same. But it will be incorrect to infer from this cooperation that it is rationally *planned* by the participating individuals in the concerned situation. Cooperation in these sort of cases includes conflict, weak and strong, and other grades in between. The resulting cooperation (or situation) is not consciously co-authored by the individuals concerned. It is an outcome of what they do, fail to do, the intended as well as unintended consequences of their doings (and undoings).

If in my formulation, analysis and criticism of REM and REB one detects a sustained undertone of basic economic concepts like market, competition and cooperation, one is perfectly right. This is to be taken as a cultural phenomenon of my 'time' especially of my own mind. Because our time and culture and my mind are deeply influenced by economic considerations. Natural, biological and normative considerations are often found to have

been pushed to a back seat. What is even more instructive is that not only is epistemology being naturalized and economics positivized but ethics is also being biologized.[8]

IV

Besides the economic and evolutionary biological frameworks of rationality, REM and REB, another framework which has been taken and discussed seriously in this connection is the behaviouristic.[9] Rationality of Behaviourism (ROB) has its undoubted attraction as a paradigm. Its psychological orientation and basic humanistic character are often regarded as good enough ground to take note of the *normative* claim of human activities. By implication it is claimed that human behaviour, rightly understood, takes due care of the normativity of human nature. In this respect ROB is said to be preferable to REM and REB. In REM such pairs of concepts as profit/loss, pay-off/penanty, are accorded high importance. Similarly, in REB selection/elimination, (adaptive) fit/misfit are recognized as crucially important. Analogous concepts in ROB are reward/punishment, the factors which do/don't reinforce human behaviour.

In order to capture the basic sense of normativity of human behaviour one has to recognize the distinction between (i) behaviour *determined* by reinforcement, and (ii) behaviour *determinable* by reinforcement. If the stronger claim of (i) is accepted, then reinforcement turns out to be a natural law holding good amidst all circumstances and constraints, internal and external. But evidently human behaviour does not appear to be so determined. True, humans often act to maximize their economic self-interest but they do not do so as a matter of law. They *can* act otherwise. The significance of the distinction between natural law and economic law (as a part of culture) must not be forgotten or underestimated. One has to recognize the distinction, say, between (i) traffic rule and (ii) law of gravitation. Culturally speaking, the distinction between (traffic rule) 'keep to the left' (as followed in India, the UK, etc.) and (traffic rule) 'keep to the right' (as followed in the USA, continental Europe, etc.) seems to be more instructive.

This shows, among other things, that cultural variations are more articulate than natural or even biological variations. But one can always point out that, notwithstanding the variations of different types, simple and complex, laws are operative at every level. For example, even planetary motions, apparently fixed, are subject to variation in the vast scale of astronomical space-time. This similarity, or caricature thereof, between cultural rules and natural laws is of little consequence in capturing the normative sense of human behaviour.

The reinforced behaviour of animals under laboratory conditions and that of humans in a free society or economy are significantly dissimilar, despite their generic similarity. The disanalogy between natural law and

cultural rule, between animal behaviour and human behaviour, may be reviewed in a further refined way. For example, different communities, globe-trotting business executives and tribal and poor people, differ in their preferences, orientation and enterprise. While the former, due to their exposure to new and diverse cultural stimuli, are at an advantage to review and revise their preferences/values, the latter, more or less firmly settled in one place and non-exposed to new and diverse cultural stimuli, are relatively much less free to develop a new orientation and expectations. The poor Bheel (tribal) of Rajasthan cannot dream of holidaying in the south of France or even at Kovalam (Kerala) or Santa Cruz (Bombay) beach.

The cultural determination of rational self-interest has another interesting aspect. It can never be *thoroughly* determined. Even the strongest form of social engineering cannot ensure uniformity of human preferences. Social reinforcement, reward and punishment, can never be completely successful. For example, it is always possible for a 'deviant' or 'delinquent' Bheel bonded labour boy to run away from his Aravalli village and get landed in a slum at Santa Cruz expecting to be a better paid industrial worker. The effect of reinforcement, suffering, punishment or even reward must not be exaggerated in the human context. A prince like the Buddha, to recall the classic example, can renounce the royal life-style and knowingly choose the hard life of penury. Lure of affluence or pleasure and fear of austerity or pain are not as compelling as the defender of ROB tries to make it out. Reinforcement-based rationality fails to take due note of the force of freedom.

V

The most disturbing feature of rationality common to REM, REB and ROB is underestimation of the diversity of human nature born out of freedom and cultural circumstances. Both freedom and culture have two aspects, inner and outer. Market, democracy, etc. are intended only to be the outer forms of freedom. Freedom itself, ontologically speaking, is difficult to define but easily understandable in terms of its endless variety of expression and suppression, anarchy and tyranny.[10]

Most of us educated and urban people are overexposed to the economic factors of life. This tends to make us culturally blind to the life-forms of the people who are not yet sucked into the giant jet of the market. The homogenizing influence of the market in the highly industrialized countries of the West has not yet made its presence felt in our life as a whole.

As a result of the absence of market tyranny we find in our country quite dissimilar types of economy, culture, language, tradition, convention and social movement. One of the cumulative effects of these diverse forms of life is that all people are not likely to accept one particular concept or ideal of rationality as morally universalisable. In other words, cultural

pluralism does not favour the idea of the acceptance of a universal ideal of rationality, economic, biological or behaviourist.

Theories of rationality are after all extracted from 'human experience'. Their correctness has to be tested by referring them back to human experience. Since 'human experience' is not an abstract jetsam or flotsam, one has to look for it in this or that particular socio-historical context. There is neither any 'essential' and 'immutable' human nature nor any 'universal' human experience. In the long run it is said to be evolutionary. And in the short run it is described as historical. Reason as *essence* (of man) is a pernicious view and deserves to be discarded.

The rationality of REM makes little sense in a tribal economy where the barter system holds good in a big way. The people of that type of society are bound to keep their accounts of profit and loss, pay-offs and penalties in a way quite different from that one observes in the Wall Street or Dalal Street.

Secondly, the goods and services which are in demand and on sale are so different and incommensurable that to think of producing them in an identical way is to disregard the diversity of value-preferences of the concerned people. Ordinarily speaking, commodities are produced on demand and exchanged for the sake of profit. But that is not necessarily the case. For example, in our culture there are certain forms of scholarship and skill which are not in demand and, therefore, gradually disappearing. The interesting thing is that most of us are not even informed of their availability in our culture. What is shocking about these goods and services is that even while we are told of their availability their demand does not pick up on grounds of their alleged obsolescence (or economic dysfunctionality).

The point which emerges from a perceptive study in these dying or dysfunctional forms of culture is that their survival is disfavoured by the so-called rationality of the market. Their value proves so archaeological that even the official archaeologist will not care to preserve them. This shows that the market works as a very powerful equalizing force. When unequals are treated equally, when weaker goods ('weaker' in terms of effective demand) are not traded at all, the concerned market can hardly be described as rational or just. The tyranny of the market ensures the devaluation, if not destruction or slow death, of non-marketable goods. It extends its destructive influence beyond the economic sphere and tends to mutilate the goods of those distinct cultural areas. Cultural goods like morals, the arts, religious sentiments, love and sympathy must not be forced into the fixed pigeon-holes of the market, demand and supply.

The basic fallacy of REM has to be first understood and then avoided.[11] It is equally advisable to reject the idea of interpreting and practising REB and ROB in the analogy of REM. Survival is not the only value, certainly not the best one, to be recognized as the guiding principle of life. Non-competitive and non-combative principles like self-sacrifice, sympathy and charity have their own need and value. In the name of adaptive reinforcement one must

not tamely surrender to the lure of affluence and the temptation of the rat-race. It is neither rational nor moral.

VI

The efforts which are being made, in the name of science, to formulate the concept of rationality in a value-neutral manner seem to be scientistic, contrary to the spirit of science. I have tried to clarify the point in my discussion of REM, REB and ROB. There is nothing wrong in recognizing economics, evolutionary biology and behaviourist psychology as science. But that does not require one to purge all value-considerations from these disciplines. The point may be extended further.

First, at times, rationality has been defined in terms of the *appropriateness of the end-means relationship*.[12] This may be done in an abstract way or concretely with reference to the frameworks of REM, REB and ROB. The second approach seems to me more promising. It helps us to bring out the implications of value-loadedness or value-neutrality in actual scientific discourses. For example, the end or goal of a particular action or set of actions may be construed either positively or normatively. Positively speaking, it may be taken as an end which disregards altogether the question of its normative character, good or bad, right or wrong. In this sort of cases the question of *appropriateness* (of the end-means relationship) does not appear to have any normative import at all. In contrast, if one looks at the chosen *end* or *goal* as related to this or that cultural context and finds it to be a value or disvalue, the whole question of appropriateness poses a normative claim requiring the concerned human beings to review their attitude towards the normally accepted means. Gandhi has particularly drawn our attention to this normative aspect of the end-means relationship. In the games of politics and economics, he emphasizes, it is not enough that our ends are moral. What is called for in addition is that our means for realizing it must be equally moral.[13] This normative requirement restricts our choice between various alternative sets of means, positive and normative. Even among the normative sets Gandhi advises us to choose that which is optimally normative from a very (if not most) comprehensive and long-term point of view. The Gandhi optimal is quite different from the Pareto optimal.

Second, the concept of rationality defined in terms of *proportionality* may also be construed in one of the following two ways—positively or normatively. By 'positively' here I mean 'purely quantitatively'. Ratio is the relation one quantity or magnitude bears to another of the same kind, expressible by the quotient obtained by dividing one by the other. Ratio-based rationality is a sort of proportionality. In the qualitative contexts of cooperation, charity, and non-zero-some conflict of love-and-hate, it is very difficult to ascertain the right proportion of goods to be distributed

among the persons in question. When utilities and disutilities (in the forms of motivation, ability, will-force, performance, etc.) are not quantifiable and measurable, the question of determining proportion-based rationality makes little, or at best, very vague and intuitive sense. This is not to suggest a sharp dichotomy between qualitative and quantitative issues. In music, painting, sculpture and architecture, for example, the issues are found to be interfused. Quantitative order(s) and even disorder(s) have welcome aesthetic effects on us.

Comparable critical considerations may also be raised against the concepts of rationality defined in terms of (normative) universalisability and (positive) enforceability. If it is insisted upon that (primary) goods like goodwill, justice and income would be recognized as moral only when these are universalisable, we land ourselves in the worst forms of abstractionism. For it amounts to claiming that goods which are really good are so in all possible cultures or cultural contexts. This claim makes rational goods culture-neutral and, therefore, the question of relating rationality to culture is ruled out *a priori*.

The opposite error is committed by proponents of enforceability-based rationality. To say that goods which are not enforceable are idle or utopian (in the bad sense) is to disregard the obvious fact of life, namely, that there are certain values which, though recognized as values by most of us, are not immediately realizable or enforceable within the constraints under which we are often obliged to live and act.[14] The ideals of truthfulness, non-violence and justice do not cease to be ideals simply because they are not realizable here and now by most of us. If the universalisability requirement disregards the diversity of cultural contexts, the enforceability requirement asks us to subjugate ourselves tamely to the unfavourable facts of life and to easily give up the moral demand of all ideal objectives on us.

Notes and References

1. Adam Smith, *The Wealth of Nations* and *The Theory of Moral Sentiments*. Adam Smith's thought on the subject has been considerably influenced, among others, by Hume and Hutcheson.
2. R. Nozick, *Anarchy, State and Utopia*. Basic Books, New York, 1974.
3. J. Rawls, *Theory of Justice*, Harvard University Press, Cambridge, Massachusetts, 1971.
4. See, for example, D.P. Chattopadhyaya, 'Human Rights, Justice and Social Context' in Alan S. Rosenbaum, ed., *Philosophy of Human Rights*, Green Wood Press, West Port, Connecticut, 1980. See also, D.P. Chattopadhyaya, *Environment, Evolution and Values: Studies in Man, Society and Science*, South Asian Publisher, New Delhi, 1982. For a proper understanding of the issues in relation to the Indian context one can profitably consult Dr R.G. Chatturvedi, *Justice: Natural, Social, Economic and Political*, Law Book Company, Allahabad, 1990.
5. The works which readily come to my mind in this connection are those of Milton Friedman, Richard Lipsey and their followers. And for a contrary view I find the works of Ludwig von Mises and F.A. von Hayek very interesting. But what is common to them is their strong opposition to socialism, central planning and even welfarism.
6. See, for example, M. Sahlins, *The Use and Abuse of Biology*, Michigan University Press, Ann Arbor, 1976; C. Gretz, *The Interpretation of Cultures*, Basic Books, New York, 1973; and P. Kitcher, *Vaulting Ambition*, MIT Press, Cambridge, 1985.
7. D.P. Chattopadhyaya, *Individuals and Societies: A Methodological Inquiry*, 1967, enlarged 2nd edn., Scientific Book Agency, Calcutta, 1975.
8. Bernhard Rensch, *Biophilosophy*, Columbia University Press, New York, 1971; see also B. Campbell, *Human Evolution: An Introduction to Man's Adaptation*, Aldine, Chicago; Ernst Mayr, *The Growth of Biological Thought: Diversity, Evolution and Inheritance*, Harvard University (Belknap) Press, Cambridge, Massachusetts, 1982.
9. C.B. Ferster and B.F. Skinner, *Schedules of Reinforcement*, Appleton-Century-Crofts, New York, 1957; see also B.F. Skinner, *Beyond Freedom and Dignity*, A. Knopf, New York, 1971; A. Gorz, ed., *The Division of Labour*, Harvester Press, London, 1976; Barry Schwartz, *The Psychology of Learning Behaviour*, Norton, New York, 1984; and *The Battle of Human Nature: Science, Morality and Modern Life*, Norton, New York, 1986. I found the works of Schwartz very useful and stimulating.
10. D.P. Chattopadhyaya, *Knowledge, Freedom and Language*, Motilal Banarsidass, Delhi, 1989.
11. M. Hollis and E. Nell, *Rational Economic Man*, Cambridge University Press, Cambridge, 1975; see also T. Koopmans, *Three Essays on the State of Economic Science*, McGraw-Hill, New York, 1957; M. Olson, *The Logic of Collective Action*, Harvard University Press, Cambridge, Massachusetts, 1965; and G. Becker, *The Economic Approach to Human Behaviour*, Chicago University Press, Chicago, 1976.
12. Max Weber, *Economy and Society: An Outline of Interpretive Sociology*, 2 vols., edited by G. Roth and C. Wittich, California University Press, Berkeley, 1978.
13. 'The Paradox of Violence' and 'The Moral Challenge of Gandhian Ideology' in D.P. Chattopadhyaya, *Societies and Cultures*, Bharatiya Vidya Bhavan, Bombay, 1973.
14. See my 'Ideology and Utopia', in Krishna Roy and Chhanda Gupta (eds.), *Essays in Social and Political Philosophy*, Indian Council of Philosophical Research and Allied Publishers, New Delhi, 1989.

Thought and language*

SUKHARANJAN SAHA
Jadavpur University, Calcutta

Letter-sounds and Word-sounds

'Language' is now being widely used in extended senses as is evident from coinages like 'formal language' and 'computer language'. In whatever sense 'language' is to be understood in such expressions this does not include the element of speakability, for even if we are credited with the ability of writing such languages we certainly cannot speak them. In contrast, we can say of the natural languages that we can speak them and if we could not do so they would not have merited that description. By this we only suggest that speakability is a necessary feature of the natural languages and the scope for other elements is not denied. But speaking differs from speaker to speaker. Thus, the way in which I pronounce 'Car-fax' (a central place in Oxford) would be different from the way an Englishman does it, just as the pronunciation of 'Matilal' by an average Bengali and the receptionist at All Souls College, Oxford would be very different. (An average Englishman would not be able to utter a soft 't' and would not know that the first 'a' of 'Matilal' has to be uttered as 'o'.) The cases mentioned relate to the peculiarities of pronunciation by members of different linguistic communities. But even within a given linguistic community, or within a family, ways of speaking differ. Thus, a man, his wife and their young child would utter the same word differently and the way their talking bird would utter it, if they have one they might have taught to utter it, would be entirely different from their utterances. (*TCM-Śabda*, Vol. 1, p. 434)

What is it then that we really utter? It is accepted by all that in one sense or the other, we cannot utter a sentence without uttering the words contained in it. Similarly, we cannot utter a word without uttering the letters contained in it. Therefore, if we take speakability as an essential feature of language and if language consists of sentences, sentences of words and words of letters, then the basic elements of language are the letter-sounds that we utter. A given sentence is only a definite ordered sequence of certain spoken words and a given word is only a definite ordered sequence of certain letters uttered by an individual.

The school of Grammarians in our country represented by Bhartrihari and Nagesa holds the view that language is a transcendent sound which is

*A slightly modified version of the paper is included in the author's forthcoming book *Meaning, Truth and Predication: A Reconstruction of Nyāya Semantics* to be published by Jadavpur University in collaboration with K.P. Bagchi & Co., Calcutta and New Delhi.

not amenable to such analysis. According to these philosophers, a sentence or a word is an indivisible unity and it is only in an act of abstraction that talking about the analysability of a sentence into words may assume some significance. Though in reality a sentence is unbreakable, we may analyse it in terms of words because like sentences words also can be assigned meaning. But letters certainly do not have any meaning and hence the idea of analysing a word into letters does not make any sense.[1] These philosophers further argue that letters can be taken to be relevant only in the context of communication. Thus when one expresses one's belief one gives vent to the words that make up one's thought with the help of pronunciation of letters and the hearer catches the word one has in mind by listening to the letters. It should thus be supposed that letter-sounds only manifest words and are not constitutive of them. Letter-sounds and their sequences are merely aids to the hearer for identifying the words the speaker has in mind. Successful communication is the hearer and the speaker participating in the same thought; this sameness is possible to formulate because of the identity of objectively identical words. Letter-sounds have no existence apart from their utterance and since utterance differs from person to person such transient and private letter-sounds and their sequences cannot really account for the fact of successful communication and of participation in identical thoughts. The Grammarians thus hold that language cannot ultimately be taken to consist of letters.

The point of view sketched above does not appear acceptable. The argument that words (which are units of meaning) cannot be composed of letters (which do not have meaning) presupposes that letters themselves are meaningless. But in uses involving auto-reference, for example, when we say that 'A' to 'Z' are the twenty-six letters of the English alphabet, we certainly allow that these letter-sounds constitute the meaning of the auto-referring expressions, for we speak here about these letters and nothing else. Furthermore, it is extreme to suppose that it will not be possible to offer a satisfactory account of meaning and an explanation of the fact of the hearer's sharing the thought of the speaker if language is taken to be ultimately constituted by letters. Again, the Grammarian's view is committed to a metaphysics of transcendent sound-entities, though they cannot altogether avoid the theory of audible letter-sounds. Therefore, it would be more in keeping with the principle of parsimony if the unavoidable common part alone is accepted and the theory of objectively existent eternal and transcendent sound-entities is dropped as unnecessary. The Grammarians also will have to admit the existence of clusters of audible letters corresponding to their so-called transcendent words, called *pada-sphoṭa* in their jargon, for otherwise a given letter would have manifested all the words that the vocabulary of a language includes as beginning or ending with that letter and would have resulted in the utter bewilderment of the hearer. We would thus hold that audible words

alone are words and that they are composed of audible letter-sounds, hence language ultimately consists of letter-sounds.

The Mimamsakas differ from the Grammarians on the question of existence of transcendent, latent unanalysable word-sounds. They admit instead the existence of transcendent, latent letter-sounds which the audible letter-sounds we produce manifest. Words and sentences are composite in nature. In fact, words are sequences of letters and sentences of words. According to these philosophers, the Vedas are a body of unauthored and eternally existing sentences. These sentences, therefore, are eternally existing combinations of Vedic words and these words, again, are simply eternally existing sequences of latent letter-sounds. An ordinary non-Vedic Sanskrit sentence, unlike a Vedic sentence, is not such an eternally existing combination of words, though these words, if they are Vedic words, must be eternally existing sequences of eternally existing letter-sounds.

The Naiyayikas do not consider the Mimamsa position to be reasonable, for like the view of the Grammarians this also commits us to a metaphysics of transcendent sound-entities. Moreover, since the Mimamsakas also regard the letter-sounds we produce as revealing eternally existing latent letter-sounds it would be more in keeping with the principle of parsimony to dispense with the latent letter-sounds. It is indeed true that these philosophers accept the analysability of sentences into words and of words into letters and thus their view would not be subject to the inelegance of the view of the Grammarians. But this does not absolve them of other charges. The Naiyayikas thus retain that element of sound theory that is common to the views of the Grammarians and the Mimamsakas and this common element is offered as the position of the Naiyayikas themselves. This common element admits the existence of reproducible but different letter-sounds, each of which is identifiable as a type and thus can be distinguished from similar others. These elementary letter-sounds are distinct from sounds produced in nature which cannot be so neatly identified and differentiated. In ontology Nyaya comes very close to the Vaisesika system and regarding the nature of sound the two systems do not differ at all. In fact, one complements the efforts of the other in establishing that sound is a quality and is non-eternal in nature. We reproduce below some arguments that have been offered to prove these conclusions.

Like colour, taste, smell and touch, sound also is 'sensible', i.e. capable of being perceived (we use this verb here in a very general sense) by an external sense-organ. Like the other senses, again, sound can be perceived only by a single sense-organ, the auditory sense-organ. We have noted above that sound is identifiable as sound and also that specific letter-sounds are identifiable as belonging to their respective specific types. We can then, following Vaisesika ontology, postulate that universals inhere in sound and they can be sensibly intuited. Thus, sound is such that some universal or

other inheres in it and is capable of being perceived by us with the help of the auditory sense-organ. This implies that sound is either a substance or a quality or an action since reals other than these do not have universals in them. Sound is not an action for an action is capable of being perceived with the help of the visual sense-organ while sound is not. This conclusion can also be supported by another argument. An action is not a causal factor in respect of another while sound can be so. If this were not true of sound we would not have been able to hear sound. That sound can be elsewhere other than its source must be accepted for otherwise remaining stationary at my seat I would not have been able to hear sounds produced in and from different directions. This only shows that sound begets sound and I hear the ones produced within my ear-drums, though they are of lesser volume than the original ones in the series.

Sound cannot be a substance either. If this were so, it would have been identical with any one of the perceptible substances. But products of earth, water and fire alone are perceptible and all of them are capable of being perceived by the visual sense-organ, while sound is not. Therefore, sound is not a substance.

By exclusion then, sound is a quality and this can be supported by a positive argument: Smell is capable of being perceived with the help of an external sense-organ, though not by the visual sense-organ. This is also true of sound. We also know that smell is a quality. Therefore, like smell, sound also is a quality. Given this we can now state some of the reasons that seek to prove that sound is non-eternal.[2]

One of the several arguments of Gautama (*NS*, 2/2/13) is as follows: Sound is non-eternal because it is perceived with the help of an external sense-organ. The underlying general rule is then: whatever is perceived with the help of an external sense-organ is non-eternal in nature. Gautama rightly anticipates the counter-example to this rule, since according to Nyaya epistemology a universal may be perceived with the help of an external sense-organ. Thus, it may be pointed out that the universal *pothood* gets perceived along with the pot by the external sense-organs of sight and touch, even though the Naiyayikas do not take pothood to be non-eternal. It is indeed true that universals are eternal. But if we consider how we hear sound, we can certainly take to be true the proposition that sound is non-eternal. We have noted earlier that the auditory sense-organ remains confined to the cavity of the ear and does not reach out to the place where sound is perceived as localized. We shall have to accept then that the original sound which takes place at the place of localization starts producing similar sounds all around and that the one that comes in contact with the auditory sense-organ is a member in that series which is produced at the seat of the auditory sense-organ. But to logically minded people this explanation does not seem satisfactory so far as the charge of counter-example is concerned. Gangesa (*TCM-Śabda*, p. 460), and following him

Visvanatha (in *Vṛtti* on *NS*, 2/5/16), have suggested an emendation of the argument as follows: sound is non-eternal, because it is perceived by an external sense-organ and has some universals inhering in it. Stated thus it is no more possible to come up with a counter-example to the general rule presupposed herein. For the rule is: if a thing is perceived with the help of an external sense-organ and is also such that some universal or other inheres in it, then it is non-eternal. Obivously, pothood does not have any universal in it as universals do not have universals inhering in them. The argument is thus not defective.

One might however argue that sound is durable (a step towards its eternity) as the same sound can be repeated or uttered again and again (*NS*, 2/2/29). It is an empirical fact that the same sound can be produced by many persons, for example, we all utter the *same* letters inummerable number of times. This clearly shows that sound is durable and persisting. But it would be too much to suppose here that the word 'same' in 'same sound' means numerical identity. Vatsyayana thus points out in reply that a dancer may repeat the same performance a number of times but it would be wrong to suppose that the bodily movement that we witnessed in the first performance is numerically the same in the subsequent acts of dancing. The appearance of the sameness of sounds, if there be any, is not due to the numerical identity of different sound particulars but is due to the identity of the type of the sound, and this, we know, is explained by admitting universals inhering in letter-sounds and by admitting ordered sequences in cases of words and sentences. In fact, repetition presupposes not so much the concept of numerical identity as that of difference, for unless what is being produced or performed subsequently were other than the original, we would not have regarded the former as a repetition of the other. This then clearly shows that there is no ground for holding that sound is durable. If, sometimes, sound does however appear to be persisting it must be composite and analysable into transient parts.

Gautama and Vatsyayana present certain phonetic facts and consider whether they lend support or not to the thesis that sound is non-eternal (*NS*, 2/2/40-57). They discuss the issue with reference to the letters of Sanskrit alphabet. But the issue seems to be quite general and may be considered to be of interest to the science of phonetics as such. We shall however present our exposition by utilizing the examples the past masters have discussed.

There are two concepts in Sanskrit grammar, one of which is called *ādesa* and the other *vikāra*. The former stands for substitution and the latter for transformation. Some philosophers literally interpret the word '*vikāra*'/'transformation' and the relevant phonetic changes are taken to support the thesis of durability of sound. We shall use the word 'transformationist' to refer to the upholder of such a thesis and the word 'substitutionist' to refer to the opponent of the thesis, although we know that these words do not

find a place in the dictionary. Before presenting the philosophical thesis we shall first note a few changes permitted by Sanskrit grammar and phonetics.

(i) *Devī* (goddess)+*uvāca* (said)=Devyuvâca
(ii) *Dadhi* (yoghurt like product)+*atra* (here)=*Dadhyatra*
(iii) *Vyadh* (a verb)+*ti* (a suffix)=*Vidhyati* (a finite form of the verb)

(In the English Language also *y* of 'deny' becomes *i.e.* in 'denied/denies' or *y* of 'petty' becomes *i* in 'petticoat'.)

It may be noticed that the shorter *i* in (ii) and the longer *ī* in (i) become *y* while *y* in (iii) becomes *i*.

According to the substitutionist, the *phonemes*, the shorter *i*, the longer *ī* and *y*, are all qualitatively distinct from one another having distinct universals in them. But grammar requires us to substitute one in place of some other in certain specified cases. This thesis of substitution fits in well with the position that sound is transient in nature. But the transformationist holds an opposite view in the matter. According to him, the changes noted do not really involve substitution. In fact, the transformationist argues that what is really involved is some sort of transformation of some basic sound pattern which first appears in the form of *i*/*ī* or *y* and then gets transformed in the form of the other. Against such a thesis the substitutionist raises the following objection: If *y* were a transformation of the longer *ī* as in (i) or of the shorter *ī* as in (ii), the volume of the original material cannot be said to be proportionately represented in the transformation as it is the same *y* in both cases.

In reply to this objection the transformationist advances an analogical argument. It is pointed out that in the realm of substances the transformation of a substance may be less than, equal to, or greater than the original substance. Threads have less volume than the cotton of which the threads are made. A golden bangle is equal in weight to the piece of gold which has been used as the material for it. Again, a plant is much bigger in size than the seed that has grown into it. It is not the case, the transformationist argues, that the original material and its transformation share everything in common and if they had been of identical nature it would be unreasonable to single out one as the transformation of the other. What is necessary is merely that the two share some property in common; in the phonetic cases under consideration the pairs have this much in common that they are elementary speech-sounds, the differences regarding shortness or otherwise of the first member of the pairs notwithstanding.

The substitutionist points out in reply that though the original material and its transformation cannot have all properties in common they must share some significant properties in addition to the general or categorial properties they have. If these general features were considered sufficient for transformation, gold would not have been a precious substance in short

supply or clay would not have been so cheap, and men would have used the one instead of the other material for the desired transformation. Hence, the transformationist should be able to show that the condition is satisfied in the short *i* and *y* or long *ī* and *y* pairs. But this he cannot do. The transformationist may retort that his is only an analogical argument when he says that in the realm of substances transformation does not always obey the law of proportion and that it is argued by analogy that this may very well be the case in the realm of phonetic transformation. Since it is merely an analogy all that has to be admitted in respect of transformation in the field of substances need not be insisted upon in the sphere of phonetic transformation. Furthermore, it would be wrong to suppose that general or categorical features are unimportant as the substitutionist himself frames laws on the basis of cases of transformation within the category of substance. The transformationist further adds that special properties also can be traced in the pairs of phonetic transformation. Thus, with *a*, *i* becomes *y* (in *dhatyatra*), *u* becomes *v* and so on; the difference in respect of short or long phonemes of the original material is not so significant a feature that it has to be reflected in the transformation. It can certainly be said with some amount of justification that if two phonemes are such that one is shorter or longer than the other then the two may also be viewed as cases of the same phoneme. And if this is permitted the talk about the law of proportion does not arise. Given a little more freedom it can be said that *y* also has some affinity with *i* and the substitutionist cannot find anything lacking in the proposed case of transformation in the *i*/*y* or *ī*/*y* pairs.

The solution offered by the transformationist presupposes grouping the short *i* and long *ī* under one type of phoneme, and these two and *y* under a still different cluster. But it was noted earlier, the substitutionist points out, that the speech-sounds the different letters represent are simple, unanalysable elementary speech-sounds, each identifiable as such and distinguishable from all others by reference to its exclusive identifying mark. It is accepted by both the parties here that these identifying marks are universals and also that these sortal universals form a hierarchical tree disallowing classification involving overlapping and cross-domain. But if *i*/*ī* and *y* are grouped together the neat scheme of classification of letters under the sortal class characters corresponding to vowels and consonants cannot be defended. Thus, if a universal covering all of *i*/*ī* and *y* is postulated it will have common locus with consonanthood in *y*, though in *ī*/*i* it will have a locus where consonanthood is lacking or consonanthood will have loci other than *y* where the proposed universal is absent, though the proposed universal along with it will be present in *y*. It is clearly because of this overlapping and consequent ontological inelegance that the solution offered by the transformationist is not acceptable.[3]

The substitutionist further points out that a speaker will use the phoneme *y* in place of *i* in uttering *dadhi* and *atra* together as *dadhyatra*. But he will

use *i* instead of *y* if he chooses subsequently to utter *dadhyatra* analysingly as *dadhi* and *atra*. This proves that *y* is not a transformation of *i*, for a thing that has undergone transformation does not revert to its original form. There are, of course, exceptions to these. Thus, ornaments made of gold may again be converted into a lump of gold. But the members of this pair share in common the universal of being gold. And this affinity cannot be traced in the *i*/*y* pair, as has been shown. In fact, this pair is more similar to the pair of milk and yoghurt in that in yoghurt the character of milk is not to be found. Therefore, just as yoghurt cannot become milk again, *y* could not give place to *i* if *y* were really a transformation of *i*.

It is again wrong to suppose that the thesis of transformation will lend support to the view that letter-sounds are eternal in nature. The concept of eternity implies continuity and therefore, if the sound represented by the letter *i*/ɪ were eternal, talk of its transformation into *y* (which is qualitatively distinct) does not arise. The concept of transformation implies that the original material loses its identity and nature when it gets transformed. In other words, transformation presupposes qualitative change and this is inconsistent with the concept of eternity. Gautama and Vatsyayana, whom we take to be supporters of the thesis of substitution, conclude that the sounds represented by letters are non-eternal. Since words are nothing but sequence of letters and as sentences are nothing but sequences of words, Vedic sentences and words also are not eternal (*TCM-Śabda*, Vol. 1, p. 464).

How Is Thought Related to Language?

When we speak we express our ideas and beliefs, or our requests and commands, or our doubts and questions. Whatever we thus express we communicate through speech to actual or possible hearers. Whether the hearers can rightly receive what the speakers have to communicate is a very important question. But it is equally important to ascertain whether it is only the case that speech or language depicts thought or also that thought necessarily involves language and speech. Bhartrihari is often quoted to have asserted that thought is inter-shot with language and is not possible without it (*VP*, ch. I, pp. 123-4). In a sense the assertion is most innocent if it is not given a sophisticated twist and there is no reason why it should not be accepted, if of course we do not hold that language cannot, though we can, grasp reality. The Naiyayikas, unlike the Buddhists, do not believe in any fissure between thought and language and, as B.K. Matilal (*Perception*, p. 342) rightly points out, they should not refuse to endorse the position. There is, of course, no denying the fact that the two are related. The question is, how exactly are the two related to each other.

We have seen in the preceding section that, according to Bhartrihari and his followers, words are simple, unanalysable latent sounds eternally existing in the universe. Whenever a thought occurs, no matter whose

thought it is, these eternally existing words get associated with it. Just as eternally existing infinite space and time accommodate within their fold everything that is there in the universe or that comes into existence, or just as eternally existing universals get tagged to their respective particulars wherever or whenever they are born, the eternally existing latent words wrap up or get mixed with a thought whenever or in whomsoever it arises. One logically possible view (we are not making any historical identification) may interpret what is being thought as eternally existing at least as possibilities to be realized in someone's thinking at a given point of time. If this be so, and if words are already there it is conceivable that words are necessarily related to such eternally existing impersonal thoughts, no matter whether it is being realized or not in anyone's thinking. But such a view of thought as something eternal and impersonal has its own difficulties.

Apart from burdening the world of entities with an infinite number of such duplicate thoughts in addition to actual cases of thinking this view will have to resort to some ways of explaining the relationship between such thoughts and the instances of thinking these thoughts. Thus, while setting out to offer an explanation of how eternal words are related to thinking, we are postulating a relationship between these eternal words and impersonal thoughts in the hope that an explanation of the relationship between impersonal thoughts and the instances of thinking such thoughts will not create much of a problem. But is that really the case? My acts of thinking cannot be effects of eternal and impersonal thought, for causes being eternal, effects would have taken place constantly. Nor can it be said that my acts of thinking are particulars in which impersonal and eternal *thought-universals* inhere. In ontology universals are admitted as being simple and unanalysable. But as thinking, and therefore thoughts also, are analysable into elements, it would be unreasonable to treat thoughts as universals. How then can they be related at all?

One might, however, suggest that our acts of thinking are about these impersonal thoughts and they are thus the objects of our thinking. Two advantages may be claimed in favour of such a point of view. First, when one communicates something to others one cannot, and therefore does not, communicate anything that is private. One's acts of thinking is private to oneself and is thus incommunicable. But if we admit an impersonal thought towards which one's act of thinking is directed, then there is no difficulty in taking it as communicable to others. Second, one's thinking may not necessarily be about states of affairs that obtain in the real world. Therefore, if it is held that thinking is about thoughts we can offer a satisfactory account of such cases of thinking and can also explain how communication is possible in such cases.

The point of view does not appear acceptable to us for the reasons stated below. Communication does indeed involve something public. But that does not commit us to the existence of impersonal thoughts. An act of

thinking is surely private to the one whose thinking it is. But it is not wholly a private affair. For we hold that thinking is a cognitive act involving directedness towards something as is also presupposed by our opponent here. If the items of the world and their relationship be the direct object of our thinking then this object being accessible to others, our thinking also can be said to involve reference to something public. Therefore, if there is a common stock of words and if there are rules of syntax of a public language, then in spite of the fact that someone's thinking is private to him, it can be said to be communicable to others, not because of its privacy but because of its world-directedness or intentionality, and both the speaker and the hearer can share the same way of thinking.

We now come to the second point of the opponent. He may suggest that in cases of cognitions which are false there is no actual state of affair. If we thus admit something like impersonal thoughts we can explain the falsity as well as communicability of such thoughts. The Naiyayikas, particularly Gangesa and his followers, hold instead that my thinking can be analysed into different elements (called *viśeṣya*, *prakāra* and *saṁsarga* in Nyaya terminology), all of which viewed discretely represent items of the world. Thus, even though there is no actual state of affair corresponding to the related content as presented in illusion, we can tally the discrete contents with this or that item of reality. Furthermore, if the elements as presented and as believed to be related were such that they could never be related in the way they are believed to be related, and if this were known, then no attitude of belief could be said to be involved in cases of such acts of thinking. If I am in error about the things or elements I am thinking about now, I was not always in error about these elements when I had occasion to think about them earlier. We can thus see that even if we do not postulate an intermediate factor like impersonal thought lying between thinking and the world it is about we can very well offer an explanation of cases of false thinking and can satisfactorily explain the communicability involved in such cases.

One might however suggest that when we communicate a thought to others there is no necessity that the thought should be such that it is capable of being true in some context or other. Thus one may say:

> The prince who is a *barren mother's son* with a crown on decorated by a *sky-flower* is taking a dip in the pond of *tortoise's milk*
> (We have shortened the Grammarian's example) (See Nagesa's *PLM*, pp.11-12)

The speaker of such a sentence can certainly communicate a thought to the hearers and nobody would take the thought thus communicated to be true or capable of being true. But it can be pointed out in reply that this forms a part of a fairy tale and the speaker did perhaps explicitly mention this at the very beginning or at least this was clear to the hearers from the

context. So what the hearers take to be true is the denial of the given sentence as is clear from the meaning of the phrase 'fairy tale'. And this denial or falsity is to be interpreted as due to the denial or falsity of the constituents of the sentence which, thus, is to be understood as:

(I) This is not the case that
  (a) A barren mother can have a son
  (b) Something can have a sky-flower on it.
  (c) A tortoise can give milk.

When distributed the negation really pertains to the forms below:

(a) No mother having a son can be barren.
  or
  No barren woman can have a son.
(b) No flower can bloom in the sky.
  or
  The sky is not such that any flower can bloom in it.
(c) No tortoise can give milk.
  or
  Milk is not such that it can be given by any tortoise.

We have not seen any discussion of the Grammarians' example cited here in any Nyaya text. But we have formulated the reply in the model of the familiar translation of '*Sasa-srngam nāsti*' into '*Sase srngam nasti*' or '*Srnge sasiyatvm nasti*' as has been done by Kumarila (*Codanāsūtra*, Verse 6), Udayana (*ATV*, p. 64) and their followers. It may be noticed that no empty terms find place in our translation. In fact, empty terms are compound terms and when they appear to be not so, for example, 'Pegasus', 'unicorn', etc., they are to be understood as containing a description necessarily representing the intersection of disjoint sets. Therefore, stated in set-theoretic terms the negations believed to be true is of the form: given any x, x is not a member of any such intersection. Stated in ordinary language, these are to be understood in the way explained here.

We have so far considered a view according to which impersonal thoughts are interposed between one's thinking and eternally existing words and we have argued for the untenability of the view because of the untenability of the thesis of impersonal thoughts. Another logical possibility is as follows. (We do not claim that this view was actually held by any philosopher, though, in our opinion, it comes close to the view of the Grammarians of our country.) There is perhaps no parallel of the view in the Western tradition and we would like to use the new labels 'Pansonism'/'Sonorous Monism' for this view.

Sonorous monism has its origin in the Upanishadic view that Brahman alone is real. But it regards Brahman as of the nature of eternally existing unanalysable sound. We have noted in the earlier section that sentences and

words are only abstractions of this indivisible unity. Sonorous monism is also a form of pansonism inasmuch as, according to this view, objects also are, in reality, of the nature of sounds. In other words, everything, no matter whether it is a word or that which is meant by it, is of the nature of sound. The former, though an abstraction, is admittedly sound while the latter, i.e. the objects words stand for, are only appearances of the transcendent metaphysical entity admitted in the system. Since appearances appear only in some kind of illusion and have no existence apart from it they are in a sense mental or *bauddha* entities. It would be thus unreasonable to interpose something like thought, no matter whether it is viewed as eternal or not, as lying between an act of thinking and such an appearance. Hence, confronted with the question how language is related to thinking, the point of view represented by sonorous monism/pansonism does not have to face much of a problem. Since thinking is necessarily thinking about something and as this something is, *ex hypothesi*, an appearance of one word-sound or the other, thinking always goes with language. The thing of which an appearance is an appearance somehow filters through its appearance. Therefore, as the multifarious world is only an appearance of sound and as this or that item of the world is an appearance of this or that abstraction-segment of sound, thinking is not possible without language.

The view outlined above does not command acceptability because of its commitment to the metaphysics of transcendent sound and its corrollary that things are its appearances only. It impresses us for two other reasons; first, for its theory of sub-vocal speech and second, for its insistence on a sort of natural connection between a word and what it stands for. This natural connection turns out to be some sort of identity in this theory. But if it were really identity then just as while uttering a word one has the word within one's mouth one would also have the thing the word stands for within one's mouth. The implication, as Gautama points out (*NS*, 2/1/54), would be that while uttering, for example, the word 'rice' or the word 'fire' or the word 'sword', our mouth would be filled with rice, or burnt by fire, or split by a sword. But as this is not the case, this supposed natural connection cannot be identity. Can it be any other type of natural connection? No viable alternative crosses our mind. Furthermore, if this relationship were really a natural connection, it would not have been different from the relation of pervasion (*vyāpti*) which forms the basis of inference and the claim that knowing from words is not inference would have to be rejected. But we suppose that the view under reference does not envisage any such equating.

It is indeed imperative on our part to admit some constancy in the relation between a word and its meaning, otherwise communication would not be possible. But the hypothesis of natural connection is not the only possible explanation of the fact of successful communication. Many philosophers hold that the relationship in question depends on convention. The view that

meaning is conventional however has difficulties in terms of the historicity and authorship of the conventions as well as the acceptability of such conventions, even if they are taken to have been actually held before, by future generations of the linguistic community. However, the hypothesis works well so far as the constancy of the meaning-relation is concerned, its difficulties notwithstanding.

The Naiyayikas of the later period avoided both the alternatives and held that meaning depends on God's desire. But if any modern follower of Nyaya philosophy would not like to bring in God's desire as an explanation of the constancy of the relationship, he may accept the thesis of conventional meaning, for, the thesis seems inescapable even for traditional Nyaya theory in respect of some words. According to the theory, names given to individuals by their parents derive their meaning from the Vedic injunction that the father should give a name to the child on the eleventh day after birth and thus really from God's desire since his desire was recorded by Himself in the Vedic injunction. But, let us suppose that the name is given at a much later date or by someone against the will of the father (for example, a Pauranic name of a god/goddess given to a child by the grandmother, much to the dislike of a Marxist father). Such a name cannot be said to have been given in accordance with the desire of God. Thus even Gadadhara, in his *Śaktivāda* (pp. 5 & 10ff.), admits name-giving to be a counterexample and records the name-giving desire on the part of the name-giver as a case of modern (*ādhunika*) desire (*saṅketa*). Again, in respect of words that have undergone a complete change of meaning (i.e. from the etymological to the non-etymological, as in the word '*taila*', meaning oil of *tila* seeds, now being used to designate mustard oil), or in respect of words whose meaning has been fixed by stipulative definitions as often happens in the sciences, the meanings of words, if they are made to depend on desire, depend on the desire of some mortal or other and not of God. If such words are accepted by the members of the linguistic community as having the meanings in which they were actually used, constancy of meaning should pose no problem. Again, taking this as the model of giving meaning to words, we can infer, from the fact of established meanings of words, that the community accepted the meanings of different words given by men of antiquity, of course, not all at a time and not by any convention or assembly *convened* for this purpose. And if we choose to ignore the etymological meaning of the word 'convention' and understand it in the sense suggested here, we do not see why we should not accept it. For on such an explanation we can account for constancy of the relationship of meaning without embracing the pansonism of the Grammarians and the over-jealous God-intoxicatedness of the traditional Nyaya theory; we can also hereby avoid the charge of lack of historicity and authoritativeness against the thesis of conventional meaning.

We have shown how the feature of constancy of meaning relationship

can be explained without presupposing the absolutistic metaphysics of sonorous monism. We shall now discuss the issue of sub-vocal speech. By developing views consistently with the basic Nyaya position we hope to show that the claim of sub-vocal speech admits a solution that does not presuppose the metaphysical view under reference.

Two important arguments may be advanced in favour of the hypothesis of sub-vocal speech, one relating to the expressing of thought through writing unattended by any audible speech and the other to the alleged phenomenon of speaking to oneself in expressing one's thought unattended by any form of writing or any form of speech audible to others. With the progress of civilization man not only invented the spoken language but also learnt the technique of transcribing thought through the medium of written symbols. It is very often the case that if we are thinking about a serious subject-matter we express our ideas through writing before we speak about it. In fact, writing is a more powerful and universal medium of communication than speech. It is also more successful, because the reader can read a written document over and over again and decipher its meaning, while he may fail to do so by listening to corresponding speech. Furthermore, ways of speaking vary, as we have noted earlier, not only from one community to another but also from speaker to speaker, making successful communication difficult to achieve in many cases. We cannot thus ignore the importance of the institution of writing that human civilization has developed. It is indeed true that while writing something one may also utter it in such a way that it is audible to oneself only and not to others. But in very many situations writing is not linked with such private speech as we do not move the limbs within our mouth while writing out something. In such situations thinking is associated with sub-vocal speech. The thinker speaks to himself, so to say, in some kind of inner speech or dialogue with himself or herself and this supports the view of Bhartrihari that thought is necessarily intershotwith language.

The above argument does however presuppose that what we directly express through writing is not thought but speech. And as audible speech is not always associated with writing, it must then express sub-vocal speech. But this presupposition cannot be accepted because we take it to be more reasonable that writing can directly express thought. It is certainly true that when we learn to write the letters of any alphabet or the words and phrases of a language we take the help of speech. Therefore, there is nothing in written language that cannot be paired with elements of speech and while learning the written language we always take the help of spoken language. Though this claim about learning the written language is largely true, it would be wrong to suppose that even after one has learnt the art of writing the elements of spoken language must continue to mediate between thought and writing. Writing can thus directly express our thought and if that be so when writing is not associated with audible speech it would be unreasonable

to postulate sub-vocal speech as accompanying and preceding acts of writing.

We can now take up the second argument for consideration. This argument records certain instances of thinking unattended by any form of writing or by speech audible to others. It is further stated that in such situations one has a feeling that one is talking to oneself, that one is involved in sub-vocal speech or inner dialogue. We do concede that we have such a feeling in the kind of situation suggested. But this feeling is illusory. In fact what I take to be hearing in such a context is nothing other than remembering the words or their combinations. We shall first show this in respect of remembered words.

It is very common among devoted Hindus, at least in the eastern part of our country, that they are initiated into the religious path by religious preceptors or gurus through the institution called *dīkṣā*. The guru often initiates the disciple through some established method and gives him or her a *mantra* which is often an otherwise meaningless word, as for example, when the disciple is initiated according to the tantrika method. It is recommended that the disciple recite the word daily a minimum number of times and the performance is called *japa*. When the disciple does this, he withdraws his mind from other things and concentrates on the recitation of the word. Further, he recites it inaudibly to others, because he has been instructed by the guru not to disclose it to any other person. It is normally the case that he sits still and does not move any of his limbs and, therefore, he does not produce any speech. But he seems to hear the word being recited. It is necessary also that he have such a feeling for he is supposed to count the number of times he does this. Such cases lend support to the argument for sub-vocal speech.

We would however like to submit that as speech cannot be produced without the movement of limbs, the disciple only has continuous images of the words he has uttered earlier. The thesis can be supported on the basis of a negative consideration. Normally speech admits of variations. Thus, when I utter a sentence I do not utter all the words in the same way because of the distribution of accents and intonations. I also vary the pitch. These confer on the uttered words certain characteristics which must be absent in the allegedly sub-vocal speech. This proves that 'sub-vocal speech' is no speech at all, but is merely a sequence of images of words. Such images appear to be of the character of speech because given the desire to produce speech the sequence can be effortlessly converted into corresponding audible speech as for producing such speech we do not require anything more than the conditions necessary for producing the sequence of images except of course the desire and ability to speak. We further submit that even if a man loses his ability to speak due to physiological reasons, he can have the feeling that he is involved in inner speech. But certainly no speech can be involved here as he has lost the ability to speak. We

thus conclude that in the situation under reference the alleged sub-vocal speech is nothing other than having a sequence of images of words.[4]

An objection may be raised against our explanation by showing counter-examples of the following sort. It may thus be pointed out that when a person, e.g., a detective, is making deductions and drawing conclusions from speeches made by an interviewee whom he is cross-examining, he is certainly not drawing his conclusions audibly to the interviewee. His thinking then must be associated with some sort of speech at the sub-vocal level, for he has to be aware of his conclusions which greatly determine the questions he formulates and puts to the interviewee in the course of his cross-examination. But it should be noticed that the deductions are all cases of propositional thinking and the sentences capturing such deductions and conclusions are all new to him. This being the case it can never be maintained that these are being remembered by him as he did not have any previous experience of them. Our reply, in short, is this: what we remember in such contexts is nothing other than parts or constituents of the sentence that flashes in the imagination. Their arrangement according to the syntactical rules of the language which make the combination of such given parts a sentence is certainly new and hence it would be wrong to hold that the sentence is being remembered, in its entirety. But for reasons stated earlier it would be equally wrong to take the sentence as the product of a speech act. We would rather like to hold that the arrangement of parts that will make the combination a sentence is effected in some kind of imagination, even though it is not the case that it is given in its entirety in any act of reproductive imagination. It is our surmise that the ways of combining words in the sort of sentence under reference are not in any way different from the ways of doing so in a spoken sentence. This will be evident from the argument defended in the last section. As prepatory to that we shall present, in the following section, our formulation of the conditions of well-formedness and proximity which are considered necessary for sentential understanding.

The Hearer and the Speaker

In Nyaya philosophy, as in many other systems except perhaps the linguistic philosophy of Panini, Patanjali and their followers, semantics is developed as an offshoot of epistemology. Knowing from words in speech is recognized as a kind of knowledge not assimilable under other recognized varieties and the knowledge thus acquired is certainly the hearer's knowledge. The hearer can know what is being asserted in speech only if he knows the meanings of words contained in the speech. This implies that speech must not contain words which are either meaningless or whose meanings are not perhaps known to the hearer.

Following Panini, Gautama (in *NS*, 2/2/58) defines a word (*pada*) as a

compound either of a verbal suffix and a root verb or of a non-verbal suffix and a nominal base. Syntacticality as pertaining to words making up a sentence is thus accommodated in the concept of a word or *pada* as envisaged by Gautama. But Gangesa prefers to treat the lexical entries as words and divides what Gautama takes to be a *pada* or word into two components —one the suffix, and the other the base to which the suffix is to be added. Therefore, the requirement that the hearer must have prior knowledge of meanings of words used in the sentence which is to lead him to some knowledge resolves into the dual requirement that he should have knowledge of the meanings of both the constituents. Here a question arises: can we substitute in place of a suffix a name word having the same meaning as the suffix component? It has been stipulated by Gangesa and many other philosophers preceding and succeeding him that such a substitution will render the resulting sequence completely unintelligible. The following is the most common example cited in this respect:

Ghaṭam ānaya
(Bring the pot)

The sentence is in the imperative mood. The second word (*'ānaya'*) is the finite verb which is also a transitive verb. The first word (*'Ghaṭam'*) is used in the accusative case. The analysis of the two words is as follows:

Ghaṭam: (a) *Ghaṭa* (meaning a pot), and
(b) a non-verbal suffix (meaning objecthood of a transitive verb)

ānaya: (i) root verb *'ā'*+*'nī'*
(meaning to bring), and
(ii) a verbal suffix whose meanings include the invariable element of *voluntas* as presupposed in the concept of agency (in addition to the varying elements related to the concepts of mood, tense, number and person varying with the varying forms of the verbal suffix)

Allowing for the substitution of name words having the same meanings as the suffixes we get the following concatenation in place of the given sentence:

Ghaṭa-karmatvam-ānayanan-kṛti
(pot-objecthood-bringing-voluntas)

It is clear that the hearer cannot have the same understanding from this concatenation as the one he can have from the earlier sequence. It is indeed true that this concatenation may be treated as a mere list enumerating the given items and the hearer also may have a synoptic idea regarding them. But it cannot be regarded as a sentence and this idea also is surely not a representation involving a predicative structure as is discernible in the other type of representation. It has thus been rightly stipulated that if a hearer is to have a belief or predicative understanding on the basis of a sequence of

words the words must be properly declined and conjugated according to the rules of grammatical or syntactical well-formedness. This well-formedness is achieved in respect of a sentence in the Sanskrit language by the right use of appropriate suffixes with appropriate roots or bases. In other languages perhaps well-formedness may be achieved in some cases by the mere order of arrangement of words and it is not always necessary to account for it with the help of certain additional constituents which themselves have definite meaning. But so far as the heavily inflected Sanskrit language is concerned order of arrangement is not enough and we are required to use additional constituents having not only a characteristic conferring syntacticality but also an additional semantic feature of meaning.

In the English language we appropriately change the root verb for using it as a finite verb by adding something to the root verb (e.g., 'to go'/'goes'/'is going') or by making partial or total substitution in its place (e.g., 'to go'/'went'/'to give' /'gave'). We also make changes in nouns for number or in adjectives for degree or in pronouns for number and case. The English language does not provide for changes for different cases in the case of nouns. Cases are indicated mostly by the order of arrangement, and sometimes, if necessary, by introducing prepositions. But cases cannot be indicated in Sanskrit without adding appropriate inflections which have meanings of their own as do prepositions in English.

Borrowing the suggestive word 'finite' from English grammar, we can say that just as no English sentence is permissible without a *finite* form of the infinite verb, no Sanskrit sentence is permissible if it contains a constituent, no matter whether it is the verb or not, that has not been made finite by adding an appropriate suffix to the corresponding infinite root or base.

This well-formedness of finite constituents is not adequate for the grammaticality of a Sanskrit sentence. There is also the requirement of proximity of well-formed constituents that go with each other. It is a fact that Sanskrit grammar is over-permissive in respect of the ordering of the constituents of a sentence inasmuch as it allows jumbling up of constituents. But ideally speaking, the well-formed constituents of a sentence should be arranged in a manner that portrays the mutual agreement of the constituents. As different noun words in different cases take on different suffixes, their adjectives too take on the same suffixes. Thus, even though there is no scope for confusion and no real lack of understandability if a host of different nouns and adjectives are jumbled up, the understanding of the meaning of the sentence would be delayed because of this jumbling up compared to the time we would take if the words were not so jumbled up. If for reasons of literary effect, e.g., as demanded by the requirements of rhetoric and prosody, one deviates from the normal order of words then this delay is adequately compensated. But if no such redeeming consideration is there, the constituents should be arranged according to an accepted pattern as is followed by most people speaking the language.

Vatsyayana and Gangesa give us two examples which support this requirement of proximity in a slightly different way. Our explanation shows the reasonableness of this requirement with the help of the idea of the jumbling up of constituents of a single sentence. We have argued that this jumbling up will not completely block sentential understanding but will cause delay in the understanding, though one can, with some application, decipher the sentence in question and have the desired understanding after reordering of the constituents. Vatsyayana's example (*NS*, 5/2/9), believed by scholars (Tarkabagisa's *ND*, Vol. V, pp. 446-9) to have been taken from the Paninian tradition, lists the following entries:

(i) *Daśa dāḍimāni* [(There are) ten pomegranates]
(ii) *saḍpūpāḥ* [(There are) six cakes]
(iii) *kuṇḍam* (a bowl)
(iv) *ajā* (a goat)
(v) *ajinam* (skin)
(vi) *palalapiṇḍaḥ* (a piece of meat)
(vii) *atha* (then)
(viii) *raurukam* (relating to a special kind of deer)
(ix) *etad* (this)
(x) *kumaryā pāyyam* (the expression speaks of a breast-fed female child)
(xi) *tasyāḥ pitā apratiśinaḥ* [her father is a (thoroughly) old man]

This example is offered by Vatsyayana in illustration of the condition of defeat called *apārthaka* (the incoherent and therefore meaningless combination of meaningful constituents). It may be noticed that entries (i) and (ii) may in themselves be regarded as complete sentences provided we treat (i) as *Dāḍimāni daśa* (literally,) *The pomegranates are ten in number* and we may as well treat this as equivalent to the translation given above). We can equally treat (ii) as *Pūpāḥ saṭ*. Interpreted this way like the entries (x) and (xi), these two also may be understood as sentences. But these may also be understood as phrases or compound words, each containing a noun along with an adjective, capable of being used as nominatives of finite verbs. Going by this interpretation, then, the list contains two sentences [(x) and (xi)], two phrases [(i) and (ii)] all of which contain base words along with suffixes; it also contains those which are merely such well-formed finite words [(iii) to (ix)].

It can be said of this entire combination from (i) to (xi) that it does not yield any connected sense which must characterize a communicable speech, consisting of individual sentences. In classical Nyaya philosophy a demonstrative argument is supposed to consist of five sentences (*vākya*) and they are believed to form a single *mahāvākya* (literally, large sentence), a concept which corresponds to the concept of speech as it is ordinarily understood in the English language.

It is stipulated by Gautama and his commentators that like the members

of such an argument the constituent sentences of a sequence of sentences meant for communicating thought to others must have a connected meaning. Vatsyayana's example clearly shows that though its constituents are meaningful in themselves, it lacks this connected meaning. Of special importance is the pair of the last two entries. If we take the pronoun *tasyāḥ* (her) in (xi) as referring back to the breast-fed female child spoken of in the preceding entry, then the hearer cannot accept as true what is being asserted in (xi), since he knows that the father of such a baby is either a young man or a middle-aged man and cannot be a thoroughly old man who does not perhaps any longer possess the ability to reproduce. This pair in Vatsyayana's list is interpreted by scholars as suggestive of the *yogyatā* (compatibility/coherence) requirement of sentential understanding formulated by later thinkers. It may however be noted that this requirement for sentential understanding on the part of the hearer implies the necessity of a corresponding condition on the part of the speaker to the effect that what is being asserted in a given case does not contradict what he has asserted earlier or what is contained in the informational background shared by the speaker and his hearers. This may not, however, be binding if the speaker wants to achieve some literary effect, e.g., in the case of (x) and (xi) the speaker may hint at adultery of the mother. We shall now pass on to the other entries in Vatsyayana's list.

We have noted above that we cannot get an idea of any connected meaning from all the entries taken together. Even if we exclude the last two entries on the consideration of compatibility requirement and concentrate on the first nine entries, we cannot arrive at any connected meaning. We may further exclude the first two entries, for in some kinds of interpretation they can be shown to be severally meaningful because of a discernible predicative structure, though because of their lacking any noticeable affinity the two taken together do not yield any idea of connected meaning. Thus we may now concentrate on items (iii) to (ix). Except for the semantically poor and hence tenuous claim of the eighth entry, *raurukam* (relating to a deer) as immediately followed by *etad* (this) which may yield '*Raurukam etad*' (This relates to a deer), the entries under reference presented in the order as listed are such that neither any one of them nor any combination of them in the given sequence without any re-ordering will yield any sentential understanding. But this complete blockade interpretation has to be given up and can be replaced by privation interpretation if we further eliminate the third and fourth entries and concentrate on the remaining ones. The end-game position is now as follows:

(v) *ajinam* (skin)
(vi) *palalapiṇḍaḥ* (a piece of meat)
(vii) *atha* (then)
(viii) *raurukam* (relating to a deer)
(ix) *etad* (this)

The sequence permits privation interpretation inasmuch as if we further leave out the sixth and seventh entries and consider the fifth, eighth and ninth entries in that order or in any other sequence privation will give way to perfect sentential understanding. For we now have the following arranged in the normal ordering:

Etad ajinam raurukam
[This skin is that of a deer (of a special type).]

It is evident that the transition from blockable or privation to sentential understanding is made possible by bringing the entries yielding connected meaning closer to one another through elimination of the entries that were blocking it. Later philosophers call it the *āsatti* (proximity/contiguity) condition. Unlike the example we have so far considered from Vatsyayana the one that is most frequently cited in later literature is as follows:

Girir (1) *bhukto* (2) *Vahnimān* (3) *Devadattaḥ* (4)
[The hill (1) has eaten (2) has fire (3) Devadatta (4)]

The sequence is the result of jumbling up the constituents of two sentences and because of this jumbling up sentential understanding is denied to the hearer. But if we interchange (2) and (3) we get the following two sequences:

Girir (1) *vahnimān* (3)
(The Hill has fire)
Bhukto (2) *Devadattaḥ* (4)
(Devadatta has eaten .....)

Clearly the original blockade, unlike in the case of Vatsyayana's total sequence, was totally a case of privation which gets removed by proper ordering according to the condition of proximity requirement. In fact the very formulation of this condition presupposes the possibility of sentential understanding if the right constituents are brought closer to each other. Therefore, taking into consideration the passage from unintelligibility to sentential understanding we can say that the latter can be achieved by observing the rules of proximity condition and is delayed till the rules have been observed. And if there is no scope for observance of such rules in respect of any group of entries and thus no viable sequence results leading to some sentential understanding, we would argue, the given sequence does not have any relevance from the point of view of this condition. Therefore, whenever there is scope to apply the rules of proximity requirement what is really involved is not total blockade but only privation.

We would like to mention again that proximity requirement will certainly apply in some typical cases where the members of a sequence are members of a single sentence. Thus, if in a (Sanskrit) sentence the nominative of a transitive finite verb is a word in the neuter gender and singular number and the word for the object is also in the same gender and number, then if

both the words end with the first vowel '*a*' of the language and each of them has adjectives, the bases of which similarly end with the vowel '*a*', we would fail to get sentential understanding if the words are all jumbled up. Consider the sentence *Puṣpasya śubhram rūpam patrasya haritam varṇam nānudhābanti*. It can generate clear and distinct understanding. But the hearer would be confused if the constituents are jumbled up in the following way: *Nānudhābanti patrasya puṣpasya śubhram varṇam haritam rūpam*. The upshot of our argument then is this: where there is scope for application of the rules of proximity requirement what we really achieve by applying the rules is avoidance of delay. And this presents us a good methodological principle to the effect that we should be prepared to accept the necessity of such conditions that ensure the advantage of having sentential understanding sooner than would have resulted without observance of such conditions. Thus later philosophrs of the Navya Nyaya tradition prefer to formulate the compatibility (*yogyatā*) requirement in such a way that bare compatibility and not its cognition on the part of the hearer is regarded as an adequate requirement in respect of his sentential understanding. Their view is based on the strategy of avoidance of delay. If it is stipulated that sentential understanding cannot be ensured upon the hearing of a sentence unless there intervenes between speech and understanding the hearer's conviction regarding compatibility, we unnecessarily delay sentential understanding (*Muktāvalī* on *Kārikā*, 83). We want to utilize this very principle regarding avoidance of delay in our account of the relationship between the speaker having a thought and his using language for expressing it. For the present, however, we would suggest in a general way that this non-delay principle can be utilized in the formulation of all the three requirements, viz., well-formedness, proximity and compatibility. B.K. Matilal, in his *Logic, Language and Reality* (p.405) refers to two views among the Naiyayikas. According to some among them knowledge that such conditions have been fulfilled is necessary for sentential understanding, while according to others, the fact that such conditions have obtained is adequate.

It might, however, be argued against us that awareness regarding proximity has to be regarded as necessary. In the cases of jumbled up constituents that have been considered by us it is sometimes possible that the hearer can actually have sentential understanding without any re-ordering according to the requirements of proximity. Since proximity is lacking in such cases, sentential understanding must be due to an awareness regarding proximity. Such a situation then clearly shows the weakness of the principle of avoidance of delay and we shall have to presume that an idea that proximity is there is to be recognized in a general way as a necessary condition for sentential understanding in all cases on the basis of our finding in this case.

Our reaction to such a hypothesis is as follows. First, a false belief has been shown to be necessary for the knowledge associated with sentential understanding in the situation under reference. But we take this to be

an inelegant epistemological explanation which bases knowledge on falsehood. Second, we would consider the following to be a matter of conceptual advantage in respect of an analysis of sentential understanding. If we can offer an acceptable explanation of the majority of cases of sentential understanding in accordance with the principle of avoidance of delay and thus by not admitting awareness of proximity as a necessary factor, then the recalcitrant cases have to be tackled consistently with this explanation. Our alternative proposal is this. When a hearer arrives at the right sort of sentential understanding of the speaker's jumbled-up sentence what really happens is that he rearranges the words in the right order very quickly and then comes to discern a connected meaning. It is true that this rearranging implies delay in understanding. But this is unavoidable because jumbled-up words do not and cannot generate it. One might say that the hearer comes to know something from the speaker's words and not from what the hearer rearranges in his mind. We would point out in reply that what are being rearranged are the speaker's words and therefore the hearer knows what he knows on the basis of these. That this sort of process is involved in other types of cases is unavoidable. Consider the familiar Nyaya thesis of the supplying of words (*padādhyāhāra*) in the case of elliptical sentences. When a speaker utters only the word '*dvāram*' (door'), the hearer supplies the word '*pidhehi*' ('close') and then arrives at sentential understanding. Or consider again cases when a speaker is uttering a word/words in his sentence wrongly, or when some word/words have been wrongly spelt in a written sentence. If the hearer/reader can get at the right meaning in such situations, he makes the correction himself. If, thus, knowing from words is considered possible in such cases, there is no reason why our explanation cannot be accepted in the case of the jumbled-up sentences under reference.

We shall close our discussion of the requirements of well-formedness and proximity with an innocent observation. No matter whether the mere fact of the fulfilment of such a condition or awareness regarding it is considered adequate, the speaker himself must not violate these conditions in framing a sentence if he wishes to be rightly understood. Therefore, there cannot be any denying of the fact that, ideally speaking, the speaker himself must fulfil these conditions in making a speech. There could be exceptional cases when the speaker may not, through inadvertance or by design, observe the rules connected with these requirements. But given that he knows the rules and is competent in the matter of using the rules, his speech must be characterized as one that fulfils these conditions. The question arises: how is this done? I believe the question is legitimate and important. Philosophers of different ages and of different countries have addressed themselves to such a question and have tried to offer solutions from their own general philosophical standpoint. It may be confessed here that there is not much discussion in the Nyaya literature regarding these problems. But keeping in mind what they have said on similar problems and remaining true to the general

empiricist position of the Nyaya philosophers, we would outline a brief answer to the problem in the next section. This will have a bearing on the question of how thought is related to language and also on 'sub-vocal speech' which we have discussed in the preceding section.

How Does the Speaker Make His Speech?

We have earlier showed our sympathy for the position that thought is intershot with language and proposed to investigate how exactly thought may be said to be connected with language. In the section preceding the last one we have also considered the claims of the hypothesis of alleged sub-vocal speech; and we have come up with the suggestion that when thinking is not actually connected with audible speech but seems to be related to some inner dialogue, what are really involved are images of words. But we found that the relation figuring in thought between the terms actually thought of did not perhaps figure, at least in some cases, in any antecedent thought and hence the question of its figuring as an image in 'sub-vocal speech' does not arise at all. We had proposed there to take up the question again after a discussion regarding the conditions of well-formedness and proximity. It has been argued by us in the last section that the traditional formulation of these conditions has been made in Nyaya from the point of view of the hearer's sentential understanding since hearer's knowledge of these conditions is often insisted upon. It was further remarked that these conditions presuppose that if a speaker's speech is to lead to the hearer's understanding of his speech then the speech itself must possess features corresponding to the requirements of well-formedness and proximity.

We now propose to offer answers to the questions raised earlier in the light of our findings in the last section and by remaining as close as possible to the general empiricist position of the Naiyayikas. We would like to record here an admission to the effect that we may have to suggest, at places, a few innocent changes which are at variance with known Nyaya positions held by many important philosophers of the school. We do not, however, think that our suggestions are inconsistent with the general empiricist stand of the system. The questions that engage our attention here did not perhaps attract the attention of the earlier Naiyayikas. If they had addressed themselves to such questions seriously they, too, would have recast their theory in some way or other, perhaps not in our faltering and unsure way but in a much more characteristically authentic manner. We hope that others will improve upon our answers and thus make advances in Nyaya philosophy. The methodology that we shall follow is quite simple. We shall frame the conditions for the making of speech by a speaker in the dual image of the conditions framed in the tradition of Nyaya philosophy to account for the hearer's sentential understanding. Since it seems reasonable to regard such conditions as two sides of the same coin, we would like to change the

traditional explanation of the hearer's understanding if it appears inelegant or inconsistent when viewed from the point of the speaker. With these prefatory remarks we may take a look at the traditional answer to the question, how does a hearer come to have an understanding from a sentence he hears. We shall offer our analysis keeping in mind simple sentences of the Sanskrit language.

A Sanskrit sentence, according to the Naiyayikas, may or may not contain a finite verb or adjuncts to it. Again, it may or may not contain sentential connectives like '*ca*' (and), '*vā*' (or), '*tu*' (but), etc. which are called *nipāta* in Sanskrit. We have earlier seen that the well-formedness of sentential constituents can be achieved only by the use of appropriate suffixes which thus form parts of a sentence. Verbs may sometimes be preceded by prefixes called *upasarga* in Sanskrit. But a sentence must contain at least one *nāma pada* or name word and this is better understood negatively as that word which is different from other types of words mentioned here. It corresponds to the noun, adjective and pronoun of the English language. Now the important point is that a hearer cannot arrive at the meaning of the sentence the words of which he hears unless he knows the meaning of each word, no matter to which category it belongs. At least the nominal bases and verbal roots if not words of other types, according to the Naiyayikas, are to be understood both denotatively and connotatively, i.e., as standing for things, events or actions which are taken as identified by specific properties. But had this been enough, understanding the meaning of a sentence would have been nothing but a synoptic awareness of discrete meanings of sentential constituents which are products of root words and suffixes. In sentential understanding the hearer also grasps the connection between the meanings of several constituents used in the sentence. The implication then is this. There is no separate constituent in a sentence that stands for the connection that the hearer takes to be obtaining between the meanings of the constituents of the sentence.

According to the Prabhakara Mimamsakas, words or constituents of a sentence stand not simply for the terms but also for the relation of which these are terms. These philosophers thus maintain that though there is no separate word in a sentence only for the relation, the words that stand for things which are understood as related in the sentential understanding must be taken as capable of representing these things as terms of some relation. In other words, the words do in some way signify the things as well as the relation which is understood as obtaining between them. Since relation is very much a part of sentential meaning which is the function of the meanings of the words contained in the sentence and as there is no word in the sentence specifically for the relation, it would be natural to suppose that the words for things are also words for their relation.

The Naiyayikas react to the Prabhakara stand in a very cautious manner. In a sense they accept it and in another sense they reject the thesis and

naturally enough they do both by formulating the problems in their own way. Credit goes to Gangesa for his insightful clarification of the issues involved. The Prabhakara thesis has an air of vague generality, for it is held by them that the words for things also represent *some type of relation or other*. But notice that no vagueness is involved when the self-same words are taken to represent the specific things they actually stand for. Thus if words are words for specific things, then if they are also words for relations they should be able to represent specific relations. But this cannot be true, for the same word can be used in indefinite number of sentences which assert different types of relation distinct from each other. How then, even according to Nyaya, do we come to know of relation from a sentence that does not contain any word for the relation/relations understood in that context? Before we state and explain the Nyaya answer to this question let us note the following in this connection.

Philosophers in India follow a general methodology in fixing the meanings of words. Since there cannot be any question of a word having meaning except in the context of a sentence and as a sentence which is nothing but a sequence of words necessarily generates an understanding about relationship between terms, the words contained in the sentence must allocate between themselves as their meanings the various contents of the sentential understanding without any remainder whatsoever. Even the Naiyayikas admit this in a sense. According to them the meaning of a word is to be judged from the desire—be it of the omniscient speaker or of a modern finite mortal—to the effect, let this word generate an understanding (*bodhayatu*) of this object. But understanding is necessarily relational in character and hence it is a part of the desire that the relation figures as a content of that understanding. In fact, Gangesa presents this as an objection against him by the Prabhakara philosophers and concedes that the objection contains a substantial point that cannot be denied. But he hastens to point out in reply that the meaning as constituted by the relation may be regarded as a causal determinant only as it is in itself and not as known (*Satyametad. . . Svarūpasatī sā (śaktiḥ) vāpriyate na tu jñātā, TCM-Śabda*, p. 538) Gangesa is in fact paying back the Prabhakaras here in their own coin. According to the Prabhakaras generally, the particular, though an object of sentential understanding, is not a part of the meaning of any word. Gangesa enunciates, on behalf of the Prabhakaras, a principle of the following form (*Jñātā vācikā, ajñātā avācikā—TCM-Śabda*, p. 539). Nothing should be taken to be a part of meaning if its knowledge is not necessary for the sentential understanding. Utilizing this principle to their advantage these philosophers argue that particulars cannot be a content of the knowledge of the meaning of a word since the particulars that may have mattered when the meaning of a word is learnt by an individual are certainly not the ones which figure in his understanding from sentences containing that word he encounters in his later life. Therefore, particulars do not constitute that

meaning of a word the knowledge of which matters to the hearer in respect of his knowledge from sentences containing that word. Gangesa and his followers who take particulars and their universals as constitutive of the meaning of a word hold that both at the time of acquiring knowledge of the meaning of a word and at the time of gaining understanding from a sentence containing that word all the particulars having that universal figure in the knowledge of an individual through a kind of synoptic perception (through what the Naiyayikas call *sāmānyalakṣaṇāpratyāsatti*). No particular is such that it did not figure in the knowledge of the meaning of a word which the person acquired in his childhood. And the particulars that figure in sentential understanding in his later life are also contents of his knowledge of the meaning of the word and hence are constitutive of it.

As we have said earlier, Gangesa is here paying back the Prabhakaras in their own coin. He raises the issue whether the relationship into which the denotation of a word enters in the hearer's sentential understanding is the same that figured in his knowledge when the hearer first learned the meaning of the word. Since, unlike the particulars, the relations do not exemplify any universal, there cannot be any question of having a synoptic presentation of all relevant relations at the time of learning the meaning of a word. Therefore, relations are not such that they are contents of the knowledge that helps the hearer in arriving at sentential understanding. Gangesa is here following the supporters of the view known as *Kubjaśaktīvāda* held by a section of the Prabhakara philosophers. According to this diviant view particulars constitute a part of the meaning of a word though knowledge of this meaning is not causally necessary for the hearer's understanding. Like other Prabhakaras they also hold that knowledge of the part of the meaning of a word as constituted by the universal is adequate for the purpose. Following the supporters of this view Gangesa also holds that though meaning of a word is constituted partly by the relation previous knowledge of this is not causally necessary for his sentential understanding.

We shall have to offer, then, some other answer to the question how we come to know of relations in sentential understanding. Sentential understanding, we have seen earlier, is due to, among others, factors like well-formedness, proximity and compatibility. We have already discussed the arguments for admitting these factors as necessary. The Naiyayikas argue that since other philosophers also endorse this analysis and as words cannot be regarded as standing for the relation that figures as a content of sentential understanding, it would be a matter of parsimony if any one of these requirements can reasonably be taken to account for understanding of the relation between denotations of words. As the compatability requirement presupposes that what are considered compatible or incompatible are themselves cases of sentential understanding comprehending a relation or its opposite, this cannot serve our purpose. Similarly, the condition of proximity has scope for application only in respect of jumbling up finished words

or what we have called finite constituents of a sentence, each one of them comprising a base word and a suffix. These two components themselves are meaningful and their product, i.e., a finite constituent, generates understanding involving a relationship and naturally enough proximity as defined here does nothing for the understanding of this relation. Thus, the proximity requirement also cannot be considered relevant for our purpose. By exclusion, then, well-formedness may be taken to be a viable alternative, if found satisfactory otherwise.

We have seen earlier that well-formedness is a syntactic or grammatical requirement. There are, of course, two aspects to linguistic well-formedness: the well-formedness of every finite constituent as well as the well-formedness of the total sequence called the sentence comprising a group of such constituents. Just as in propositional logic a compound proposition containing components which themselves are compound propositions contains a major sentential connective in addition to the other connectives involved in the component compound propositions, any sentence in Sanskrit (barring the exceptional cases of single-finite-constituent sentences) must be such that a major relation is understood from it in addition to the other relations represented by the finite constituents themselves. But our comparison should not mislead one to think that there is a sign in the sentence itself for a relation as there is one for a sentential connective. We have remarked earlier that there is no word for relation and therefore no sign occurs in the sentence either for the principal relation or for the auxiliary relations. What then is the mark for a relation? Since it cannot be any constituent this cannot be anything other than the sequence called *ānupūrvī* in Sanskrit which characterizes the components of every finite constituent as well as all of them in relation to each other if they do not flout the condition of proximity requirement. This linguistic feature of bondedness as obtaining among the components of a finite constituent and also as obtaining among the different such constituents themselves may be taken, on grounds of affinity, to be the factor responsible for the understanding of various relations that ensues upon hearing a sentence. In a sense this project has some similarity to the approach of logicians when theorems of formal language are made to tally in metatheory with the logically valid propositions of the interpreted system.

As auditory perception of words is necessary for the hearer to arrive at his understanding, the sequence of words as described above also gets noticed. In a sense this is very much a part of the auditory perception of words just as awareness of the sequence of letters of a word is a part of their auditory perception. It matters little whether the bare sequence of well-formed finite constituents of a sentence or an awareness regarding it is taken as the necessary causal factor of sentential understanding. What is more important to note in this connection is that a hearer, if he happens to be a competent member of the linguistic community, will be able to detect

whether any given sentence or any part thereof fails to fulfil the condition relating to well-formedness. This cannot be done unless the sequence that characterizes a sentence is given to the hearer. What is further relevant in this connection is that the hearer knows the rules of well-formedness and is familiar with a few usages illustrating the rules in sentences (uttered by other competent speakers and/or rehearsed by the hearer himself). Unless the hearer is familiar with such usages he will not be able to arrive at any understanding from a sentence even if it actually possesses the feature of well-formedness and the sequence representing it is also given to the hearer. Therefore, the more important causal factor involved here is knowledge of rules and of usages on the part of the hearer. Since knowledge is given an episodic interpretation in Nyaya knowledge about rules must be taken as a state of consciousness the hearer had long before regarding rules and their illustration in standard usages. By making use of the principle of avoidance of delay noted by us in the last section, we would say that it is not necessary that those past states of consciousness be recalled into the mind of the hearer if he is to arrive at understanding of the speaker's sentence. It would be adequate if the residual traces (called *saṃskāra* in Sanskrit) of these past sentences are left behind in the mind and are thus called into play not for producing memory of the past states of consciousness but for the hearer's understanding of the speaker's sentence.

An objection might be raised against our explanation that like other forms of non-mnemic cognition, sentential understanding also cannot be said to be generated by residual traces. It is only memory or mnemic awareness which can be generated by residual traces. Therefore, the analysis that has been offered cannot be accepted. But our question here is, what is the harm if residual traces are shown to be necessary in respect of non-mnemic awareness? The Nyaya system of epistemology, it may be pointed out by our objector, envisages that the sense-organ is necessary only for perception, knowledge of pervasion only for inference, knowledge of similarity only for knowledge by comparison and knowledge of words only for the hearer's understanding. The objector may thus generalize that residual traces should be taken as necessary only for memory and not for any other kind of non-mnemic awareness. Our submission, however, is as follows. It is, of course, necessary that every effect (of a kind) must have an exclusive set of causes which in their totality cannot be taken to be generative of an effect of a different type. But even if we concede the demand that a member of such a set is an exclusive causal factor in respect of a specific kind of effect we can say that an earlier primary cognition *qua* primary cognition having the entire content of memory as its content can be shown to be such an exclusive causal factor in respect of the phenomenon of memory. This point is accepted by all and hence it should not be considered that residual traces are causally necessary only for memory.[6]

If our hypothesis that residual traces may be causally necessary for non-

mnemic awareness is accepted we can show its utility for an analysis of the factors necessary for the hearer's understanding emerging from his hearing of a sentence. He cannot have the understanding without hearing the words constituting the sentence. Similarly, he cannot have it unless he has knowledge of the meanings of words which he has actually acquired in his boyhood. The traditional explanation envisages a causal chain like this: Audition of words (x)—memory of things the words stand for (y)—sentential understanding (z). The causal analysis follows a model of x's producing z by producing y. x thus produces both y and z, which two again are causally related. Knowledge of meanings of words which the hearer acquired in the forgotten past is taken as episodic and thus has now passed out of consciousness. This knowledge of meanings is taken as operative through the medium of residual traces in generating here the factor y (memory of things words stand for). Since knowledge of meaning is now absent from the canvas of consciousness the objector who denies the role of residual traces for the hearer's understanding cannot take it to be causally necessary for sentential understanding. But this appears to do injustice to our robust belief that the hearer would not have been able to arrive at his understanding of the meaning of the sentence if he lacked knowledge of the meanings of the words of the sentence he has heard. Thus instead of the traditional approach of making the knowledge of meanings of words a causal condition of y (memory of things) which itself is causally necessary for z and thus disqualifying it as a causal factor in respect of z, we should so try to reformulate the causal law that the knowledge of meanings of words may be regarded as directly causally necessary for z. Our hypothesis showing the causal relevance of residual traces for non-mnemic awareness is of utility in the matter of such a formulation of the causal relation involved herein.

We have seen earlier that the primary cognition, though separated by a long gap, is taken as causally necessary for memory as residual traces, which are taken to be continuing, span the gap of time lying between the original cognition and its reproduction in memory. But though memory is thoroughly reproductive and the hearer's understanding is not so, we would take both of them as effects for the origin of which residual traces are necessary. Thus the bits that appear as terms of the relation cognized in that understanding, we would hold, are given to us through the operation of the residual traces. Our knowledge of meanings of words is knowledge about the relation between a word and its meaning and when one of the relata of this relation (i.e., the word) is given to the hearer in audition the residual traces bring to him the other relatum by abstracting from that relationship not so much as an image in memory but directly as a term of new relationship showed by the sequence of words uttered by the speaker. Knowing this new relationship is not, however, a case of reproductive awareness and is recognized as a distinct kind of primary cognition because

of its essential non-reproductive character. Even the traditional analysis concedes this point. For, according to it, though the terms of the relationship are first given to the hearer in memory, due to the joint factors of audition of words and excited residual traces relating to the meanings of words, these terms when known as terms of the new relationship figuring in the hearer's understanding are certainly known as terms in a non-mnemic or primary awareness (*anubhava*), called *śābdabuddhi* in the literature. Therefore, if the givenness of a term in such an awareness via memory which presupposes the operation of residual traces does not make the term a reproduced bit of content, then we do not see any danger of its being such a reproduced bit, if the term is taken to have been given in the hearer's understanding directly by the excited residual traces themselves.

It might be objected that our explanation will disqualify the audition of words as a cause of the special kind involving double causation. According to the traditional analysis, audition is involved in double causation, for it first produces memory of meanings and then, when joined by it, produces the hearer's understanding. There is, however, no scope for such an analysis in our explanation inasmuch as the residual traces which are taken by us as causally necessary were produced not by the audition of words but by the knowledge of meanings of words acquired by the hearer long ago. The objector might continue to argue that in the absence of double causation involving audition of words we would not be able to say that the hearer's knowledge is due to audition of words through its intermediate causation. But this practice is followed in Nyaya for distinguishing one kind of knowledge from another and also for defining mediate knowledge in general (as distinct from perception) as that knowledge which some other cognition produces jointly with an intermediate factor produced by this very other cognition. Our humble reply to the point is as follows.

The objector's scheme of causal analysis presupposes its utility in offering definitions of the phenomenon whose causal analysis is being offered. Since definitions make use of exclusive (*asādhāraṇa*) features, causal analysis has been given by such philosophers in such a manner that the causal conditions of a phenomenon include at least one such feature. In fact, the approach can be traced back to Gautama himself who sought to define perception, if not other varieties of knowledge, by reference to an exclusive causal condition. But the methodology of definition underwent changes in the course of time. Thus even Udayana, in his *Lakṣanāvali*, followed a different method as he often defined the concepts of Vaisesika ontology by reference to universals even where satisfactory causal definitions could probably be offered.[7]

Even if it is in order to offer a causal definition of a concept it is hard to see why reference to the scheme of noted double causation should be invariably made. Gautama, Vatsyayana and Uddyotakara did not do it. In fact, they used to pick out the causal condition to appear last on the scene as one such exclusive condition. What is more, according to

Gangesa and his followers this procedure has to be abandoned in respect of the definition of inferential knowledge. The familiar definition of it involving double causation enlists memory of pervasion (*vyāptismṛti*) and its product (*parāmarśa*) which is a kind of cognition of the subject of inference as having the probandum known via memory of pervasion as pervaded by the probans. The Naiyayikas envisage the possibility of such a composite cognition on the authority of a statement by a reliable person. They further grant that such a composite cognition may lead to inferential knowledge. The implication then is that inferential knowledge is possible without a separate memory of pervasion; the composite cognition on the basis of which the inferential knowledge emerges does, of course, include an awareness of pervasion. Such a case clearly rules out the possibility of a definition of inference involving double causation. And if the point is conceded in respect of inference we see no harm if our explanation of the causal process involved in the hearer's understanding does not make room for its causal definition by reference to an analysis involving double causation. Our explanation not only provides for a less complicated analysis but also gives a more simple account of the hearer's understanding compared to the account given by the traditional point of view. Thus, consider the sentence:

Janakaduhitā Sītā Rāmasya patnī āsit.
(Sita, the daughter of Janaka, was the wife of Rama.)

The Sanskrit sentence contains five finite constituents each one of which represents a blend of a base word and a suffix. Since both the base and the suffix are assigned separate meanings, these meanings, according to the traditional theory, are to be recalled in the mind and their relationship also is to be grasped because of the presence of the relation of immediate succession or *ānupūrvī* in which the two have been presented in the hearer's audition. Every finite constituent when registered in hearing thus generates two memories and another separate state of relational understanding in which the two meanings are understood as related. Since there are five such finite constituents in our sentence there will take place in appropriate succession ten such cases of memory and five such cases of relational understanding, requiring a total of fifteen moments, for no two states of awareness can take place at the same moment. We are not taking into account the time taken for hearing the words, for that must be allowed whichever alternative is accepted. But the traditional account cannot fix the moment following these fifteen moments as the moment in which the hearer's understanding of the meaning of the sentence as a whole emerges. We shall perhaps allow a necessary time segment for the relational understanding covering the agreeing constituents some one of which is to be regarded as the noun and some others as its epithet/epithets. In the sentence under consideration, the first two words are related this way.

For an understanding of the relationship of meanings of such agreeing constituents and also for the understanding of the sentential meaning as a whole, an equivalent of the original audition of words has to be repeated. Thus, Gangesa points out in his *Tattvacintāmaṇi* (*Śabdakhaṇḍa*, Vol. I, pp. 292 & 328) that the cases of discrete memories of meanings of components of finite constituents and cases of partial relational understanding exhaust the efficacy of the linguistic entities, for, it is presupposed that once a base or root word/suffix gives rise to the memory of what it stands for and its audition has acted as an instrument in generating some relational understanding it becomes powerless in generating any other case of such a memory or relational understanding. Therefore, in order for the hearer to have understanding of the meaning of the sentence as a whole, e.g., that of the sentence under consideration, the hearer must have before him the constituents given again in a grand memory about words. Such a memory, according to Gangesa, has to be a synoptic one comprehending the images of all the words and their sequential order along with the images of the relations comprehended earlier in piecemeal fashion. In the case of the sentence under consideration this synoptic memory can take place only after at least such seventeen states of awareness, ten cases of memory and five cases of relational understanding involving the meanings of the roots and suffixes of the five finite constituents, and one more synoptic memory comprehending the images of the first two finite constituents and relations represented by them, and that of the understanding about the relationship between the terms represented by the first two constituents. Only after the second grand synoptic memory, comprehending the images of all the constituents and of all relations figuring in all earlier relational understandings, can the final understanding about the meaning of the sentence as a whole can emerge. This picture, to be frank, is extremely clumsy compared to the accounts suggested by our analysis which privides for the origin of understanding of sentential meaning by a single stroke if the hearing of the finite constituents is there and is aided by appropriate residual traces. This point of view, unlike that of the traditional analysis, can also do justice to the principle of non-delay defended by us earlier. This then clinches the issue in favour of our point of view.

Now that we have been able to offer an acceptable account of the hearer's understanding, we can, consistently with this, offer an account of how a knower can express his thought in language. Let us recall that the account must cover not only cases of audible speech but also cases of alleged subvocal speech or inner dialogue wherein the knower seems to speak to himself. We would also utilize this opportunity to take note of the fact that according to Gangesa, the images of words can do the job for words as he wanted to have it done by accounting for the hearer's final understanding of the sentential meaning as a whole from replicas of words given through repro-

ductive imagination in the grand synoptic memory just noted by us. We shall make use of this in giving an account of how thought is related to language and not of how language generates knowledge.[8]

Let us pick up the thread from the detective's story. We have earlier referred to a detective's deductions instantly drawn on the basis of his known facts and also from the answers he gets to the questions put by him to an interviewee in the course of his cross-examination. Since the detective has to keep things to himself he cannot recite the deductions audibly to the interviewee and since he himself has to be sure of his deductions, these are to be given to him as embedded in language. But since speech as we want it to be understood is necessarily audible speech, the detective was then engaged only in some inner dialogue involving sub-vocal speech. We have argued in the section preceding the last one that what are really involved here are images of words as they flash in the imagination of the detective. A question has been raised there to the effect that though the words which clothe the detective's thought may all be from the stock of words acquired earlier by him, the relations that figure in his deductions were not given to him in any of his thoughts and, therefore, the question of their figuring in his imagination does not arise at all.

It is indeed true that the sentence that captures the detective's thought was entirely new to him and is not one he encountered earlier. But from what we have discussed a little earlier regarding the way the condition of well-formedness generates relational awareness on the part of the hearer it should be clear that the question of having an image corresponding to the sign for relation makes no sense. We have seen that there is no word or sign in the sentence that stands for the relation. Borrowing a suggestive word from Wittgenstein we have said that the sequence of words in the sentence if it is as is required by the condition of well-formedness, accounts for the relation figuring in the hearer's understanding. We have further seen that the condition of well-formedness must also be satisfied by the speaker's sentence, for unless it is well-formed the occasion for the hearer's noticing it and thus coming to have an understanding of the relationship will not arise at all. Therefore, whenever a speaker arranges words in a sentence he must do it by observing the rules of well-formedness. We have also seen that unless the hearer himself knows the rules and their illustration in standard usages he will not be able to detect the lack of well-formedness in a sentence in case it is ill-formed. Since every speaker is also a hearer and every hearer is also a speaker, two sets of rules of well-formedness need not be postulated. Hence, when a speaker arranges words in a sentence for audible speech or for inner dialogue involving images of words at the sub-vocal level he will have to observe the rules of well-formedness for manipulating the words for proper placement in the sentence. By appealing to the principle of avoidance of delay and also to the principle of parsimony we would like to hold that memory of these rules and of their illustrations is unnecessary and

that the residual traces of past learning are quite adequate for the speaker to properly handle and arrange the materials of his speech and for the hearer to detect well-formedness or its opposite in a sentence.

If a mere concatenation of ill-formed constituents cannot generate the hearer's relational understanding and thus the orderly sequence obtaining between well-formed constituents is necessary to *show* the relation to the hearer, we can, by parity of argument, expect that the speaker can put that sequential orderliness in the finite constituents themselves and also in their combination in a sentence only if he has a vision himself of the relation which his sentence can show to the hearer. In other words, as well-formedness can generate relational understanding on the part of the hearer, a qualified awareness about such a relation obtaining between relata enables the speaker to arrange the materials of his speech in a well-formed manner. It is because of this fundamental epistemic affinity that a sentence embodying a proper arrangement of well-formed constituents can be justifiably taken as capable of generating the hearer's relational understanding. The thesis defended here accords primacy to awareness of relation when we look at things from the point of view of the speaker. At the same time, it accords primacy to language when we look at things from the point of view of the hearer. But these are only two ways of looking at the relation between thought and language. From what has just now been stated and from what has been recorded in the preceding paragraph we can understand how the detective in our story comes to arrange the images of words capable of being used as finite well-formed constituents of a sentence in his imagination. If he has an awareness of a relation and if the residual traces of his learning regarding the rules of well-formedness are called into play by his relational awareness, the detective can produce a sentence with the help of the images of words. What we have said about the detective's thought being clothed in language at the sub-vocal level is true of the speaker's expressing his thought in speech. We shall dwell on the point a little more elaborately.

Whenever a person comes to know of a thing as qualified or as related, i.e., whenever he comes to have a propositional belief, he will, in the immediately succeeding moment, encounter in his imagination a sequence of images of finite constituents composed by him from appropriate bits and arranged by him in the proper order following the rules of well-formedness and proximity. In his acts of so composing and arranging he is certainly guided by the residual traces of his previous knowledge relating to these requirements as well as by those residual traces that rulate to the bits to be composed in finite constituents which are to be arranged in a standard order of arrangement in relation to each other. As the sequence of meaningful units of a sentence shows to the hearer the relation to be grasped in his understanding, so the speaker's propositional belief leads the speaker to produce the sequence of meaningful linguistic constituents capable of generating a similar relational understanding in some hearer or other. But this

propositional belief, or what is more frequently referred to by the students of Indian philosophy as qualified awareness, is analysable into various elements as related. Residual traces corresponding to these elements supply the meaningful words in imagination and the speaker's present awareness of the relation guides the arrangement of words. Since a knower does not always use audible speech we would like to hold that even when audible speech is absent, a sentence flashes in the imagination of the knower in the context of propositional belief. We would rather like to make a stronger statement to the effect that even when the speaker produces an audible sentence he is already in possession of a sentence given in his imagination. Such a hypothesis seems to have at least the merit of uniformity. If in situations which are referred to by some as cases of sub-vocal speech or of some kind of inner dialogue thought has to be taken as associated with some sentence given in imagination, then also in cases involving audible speech postulation of a sentence being given in imagination makes the two cases similar. And we can say that *thought is necessarily intershot with language in this sense.* This interpretation cannot, however, be offered if such a postulation would seem inconsistent with audible speech. But is that really the case? If the hypothesis of sentences figuring in imagination is given up in situations of audible speech, one will have to hold that qualified awareness is directly instrumental to the production of speech. But suppose that a sentence is a long one and the speaker takes some ten moments to utter it. Since, like other states of cognition, a qualified awareness is episodic in nature and as a state of cognition is held to be transient in character and thus is believed to have a span of only three moments, when the speaker produces the complete sentence at the tenth moment the state of his primary cognition has long elapsed. The state of cognition is then only a remote and not an immediate antecedent in relation to the complete audible sentence in question. Hence, the state of cognition cannot be regarded as a causal condition in respect of the audible speech the speaker produces. If, on the other hand, we hold that it is a causal condition in respect of a sentence that flashes in the imagination there will be no such difficulty, for an act of imagination, however complicated it may be, can take place at the stroke of a single moment. Therefore, there is no possibility of the qualified awareness being remote in relation to the sentence of the imagination.

One might, however, raise the question how on our account audible speech can be shown to be possible. Our account, too, will be subject to the difficulties of the other view, for like a state of primary cognition a state of imagination, too, should be treated as transient in nature. Therefore, when a speaker takes a few moments to utter a sentence the sentence that has flashed in the imagination will pass away much before the completion of the sentence. Our reply to the point raised is as follows. A state of imagination is different from a primary cognition in a very significant respect. If the conditions that can generate a given primary cognition are all present together at a given moment and thus generate it, the combination may not persist ensuring its recurrence a number of times. Some philosophers even go to the extent of saying that prior non-being of the effect which is an essential part of that combination ceases at the advent of the effect and thus subsequently renders incomplete the combination. But so far as the sentence of imagination is concerned such difficulties are not that greatly relevant. The imagination involved here is not of the reproductive variety and thus though it is constructive in nature it is not about objects of the outer world. If it were so, the non-productive imagination would have been purely a fiction and our account would not have deserved any attention because of that undependable and vitiating character. But as it is directed only towards the linguistic pictures of the world it has an autonomous content, namely, words and sentences. This being the case, we can even say that because its causes are subjective in nature (residual traces, among others, being the most important factor) and because of the high probability of their continuance and therefore of their sustaining the act of imagination once it takes place, the sentence of imagination may not be that transient in nature. Even if this is not accepted, for the sake of uniformity we would say that the imagination involved here is a kind of primary awareness because of its constructive nature and it can generate a reproductive image of itself. If the continuation of the sentence of imagination is necessary for a longer time we would allow, at least here, that memory begets memory and thus the sentence of imagination, no matter whether it is constructive or reproductive, can be presumed to be there at the disposal of the speaker as long as it can be shown to be useful to him for producing the audible verbal representation corresponding to the sentence of his imagination.

Our thesis that a sentence in imagination necessarily follows an act of qualified awareness, it might be argued, would have the following unacceptable implication. Since according to Nyaya and many other systems of philosophy no two states of awareness can have synchronous origin, at the moment of the origin of the act of imagination embodying a non-audible sentence no other cognition can take place. But this principle seems to have been violated by us and if this goes unprotected many of the views held by the Naiyayikas in their epistemology have to be given up. Thus, an inferential belief is normally held to be causally due to two antecedent beliefs immediately preceding in succession. The first of these two is the mnemic awareness of pervasion which takes place, let us suppose, at the moment numbered one. It is followed at the moment numbered two by the composite cognition called *parāmarśa*. And then takes place, at the third moment, the inferential belief. Now, if every qualified awareness is to be followed by a sentence in an act of imagination, then in addition to *parāmarśa* two acts of imagination (one corresponding to *parāmarśa* and the other to the belief about the pervasion) must intervene between the awareness of pervasion and the inferential belief. The implication then is that the final inferential

belief can take place only at the fifth moment, if synchronous origin is to be avoided. But the model of causal analysis followed in Nyaya requires that what is proposed as a causal condition cannot be such that it passes out of existence earlier than the moment of origin of the effect in question. Hence, if a cognitive state passes out of existence at the third moment from the moment of its origin, the awareness of pervasion passes out of existence earlier than the moment of the origin of inferential belief. This disqualifies the former as a causal condition for the latter and this situation is clearly an awkward one so far as Nyaya is concerned. But in defence of our account we would like to say the following.

It is not our aim to offer accounts of origins of mediate knowledge different from the standard Nyaya explanations. The way out for us may be by holding that the thesis of non-synchronous origin of cognitions should not cover the acts of imagination about sentences of the sort we have proposed. We would say that the thesis under reference has for its scope the usual cognitions about objects and, if one so wishes, also the acts of memories of objects or of introspections regarding cognitions about objects. In fact, while arguing for the atomic size of *manas* in his comments on the *Nyāya-sūtra* (1/1/16), Vatsyayana has illustrated the thesis by reference to cases of perception of external objects. *Manas* as conceived here in the course of this argument represents the Indian analogue of what is called attention in the other tradition as is testified to by our translation of the word '*mano-yoga*' as used in the Indian languages today as 'attention'.[9] The word '*manoyoga*' is a synonym of '*manaḥsaṁyoga*' which contains only the prefix '*sam*' in the middle in addition to the components of the other word. Treating '*manaḥsaṁyoga*' as a substitute of and as an abbreviation of '*indriya-manaḥ-saṁyoga*' as used by Vatsyayana here we can justifiably formulate the issue of non-synchronous origin of cognitions as an issue of attention. Given this, we would argue that when it comes to the question of attending to more than one object we cannot certainly do that. But once a person acquires a belief regarding some object at a given moment his attention can be shifted to some other object at the subsequent moment. And when he is attending to the other object there is no bar, in our opinion, to his having a sentence in imagination as here he is not thinking about any new object. The sentence represents his thinking in the preceding moment when he has already attended to the first object. No fresh attention to that object or to the sentence of imagination regarding it is necessary in the second moment as, we would say, having the sentence in imagination is not having a fresh thought. Such an act of imagination can thus take place along with other acts of thinking regarding objects.

We shall conclude our discussion by noting again that though we have made a few departures from the traditional Nyaya theory we have tried to remain as close as possible to the basic features of Nyaya semantics. This can be appreciated best by taking note of what we have tried to avoid.

Thus, though we have shown great sympathy for Bhartrihari's claim that thought is intershot with language, in our account of how exactly the two are related we have avoided the ways of Sonorous Monism or of the Pansonism of the Grammarians. We have also refrained from resorting to the theory of innate ideas or to the concepts of ability and faculty which are frequently used by philosophers of the other tradition but which are so foreign to our tradition in general and to the Nyaya school in particular. We believe that something more than these negative considerations will show that we are closer to Nyaya than to any other system. We have thus often approvingly explained the positions of Gautama, Vatsyayana and Gangesa and have argued against the doctrines of the philosophers of other schools. In respect of methodology also we have always tried to settle question by following the method of causal analysis so characteristic of the style of philosophizing the Nyaya way. Therefore, whatever little deviation we have made was felt absolutely necessary by us for showing how and to what extent the Naiyayikas can accept the claim of Bhartrihari. This is a new venture and we do not claim any finality. It is for others to show our mistakes (and not the deviations that we ourselves admit to have made). We shall welcome attempts by others to give an account of the relationship between thought and language from the Nyaya point of view by avoiding the deviations we have made and also by not making any other substantial departure from the traditional point of view of Nyaya philosophy.

Notes and References

1. It is usually believed that the Grammarians (and Tantrikas) accept different kinds of *sphoṭa* including *varṇa-sphoṭa*. Thus, even Visvanatha, towards the end of *Śabda-khaṇḍa* of his *Muktāvalī*, refers to the thesis of *varṇa-sphoṭa*. Our explanation is, however, based on the account of the philosophy of the Grammarians as given by a contemporary philosopher, Pandit Avadha Behari Tripathi, in his paper entitled 'Sphoṭatattva-vimarśaḥ' in the 150th anniversary of the Sanskrit College Publication of *Our Heritage*. See pp. 25 and 29.
2. The arguments for qualityhood have been taken from Prasastapada (see his *PDS*, pp. 147 ff.) and for non-eternality mostly from Gautama and Vatsyayana (*NS*, 2/2/13 to 57).
3. I am grateful to D.P. Chattopadhyaya for his helpful comments in the departmental Thursday discussion at Jadavpur University that helped in formulating clearly the substitutionist's stand as presented here.
4. This conclusion seems to be corroborated by the popular usage giving advice to a man about to die for *remembering* the name of his diety (In Bengali—*Iṣṭanām smaraṇ karo.*)
5. The label used for this view is *anvita-abhidhāna-vāda* (related-designatum-theory). An extreme variety of this is known as *kārya* (an action to be performed)—*anvita-abhidhāna-vāda* according to which the relation understood from a sentence essentially involves reference to an action prescribed to be performed. For a discussion of such

a view and its refutation see the Chapters *Kāryānvitaśaktivāda: Pūrvapakṣa* and *Siddhānta* in Gangesa's *Tattvacintāmaṇi-Śabdakhaṇḍa*. See also our summaries of these in the *Navya Nyaya*, Vol. 1 (forthcoming) of the *Encyclopedia of Indian Philosophies* edited by Karl H. Potter. For those who know Bengali we recommend the scholarly work *Vyākyārtha Nirupaṇer Dārśanik-Paddhati* by Mahamahopadhyaya Jogendranath Bagchi.

6. Even an asute logician and philosopher of the calibre of Raghunath Siromoni admits (*Anumāna-Cintāmaṇi-Didhīti*, p. 74) that residual traces left behind by previous knowledge of *viśeṣaṇa* (qualifier) and not knowledge of *viśeṣaṇa* have to be admitted as causally necessary for *viśiṣṭabuddhi* (qualified cognition) as embodied in introspective awareness (*ghaṭa-viṣayaka-kṛtimān aham*) in respect of the object towards (the acquisition of) which one's determination is directed. In other systems also, e.g., in Advaita Vedanta, residual traces are admitted as necessary for some types of perception (e.g., for perception of the illusory object—vide their definition of illusion as a cognition as being due to three causal factors, namely, sensory contact, defect and residual traces) as well as for some cases of mediate knowledge (e.g., residual traces left by one's past perception of co-presence embodying one's knowledge of pervasion (*vyāpti*) and not memory of pervasion is adequate for one's inference—See *Vivaraṇaprameyasaṁgraha*, Vasumati Edition, pp. 221-5). Therefore, what we are arguing for can be shown to have been supported in Nyaya and other systems.
7. See Tachikawa's translation.
8. We are glad to have been lucky to come across such a strategy in Gangesa himself though we were able to arrive at it independently while considering the question of sub-vocal speech.
9. *Manayoga*, when taken as corresponding to attention, should properly be understood as *ātma-manaḥ-saṁyoga*. In perceptual situations *manas* (which is of necessity related to ubiquitous *ātman*) is also related at the other end to *indriya*. Hence, by *manoyoga* or attention we may also cover *indriya-manaḥ-saṁyoga*.

DEDICATION

This paper is dedicated to the memory of Professor Gopinath Bhattacharyya and Professor Bimal Krishna Matilal who were my teachers at Presidency College and Sanskrit College, Calcutta.

Ontology and history

S.S. BARLINGAY
University of Poona, Pune

I

Man as a living being has both spatial and temporal characteristics. His physical body accounts for his spatial characteristics and the fact that he is living shows that he endures in some peculiar way in time for some finite period, i.e. from birth to death. This distinctive enduring tells us that during his life period he is experiencing, reflecting, acting and reacting to the situations present before him. History is the story of such a man. However, if there were only one man in the world, his enduring in time would not be called history. Our concept of history requires an interaction, communication or conflict between more than one man, i.e., it requires a pluralistic universe, a *society*, in which his individuality and particularity would play an important role. Marx talked of the history of society and human conflict but he knew that history could not be a story of an abstract concept like society *qua* society; when Marx talks of society what he means is the plurality of individuals without whom society cannot be formed.

But, if a human being is to act, he requires a certain background, a certain stage, a certain playground. It is partly 'given' to him at the time of birth and partly it is his own construction. In the study of history, therefore, understanding of the world, that is, understanding of man or society in the background of the world, becomes necessary. History is not only happenings or a memory of cross-sections of happenings, it is also reconstructing or interpreting. This reconstruction is done in two stages. (i) The makers of history, while experiencing, reflecting and acting are continuously reconstructing the world. (ii) But the historian is also reconstructing the world although what he does is something that the makers of history are not consciously aware of. The historian, therefore, is an extended consciousness (self-consciousness) of the makers of history. For both the makers of history and the historians, the world is divided into two sets—a set to which they belong and the counter-set against which they act. Man's ego, or the development of man's ego, depends on how big or small his own world or universe is. So, although history is the study of man it tends to become a study of man in a particular clan; similarly, a historian is not necessarily a historian of man, he tends to become a historian of the clan. But whether it is a man in the clan or a clan, it does require the background of the whole universe and the relation of man or society to this universe. I

therefore propose to discuss, in what follows, the concept of the world and the relation of man to this world.

The world with which man's encounter begins from the time of birth is both the astronomical world and the social world. The astronomical world is absolutely objective, consisting of the different celestial bodies in the galaxy and outside. Such a world or universe would exist whether or not man exists. This is the cosmocentric world. But sometimes man's cosmocentric world also increases or decreases depending upon his power to conceive, argue, theorize and perceive. Thus, for an ordinary man, the world may consist of his town or his country. It is this concept of the world which I call geographical. But the geographical concept of the world is only a subcase of the astronomical concept of the world. The geographical concept is, of course, modified by human perception.

In opposition to this astronomical-cum-geographical world, there is the anthropocentric world. The whole human world, i.e. the culture and civilization of human beings, exemplifies this anthropocentric concept of the world. Unless there is human intervention, there would be nothing but some world, some X about which it would not be possible for us to talk. Our very identity or identification starts with naming, and the world that we construct is likewise a human world. This world is certainly objective but is equally intersubjective and it may restrict itself to a person or two, or may partly or wholly overlap the geographical concept which is concerned with the globe, or even transcend the concept and envelop the astronomical concept in trying to measure it and in making calculations about it. However, I may point out that these two concepts are intertwined and cannot be distinguished. As a matter of fact, I must confess that even the anthropocentric world finally sinks in the cosmocentric world, since man and his actions are also part and parcel of this world. Man may create other things but he himself is a part of this world. However, in practice, when we talk of the world, our context is set by *this* 'man's world' and with the growth of his knowledge this world also continues to grow. I may say that the anthropocentric world, which really matters to us, is an evergrowing construction over the astronomical world. In fact, man's history is nothing different from what man constructs on the geographical or astronomical world. That the geographical or astronomical world does not increase or decrease is expressed by the law of physics which states that the quantum of matter or energy in the universe remains constant. What really changes is the meaning of things which exist in the natural world. A chair is a piece of wood arranged in a particular manner. A house is a particular arrangement of stones and bricks. They have a particular use for man. A log of wood and a chair have a different meaning for a beast, an uncivilized man and a civilized man. The meaning or purpose of all such things becomes more important on account of the relationship that man has with things, or rather, the relationship men have with other men and things. In fact, I

may say that it is not the structure which determines the functions of social institutions that man creates; rather, it is the functions which determine the structure of social institutions. This means that the value, meaning or purpose of everything that exists in the world is determined by the use they have for human beings. Their meaning is determined by the relationship between man and man. Thus, the meaning of everything in the world is correlative to the relation of man to man. It follows that, in the final analysis, when we talk of the world, it is not the geographical or the astronomical world, but the world determined by relations amongst men and men, i.e. the world determined by human relations. This anthropocentric world, which is a construct over the cosmocentric world, takes various forms—social and political—and sometimes give rise to states, kingdoms and empires. But it must be remembered that the world with these forms is a function of a certain geographical area and individuals in the form of a community. If there were men on other planets, and if communication between them was as easy as it is on this planet, the human world would have consisted of the different astronomical areas and their human function. The proximity of land and atmosphere and the easy communication on land (or sea) make this world one. Possibilities of faster communication would make parts of the world shrink and come closer, together. But although the parts of the world would shrink, if human relations deteriorate, either on account of the internal conflicts of a society or on account of external conflicts among societies, our human world would break into many. It therefore follows that the nature of the human world would be determined by the types of community man is able to evolve.

Man continuously lives in such a world and also acts as long as he lives. He is walking, eating, breathing, desiring and thinking about the world. Activities like walking, etc., come under doing; desiring comes under willing and feeling; breathing is neither; and thinking is reflecting on all these. In all these activities and happenings, man is continuously gathering experience. If he lives for a hundred years his experience is also of hundred years duration. But this may be an understatement. The memory and awareness he has can take him beyond himself to the experience of previous generations; and, therefore, if he lives for a hundred years it does not mean that his experience is of a hundred years only. On account of this awareness, through his memory and knowing which largely, and at least initially, comes from his doing, he gathers his experience. But in so doing he is selective. While he remembers a few things he forgets many other things and although the forgotten things are parts of his experience he can systematically make a story of only the remembered experience which is, consciously or unconsciously, selective. If this experience of a hundred or more years is to be narrated, it does not require a hundred years. The whole process of storing knowledge seems to be a 'shortening of the duration' of the experience. This 'shortened duration' could even be the logical limit of duration. On

account of this shortening, the history of a hundred or more years could be understood or narrated in a much shorter time. There are two elements in this process: (i) selectivity and (ii) shortening of duration. Both these presuppose that the knower, in his self-reflectiveness, discards a few things and accepts a few other things. Where there is discarding something and accepting some other thing, there is also the activity of judging, which arises in the reflective shortening of duration. Selecting is judging, although every judging is not selecting.

Why does man do all this? I shall not be able to give any philosophical answer to the question, but psychologically this seems to be the case in any activity, whether it is human or animal. We have phrases in our language such as 'bird's eye view', 'looking back like a lion'. They all point to judging. An individual who is born is, so to say, 'walking' throughout his life. Although he is 'walking' to an unknown place or destination, he gets accustomed to the places he has already covered. He is trying to make conjectures of the places he has not visited from the ones he has already covered. He wants to find out whether the 'path' he has chosen is the 'correct' one, whether the path he is yet to lead will take him to the 'village' where he wants to go. Reflecting on all experience is not only judging but also evaluating. In the very process of accepting and rejecting he is evaluating. Not merely that, he is also evolving certain norms. History becomes his guide for further activities, his evaluation becomes a judgement, a critique of his activities; and sometimes his critique is not only a critique of his activities but also a critique of his judgement.

In this effort he has taken for granted that there is some world. The questions 'What is the nature of this world?' and 'How is he related to this world?' gradually assume importance. Is the world, as he perceives it, the real world, or has he merely assumed some such world, or has he superimposed something on the world that exists in its own right? If something is superimposed, how much is superimposed and how much is given? Similarly, in this process the individual discards his role as a third person and assumes the role of a first person. The individual's consciousness now takes the form of self-consciousness. The knower is born. This knower must also be a part of this world. 'Can we separate the knower *qua* knower from the world? What is the nature of this knower?' On these questions will also depend the relation between the knower and the world.

II

I have said earlier that man is continuously experiencing and preserving a part of his experience. Ordinarily it is thought that what is conveyed by this experience is entirely external to him (or the knower). But, man does not simply receive impressions from the outside. He is also continuously evaluating and modifying them. For, he is essentially concerned with action

or what Marxists would call *praxis*. There cannot be an action unless the thing acted upon is theoretically or practically modified. The realists did not take note of this when they conceived the relation between the knower and the world as some kind of external relation, a relation between any two things. They did not realize that perception is not just a print of the object imprinted on the knower. The print is also coloured by the knower. The idealists, on the other hand, also misconceived this relation and, in fact, denied it by confusing knowing with the object of knowing. I feel that when we put this issue in terms of 'knowing' and the relationship between the knower and the object, we unduly 'mechanize' the whole issue. For, the so-called knower is not just a knower, he is simultaneously an enjoyer, modifier, constructor, builder, critic and appreciator of the total situation. These different roles of the 'knower' can be distinguished but not separated. I think it is to the credit of Gaudapāda that he pointed out that instead of using the model of the knower and the known we should use the model of 'Bhoktā' and 'Bhojya'. But usually the activity element in our life is ignored, with the result that the problems we pose are only about the possibility of knowledge, and not about the total experience. It is forgotten that the theory of knowledge is only an element in the total experience-situation. From this point of view, the Vaiśeṣikas were on the correct track. For, their scheme of *padārthas* or categories was an analysis of experience and was not merely concerned with knowing, as in the case of Locke or even Descartes.

If these different roles of the 'knower' are taken into consideration, and if it is accepted that man, in addition to being a knower, is a gestalt or a unified temporal whole of action, his role as a critic and appreciator would be clearer. This role requires that he recognizes that he is continuously modifying that which is given, that he is constructing, creating and superimposing a new world on the given. In this process the role of a scientist (like that of an ordinary man) is somewhat different. He takes this two-track world as a one-track objective world and discovers the laws of this world. These laws, in a sense, are objective, but the frame in which these laws are expressed, or codified, is not necessarily objective. The framework of these laws, since they include concepts, categories and relationships, is man-made. It is not a personal, subjective frame; it is an impersonal, intersubjective one. But there is definitely a difference between something being purely objective and something being impersonal and intersubjective. Again, all the laws of science are not necessarily objective. They are, to a great extent, the laws of man's experience also. However, what is important is that when a man discovers these laws he does not simply stop at that. He also expresses them, codifies them and creates a vocabulary for communicating them. He does this by the process of abstraction, by taking away space and time out of experience. All these activities can be distinguished from the nature of the actual phenomenon that he is handling.

Man's role as a knower and doer or creator requires that he is not just a

passive observer outside the process of creation but that he is a part of the creative process itself. His uniqueness is that he can patiently observe the process and be a critic of it although he is a part of the process. He is a part of the process because he is a product of the process, because he is governed by the cosmic laws. He can be a detached observer because of the awareness that arises in the process itself. It is this awareness which makes him a universe by himself, capable of looking upon the rest of the universe, to which he actually belongs, as different from himself. The formation of his self-identity and alienation or otherness from the rest of the universe take place simultaneously, like the two ends of the see-saw, one going up and the other going down. But what is important is that his otherness or alienation from the rest of the world and the formation of his own identity make the knower different from the known or the given; he is now able to think and know about the rest of the world as an outside observer. This leads to the study of the sciences, history and the theory of knowledge.

But once this happens the knower or the man is able to look at what is given, with or without emotion. In this process, however, he forgets that the whole universe, including himself, is a gestalt of movement and action and the dynamism which is integral to the universe is lost. Of course, although the dynamism is lost, man is able to take away a slice of this universe out of the mainstream and look at it as a proto-universe. He can look at it as a static system of laws or he can also look at it as part of a total process, though segregated from it for practical reasons. This attempt at segregation is the beginning of knowledge and even the beginning of science. Furthermore, this process has also to be communicated to others. This requires a further segregation; it requires looking at the different segments of the process as static points or lines. This leads to abstraction, conceptualization, and universalization. These three are different from one another. But what is important to understand is that what we do in experiencing and understanding, is segregating a segment from the total process. Similarly, in expressing also we do the same thing. This is necessary for communication. The entire process of segregating is both the process of alienation and the process of identity formation.

Every investigation of man is either a contemplation of this experience or a judgement on the experience. When it is a judgement it becomes a philosophical investigation. When it is an experience of the phenomenon external to man it becomes an inquiry in the natural sciences. When it is an inquiry in which he and his species are involved, it becomes an inquiry in the social sciences. Historical inquiry intersects all these modes. But in all these cases the experience is, so to say, codified and becomes static. If experience is a picture of what has happened, it is a static picture and in this picturing or even judging, the time-element is completely eliminated. If we are thinking of succession we are substituting time in a different form. But the attempt is to eliminate time. The time-element comes in

again only because it is not possible for man to look at events simultaneously. In this process even the space-element is eliminated. But when events are brought before the mind's eye, they are not abstract (events), they are visualized as spread in space. What we now get are not events but ideas of events in some imagined space. But all these investigations are epistemic and, as I said earlier, they are possible because of man's ability to have a consciousness of consciousness. In this investigation, consciousness, which, in a way, belongs to the universe, gets its own identity. Consciousness, or the consciousness of consciousness, is a function of a certain body, but it begins to control that body and acts as a proto-universe. It takes two forms. The one that is important for us is the whole of the body, consciousness, and consciousness of consciousness. When a man acts, say, for example, walks, it is this whole which acts, and it ceases to act when the whole breaks, because the elements of the whole disintegrate. But we have another concept of the knower. This concept arises because the consciousness which controls the body creates an impression that it is distinct from, separate from and external to the body. Thus it is reified. It takes the form of a thing itself, although it is not a thing. This consciousness-cum-self-consciousness is presupposed in all thinking, and, if thinking is regarded as some kind of activity, it is not directly concerned with the body; it is directly connected with self-consciousness and its connection with the body is forgotten. This gives rise to another concept of the knower as 'I'. This 'I' has no bodily base; it is merely an assumption of knowledge and its base is awareness. Now, two possibilities emerge. One is to regard this 'I' as non-existing because it is not connected with the physical whole. The other possibility is to regard it as always existing, because it can never wither away, each 'I' being situated in a proto-universe. This 'I', again, is not a psychological 'I'; for each living person has such an 'I', and there is a possibility of communication between this 'I' and the other 'I's, the other 'I's being 'you', or 'he' or 'she'. This is what would bring about society or *Lokavyavahāra*. This 'I' is a necessary presupposition of all epistemological investigations. This 'I' is created of its own accord, it is *Svayambhū* and can neither be killed by any weapon, nor burnt by any fire.* It cannot undergo such changes because no concept can be divided or burnt. But in the process of the creation of this 'I' the world itself is 'divided' into two, the 'I' and the world or the *Viṣayī* and the *Viṣaya*; and this 'I' is never regarded as a part of the world. This is the genesis of what is called *Ātman*.

But this 'I' and the 'proto-universe' which requires a body are usually confused with each other in ordinary language and we usually use the expression 'I' for both. In practice 'I' is the physical whole and when we think of 'I', it is only the other 'I', the epistemological presupposition. Out of this systematic ambiguity, the epistemological and religious problems about 'I' arise.

*Nainam chhindanti Śastrāṇi. . . . *Bhagavadgītā*, 11.23.

When we talk of experience we usually presuppose a pluralistic universe, i.e., we have divided the world into parts, and we also think that the proto-universe and other parts of the world can be comprehended together. The problems of 'in the universe' and 'out of the universe' do not arise here. We investigate several experiences, systematize them and in this act we forget that we have also added something to them by way of naming or by way of (understanding their) forms. These inquiries are regarded as objective, though they are only quasi-objective. For, they are only assertions and judgements about the world. I said earlier that pluralism is presupposed in such inquiries. This is so because in the very act of division into the knower and the known, the cosmic world is divided into the cosmocentric world and the anthropocentric worlds, and the cosmic world is coloured by the anthropocentric worlds.

This experience of ours is expressed in the form of assertions which represent our impressions. But the intensity of impressions may vary from simple naming to new creations. If we merely give names we would say that what we have done is a discovery. If we have created something it may be called an invention, construction, etc. Viewed in this way historical writings or historical understanding can be both discovery and invention. As I have said earlier, it is not one proto-universe which is created, there are several proto-universes, and communication amongst them is possible through what we call language. But in communicative acts several rules and forms of behaviour arise either with regard to themselves or with regard to their relation with the cosmocentric world. Such studies usually take the form of the social sciences. In such social studies we are not only concerned with naming and describing but also with constructing, planning and even destroying.

III

Our discussion so far tells us that history is properly concerned with the anthropocentric world and the central figure in this construction or creation of the world is man. Here I am not concerned with whether man is matter or spirit. What is relevant in the present context is that, whether matter or spirit, man has to be distinguished from things like tables, chairs, trees, etc. What constitutes the difference is that man has consciousness, he is a living being, whereas things are not. He is also conscious of his own consciousness. It is this characteristic which gives him historicality and makes him a historical being.

Let me explicate the idea of a historical being. All of us recognize the difference between happening and action. Action requires an author. This authorship must be a real authorship. The authorship of everything that happens cannot be attributed to the person to whom the things happen. For example, if a man suffers from a fever or a disease or if he has a cold on

account of atmospheric changes, we cannot say that the man is its author. When someone is the author, the responsibility of the action falls on him. It goes without saying that nobody can be held responsible for an action unless he has wilfully desired it. The source of the action must be the author himself. In the first place this means that the author must be a living being, he must have consciousness. It also means that he must be conscious that he has consciousness. It is this second consciousness, or self-consciousness, which makes him exist in his own right, it gives him an identity of his own and carves out for him a place in the universe. He, as an individual, becomes a proto-universe. It is self-consciousness which makes man the maker of history, a historical being. It is this characteristic which makes him rise above Nature and modify it. This is the beginning of pluralism, since there must be such individuation of consciousness at several points in the world. When we hold such individualized consciousness responsible, we take for granted that a structure of space, time, consciousness and self-consciousness is already existent. We also understand that along with the process of individuation, the (human) structures so caused would be aware of several other structures of the same and different kinds, that although the structures are different they could consciously act and interact with one another, i.e. they could communicate. This communication could be at the level of language or at some other level. For example, one structure might destroy the other structures and this might be regarded as one-sided communication. But the communication could be more sane and the structures might manage or agree to stay together. Consciousness, self-consciousness, structures, communication, society—all these are characterized by temporality. The length in time or temporality and the possibility to communicate create historicality in the structures. History is a product of inter-communicability; and such a complex variety of inter-communicability can exist only in human beings.

It may be pointed out, at this juncture, that temporality with respect to the past, present and future does not seem to be of the same kind. Man seems to be aware of the past although his memory may sometimes betray him and he may not remember everything. He can be aware of the present but before he starts doing something the present has already become past. And he cannot be aware of the future though, of course, he can imagine and guess about the future. But man is able to act in these three modes because like him, his actions too have length in time. The length in time also creates the possibility of changes of structures, new creation and so on. Although philosophers may talk of change of time, had there not been structural changes other than the change of time, history would not have been possible. The structure, that is man, can decide to do something in the present, taking a stand on the past. But he cannot determine that his actions would necessarily assume the shape he has envisaged in the future. It is this inability to determine the course of action in relation to the past

and the present and his inability to be definite about the future that makes man a historical being and not a futurist being. This is well stated in the Bhagavadgītā by Kṛṣṇa in the aphorism *'Karmanye vādhikāraste mā phalesu kadācana'*. 'You have the ability to control your present actions, you have no ability to shape the future events.'

Man's temporal structure is very complex, having several sub-structures as constituents. The first such sub-structure is a spatial structure consisting of physico-chemical elements. But this structure must also have, integral to it, consciousness or livingness, and this consciousness or livingness must, as said earlier, be self-conscious. Action is a constituent characteristic of this structure. I cannot conceive of man without action. Action is temporal; nevertheless, action constitutes something more than time. It is this 'something more' in action which gives man a history (the history) which can be stored. Although action and the author of the action can be distinguished they cannot be separated; they form one whole. The history of man cannot be separated from man. In the history of humankind this particular aspect of human gestalt, that the agent is not different or separable from his actions or desires was first made clear by the Buddha and the Buddhists. But I think this is also at the back of the Vedānta philosophy if properly understood. Both these philosophies agree with each other in that they regard Ātman as the nature of awareness, *jñāna* or, as Kashmir Śaivism would say, *Pratyabhijñā*. It means that although in ordinary language we talk of the author or the agent or the subject or the 'I', as different from actions, actions cannot be separated from any of these. Whatever may be the genesis of this 'I' (and there may not be any ontological existence for this 'I'), it is merely a cumulative name for consciousness and manifestations of consciousness, i.e., will, desire, action, knowledge, etc. This Indian interpretation of 'I' does not seem to be opposed to the materialist interpretation of history. 'I' or consciousness can very well be the function of matter, or praxis, and still, when it comes into existence, the consciousness, the function, does not remain a mere function. It becomes a structure and starts controlling the organization which has given rise to it and also leads to the creation of a society. History, in the final analysis, seems to be a product of this ability of the 'function' to assume the form of a structure.

The structures so created give rise to groups and a society consisting of a plurality of individuals. Every member in the group has an identity of his own, yet all of them are characterized by the same temporality, by the same historicality, by what may be called action. Thus, although man is independent, on account of the characteristics mentioned above and on account of communication, a common history of several individuals becomes possible. It is in this historicality that man's social character comes to the forefront. The social character is nothing but a manifestation of the I-you relation, where both I and you are basically treated as equal. What

we call history is not the biography of one individual but a record of the interaction or communication of several individuals.

Although I have talked of man and a group of men, I wonder whether it would be possible to talk of the whole human race as one, in the sense of their history being uniform. It appears that, like the span of attention, the span of communication is also limited. On account of this span of communication and on account of certain geographical factors which are again partly historical in nature, the whole human world gets divided into different cultures, different traditions and they seem to have different identities. These diversities are also a factor in history and they influence man. On account of these diversities, different value-systems come into existence. The value-systems have a tone of self-interest and these self-interests give rise to intra-group and inter-group conflicts. The intra-group conflicts, according to Marx and his followers, take the form of class-struggle and the inter-group conflicts lead to imperialism and colonization. But this can only be a macro-analysis of society. In micro-analysis, one will have to consider several other factors governing the group. The factors, which are responsible for the creation of a group, are also responsible for the conflict of one group with another.

It is important to point out, and this consideration arises from what I have said earlier, that although the agent and his actions cannot be separated, they can be distinguished and 'treated as separate', i.e., we can think of the agent without any particular action. It is possible 'to separate' man, the agent, from his actions and desires, only because every individual can choose his actions and desires. Every action or desire that man wills has an equal possibility of failure or success. So one cannot say that a particular assortment of actions and desires is necessary to form a human gestalt or structure. Although desires are integral to man, one cannot really say whether what one wills or desires would be realized. It is on account of the possibility of considering the agent's action as different from the agent that it is also possible to evaluate actions and consider them to be desirable or undesirable, good or evil. It is on this count that it is possible to prescribe certain kinds of actions and prohibit certain others. Had the agent or agents no freedom to do this, the history of the agents, i.e. men, would not be different from the history of phenomena that have neither consciousness nor will. It is on account of this ability that human history gets one more dimension, the dimension of the future. Man is thus able to make predictions about the future, imagine about the future and apply the laws of his past experience and history to the future. In a way, the history of all living beings is the history of their actions. But in the case of those who have self-awareness, there is also the power to distinguish one self from another and it is this power to distinguish, the power of alienation, which makes his history not only the history of his actions but the history of his awareness

and the history of the evaluation of his actions. Ordinarily a being is controlled by nature but his awareness or alienation or self-consciousness gives man the possibility of revolting, and controlling nature. It is this capacity which makes man look into the future. History does not have merely a dimension in the past; it also has a projection in the future. We had earlier seen that man is a '*gestalt*' of structure of actions and desires. In fact man can be described as a product of matter, consciousness, temporality, desires, actions and hopes (hope being a temporal factor connected with future), on the one hand, and environment and history, on the other. It can now be seen that value is also a constituent in this gestalt. Man's history is a manifestation of his form of life. The history, in the sense of events that take place in the course of time, becomes a part of nature and, therefore, like other environmental factors, it tends to become an object of the cosmocentric perspective. The history and the environment are continuously modified by man but they tend to become external to him and, in turn, try to modify him. The history of man and the environment tend to act as a feedback and, in turn, enrich the gestalt that is man. The action of individual historical agents takes place in a situation determined partly by their own specific projects and intentions and partly by the tendencies of the objective situation. The objective situation consists of the forces of the natural world and, more importantly, other historical agents. The context of action is at once natural and social. As a result of this kind of situational determination, new structures emerge. These emerging structures are of two types—new structures of power and new structures of social relationship. Historical beings, by means of their actions, create new situations as also new patterns of inter-relationship amongst themselves; thus, groups arise and these social processes lead to the formation of distinct cultures having their specific identities.

Buddhist anthropology vis-à-vis modern philosophy and contemporary neurophysiology

GUY BUGAULT
51 Rue des France Bourgeois, Paris

I

Early Buddhism was not, strictly speaking, a religion but rather psychosomatic training, in the first place for monks and to some extent for laymen. This training was threefold: morality (*śīla*), concentration or yoga (*samādhi*), insight (*prajñā*). None of these components was ever separated from the other two. In the course of its evolution Buddhism became a religion, mainly under the pressure of laymen. Even then, there was no room either for God's creation or revelation; neither, as we shall see presently, for any soul, human or divine. All this is true even today.

II

Hence, a Buddhist reader is perfectly at ease when he is faced with the achievements of science or with contemporary trends of Western philosophy such as logical empiricism and analytical philosophy. In order to understand this, here are some common features of the Buddhist approach and the scientific approach.

First of all, they share the methodological primacy of experience and reason. The peculiarity of the Buddhist attitude, probably because it is therapeutic and medical, is an analysis leading to reduction: when one sees *prima facie* unity, one should try to find out the underlying plurality. More generally, Buddhist theories of knowledge postulate that every unity consists of some synthesis, every synthesis is the work of imagination.

The second link is that both are dynamic, not static. As far as I know, the oldest formulation of the idea of law or function—not to be confused with metaphysical or transitive causality—in world literature is the statement of *Majjhima-nikāya* (III, p. 63):

imasmiṃ sati idaṃ hoti imassuppādā idaṃ uppajati
imasmiṃ asati idaṃ na hoti imassa nirodhā idaṃ nirujjhati
This existing, that exists; this appearing, that appears.
This not existing, that does not exist; this ceasing, that ceases.

This dates back to a few centuries B.C. At that time, of course, this relation is not yet quantified, it is still qualitative. Nevertheless the statement is an all-important event in the development of human knowledge. A noticeable

consequence, *inter alia*, is that death is understood as a natural event, aside from any kind of magic.

Moreover this doctrine of dependent origination (*pratītya-samutpāda*), showing that everything coming-to-be results from a concourse of causes and conditions (*hetu-pratyaya-sāmagrī*) spares nothing at all. It applies also, and firstly, to human personality; the idea of being a self, viz. a simple and non-dependent entity. Let us notice, in passing, that apart from Spinoza and, to some extent, Hume and Schopenhauer, most of the Western thinkers are not aware of the contradiction between the principle of sufficient reason and the belief in a self.

In the *Sermon of Banaras* the self is analysed and reduced to five *upādāna-skandhas*. What we believe to be a substantial unity is a psychosomatic compound, breaking down into five aggregates of grasping. Let us try to test them on ourselves.

First, we identify, of course, with our bodily constitution (*rūpa*), and also more privately with the pleasant, unpleasant or neutral way we are affected by our sensations. This is our emotional sensitivity (*vedanā*). Besides this there are in ourselves quite a lot of socio-cultural equipment, the set of *saṃjñās*; *saṃjñā*, that is three things together: percept, pragmatic concept, denomination. For instance, take the sentence, will you please give me a pencil? He who asks for the pencil must have some visual and tactile image of it, know the use of it, and by which name to ask for it. Thus, the mother tongue and the languages one has been taught, the dictionaries and encyclopaedias, the whole of what has been taught at school and in daily life, make up a huge pool, most often unconscious, which we identify with (I ordinarily speak and think in French!). This is a kind of code or software, before the fact that we are accompanied with wherever we go.

And then, there is our inner engine, the group of driving forces (*saṃskāra*), our tendencies to act. Inherited from our past, they move us forward ahead of ourselves, sometimes consciously when we strive to deliberate, sometimes unconsciously as impulses. *Conatus* now rational now irrational.

Lastly, these four components of personality would remain unconscious themselves, if the projector of mindfulness did not focus on them. This power of selective attention that moves by definition from spot to spot is consciousness (*vijñāna*).

After this very simplified exposition, a few comments. Firstly, one point with major consequences: none of these five factors of personality exists apart from the four others. Together they make up a network, or, as stated in the original texts, personality is a kind of mixed bouquet (*saṃkhāra-puñja*).[1] Other comparison are: a chariot made up of pieces and blocks, a man and conch (there is no pre-existing sound in the conch),[2] a crew and its ship,[3] two bundles of reeds leaning on each other,[4] a wooden mechanism (*dāru-yantra*):

> In the same way that, by pulling strings, a wooden puppet is able to stand and look full of life and activity, although non-substantial, lifeless and inert, in the same way mind and body as such are something empty, lifeless and inert. But through their mutual work this mental and bodily combination can move, stand and look full of life and activity.[5]

Such a concept of personality at once dismisses both spiritualism and materialism, since psychic elements (*nāma*) do not exist apart from material elements (*rūpa*) and vice-versa. There is neither any consciousness not specified as visual, tactile, etc. nor any matter without being given form by consciousness. Or else it would be, like the spirit, a metaphysical hypostasis. In short, personality is always in the plural. Personal identity, which seems to us to be the simplest thing in the world, is in fact the sum of a number of identifications: name, sex, relationship, profession, nationality, social and cultural membership, address, phone number, etc. In brief, the polite 'you' is actually a true 'you'. The unity of the person is functional and nominal, it is not substantial.

Then, you may ask, what is the process through which we come to say 'I'? Through the five gestures of grasping referred to above: by making the body, feelings, etc. our own. The underlying idea of this analysis is, it seems to me, that the *ego* develops through the practice of *mine*, the appropriator (*upādātṛ*) through appropriation (*upādāna*). Think of the croupier's gesture, of the gesture of patients suffering from a frontal lobe lesion or a more extensive hemispheric lesion, called 'collectors' by hospital consultants: they catch any object within their reach and cling to it. Think, above all, of the newborn child's grasping reflex: he does not let your finger go. Grasping does not need to be learnt, it is loosening one's grip that needs to be.

Lastly, in order to illustrate this plurality at work, let us consider a man in a given situation, whilst delibrating and making up his mind. This is how he is depicted by a Tibetan parable.

> A person is like an assembly made up of a number of members. Discussion never ceases. At times, one of the members gets up, makes a speech, advocates an action; his colleagues approve, and it is decided to follow his proposal. At other times, several members of the assembly get up together, propose different things and each bases his proposal on specific reasons. Fights may break out between colleagues.
>
> It may also occur that several members of the assembly leave of their own accord; others are gradually pushed out and others are forcibly expelled by their colleagues. In the meantime newcomers work their way into the assembly, either by slipping in quietly or by battering down the doors. One notices that some members of the assembly slowly deperish; their voices weaken and are no longer heard. Others, conversely, who were weak and timid, are strengthened and emboldened, and end by proclaiming themselves dictators.

The members of this assembly are the physical and mental elements that make up the person: our instincts, tendencies, ideas, creeds, desires, etc. Each of these happens to be, from the causes that generated it, the descendant and heir of multiple causal lines, multiple series of phenomena harking far in the past and whose traces are lost in the night of time.

Having now some idea of Buddhist anthropology, it is time to attempt a confrontation with some prominent standpoints of Western thought taken as examples.

Descartes writes to Clerselier: '...I do deny that thinking substance needs any other object than itself in order to exercise its action, although it can also extend it to material things when examining them.' And in the *Principes de la Philosophie* (I, § 53): '...we can conceive extension without any figure or motion; and the thinking substance without imagination or feeling, and so on'. And it is precisely the independance of the mind *vis-à-vis* the body that makes the act of Cogito possible. Now, we know through the analyses above that according to the Buddhist perspective *nāma* and *rūpa*, the operations of the mind and those of the body, never exist separately.

More specifically, let us try to imagine how a Buddhist could criticize the processes of Descartes in the Cogito. It is quite simple. He beheads Descartes, he puts him to death. For Descartes most often says *ego sum, ego existo* (second *Meditation*). The Buddhist stops him immediately: you said *ego*, all is said, it is useless to go on. Whenever Descartes says only *cogito ergo sum*, it is no better, because the inflexion is in the first person. If there is a Cartesian circle (*cakra*) for a Buddhist, it is this one.

I once heard, in the Sorbonne, Sir Alfred Ayer, in passing, calling the Cartesian Cogito a language game. A Buddhist would have nothing against this. Wittgenstein, too, denounces the undue, irrational privilege of the first person, and France Jacques Bouveresse has devoted his thesis to *Le Mythe de l'intériorité* (the myth of the inner man). In order to dispel this myth, Wittgenstein tackles two habits of thought. The first one is the idea that there is an owner of psychological states. This is his no-ownership theory, which does agree with the Buddhist theory of *pudgala-nairātmya*. Second, he challenges the egocentric predicament 'I have a toothache.' He suggests that one could say "There is some toothache.' Let us take note, by the way, that this is the dentist's point of view! As for the Buddhists, they profess in the same way that there is suffering, but nobody suffers. Nevertheless this does not do away with the egocentric, monadic structure of our experience, and one must sit personally on the dentist's chair, under the dentist's drill. When it is behaviour that is at stake, not language, one cannot find oneself a stand-in.

Let us conclude. We hold three certainties. In any meeting we participate in, the first person in my own eyes is me, and I know that it is you for each of you. On the other hand, one is unable on reflection to justify this fact

rationally as if there were at the root of individual existence something irrational, called *avidyā* in India. Lastly, given that one cannot find any solution on the theoretical plane, one must seek it at the practical and therapeutic level. Hence a cure is necessary, first to restructure the psychosomatic complex and then to do away with it as a whole. This is the purpose of the Buddhist physician's eightfold prescription in the fourth noble truth of the *Sermon of Banaras*.

Contemporary neurophysiology is developing a new idea of man. Professor J.P. Changeux, member of the Institut Pasteur and Collège de France, has recently published a book titled *L'Homme Neuronal* (neuronal man). The human mind, or rather what is usually so called, is depicted by him as a spider's web made up of billions of neurons: at least thirty billion in the neocortex alone. These neurons are adjacent but distinct from each other, placed side by side but discontinuous. They are connected with each other through synapses, some of which are electric, others chemical. A Buddhist reader will not raise any objection of principle to that, since he strives to get rid of the feeling of being someone. Moreover he is at home, so to speak, with vocabulary itself: the adverb *pṛthak*, 'separately, one by one', the verbal adjective *vivikta*, 'distinct, discontinuous' was already used to qualify the *dharmas*.

Going further, in chapters four and five, Professor Changeux attempts to interpret in terms of neuronal activities certain psychic or psychomotor operations such as singing and escaping, being thirsty and feeling sick, taking pleasure and getting angry, achieving orgasm, analysing a situation, speaking and doing, perceiving, conceiving, thinking. He tries to work out a neurophysiological status for 'mental objects' (chapter five). Again, the Buddhist reader would not argue against this scientific, experimental inquiry. On the contrary, it is in keeping with his own way of thinking, anti-phenomenological, analytical and leading to reduction.

There remains, however, a great deal of difference between a scientist leaving his laboratory, an analytical or a positivist philosopher after his lecture, and a Buddhist monk coming out of meditation. The former two, carried along with the stream of daily life, let themselves be captured again, nearly without their being aware, by the code of language and social intercourse. They experience themselves again as being 'someone' with an environment of 'things', and being in touch with other 'persons' of same monadic status. The Buddhist monk too is under this influence, but he must be careful, be as aware as he can. He must remember that he himself, other persons and all things are not beings but products, less entities or pictures than movies or events. The Buddhist training is a flask of ammonia!

Here the contrast is all the more intense because Western man generally has a strong feeling that he is responsible for his deeds, for taking the initiative for them: he is *kartṛ*. He is also very involved in himself as a con-

sumer and patient (*bhoktṛ*). In ordinary life it is particularly at the level of this *kartṛ-bhoktṛ* pair that the belief in the self, the *sat-kāya-dṛṣṭi*, becomes a factual experience.

So let us consider the phenomenon of elocution and interlocution. Let us suppose that a monk, coming out of his meditation, meets a man who addresses him angrily. How will he react, how should he react? By means of analysis of course. He must remind himself that language is just like an echo. 'When a man is about to speak, there is in his mouth some wind called *udāna* that goes back to the navel, it strikes the navel, an echo is produced, and while going out it strikes seven places and moves back. That is language (*abhilāpa*).' Some stanzas say:

The wind named Udāna
Strikes the navel and moves up,
This wind then strikes seven places:
The nape, gums, teeth, lips.

Tongue, gullet, and chest.
Then language occurs.
The fool does not understand this;
Hesitant and stubborn, he generates hatred and delusion (*dveṣa-moha*).

The man gifted with wisdom
Becomes neither irritated nor attached
And makes no mistakes:
He adheres only to the true nature of the *dharmas*.

With curves and straight lines inflexions and elevations,
[The sound] that comes and goes expresses language.
There, there is no agent.
This [language] is magic,

Who could know
That this skeleton, this bundle of nerves.
Can produce language
As molten metal spraying water?[6]

III

In conclusion, I would like to go back to the original situation of Buddhism with respect to spiritualism and materialism. Given that it rejects spiritualism, one could expect it to profess materialism. Paradoxically, nothing like that happens. There are two reasons for this.

We know the first one. Man is a psychosomatic complex made up by putting together five aggregates of grasping. None of these five exists apart from the others. In particular, in the same way that there is no mere consciousness, what we call matter is given to our experience only through the five sense organs and with the help of a minimum of awareness. Apart from experience matter, like spirit, would be a metaphysical hypostasis.

There is a more subtle reason which stems from the method of discussion and argument. The Buddha had said: 'I do not debate with the world but the world with me'.[7] Moreover, when he was asked metaphysical questions such as, 'Is the world eternal or not, finite or infinite? Does the saint exist after death or is he annihilated?', the Buddha did not answer.[8] These questions remind us of Kantian antinomies and are known in the Buddhist tradition as *avyākṛta-vastūni*, viz. 'devoid of definite sense'. In fact what are we speaking of, where is the referent? Show me the world, show me the saint after death. There is no exaggeration in saying that a third logical value is at work here, implicitly but obstinately: nonsense, meaninglessness, irrelevancy.

Some centuries later, this problem takes its most acute form with the most radical school of Buddhism, the Mādhyamika Prāsaṅgika. Professor B.K. Matilal deals with this subject brilliantly in his chapter 'Negation and the Mādhyamika Dialectic'.[9] I shall resume my viewpoint as follows. Debating with his opponent, Nāgārjuna makes merciless use of the law of contradiction. So far, he agrees with Aristotle and commonsense. As for its usual corollary, the law of excluded middle, one must make a distinction. For it involves two commitments. Of two contradictory propositions, one can accept one at most, one must accept one at least. Nāgārjuna not only consents to the first commitment but he forces it upon his opponent with no concession. On the other hand, as *prāsaṅgika*, he is not at all concerned with the second commitment because it might so happen that the problem is nonsensical. Besides, he states, 'I have no thesis', *nāsti ca mama pratijñā*.[10] In other words, Aristotle's way and the way of commonsense reasoning proceed through dilemma, while Indian Buddhists are fond of tetralemma, whose fourth proposition precisely consists in evacuating the two propositions that make up dilemma: neither....nor. In that there is a cast of mind that Buddhists use quite naturally in order to evacuate both spiritualism and materialism at once, as being answers to an ill-founded problem. That is an aspect of the *madhyamā pratipad* of Buddhism as a middle way between the extremes.

Let us add that, according to Nāgārjuna, the fourth proposition of tetralemma represents a provisional standpoint and, so to speak, a pedagogical concession. When one has understood that a problem is ill-founded, one no longer thinks either of the problem or the answers: *āryas tuṣṇībhāvaḥ*. That is 'the noble silence' of Buddhist iconography.

Notes

1. *Saṃyutta-nikāya*, PTS, I, p. 135.
2. *Dīgha-nikāya, sutta*, n 23.
3. *Visuddhi-magga*, chap. 18.
4. *Saṃyutta-nikāya*, II, p. 112; *Abhidharma-kośa*, VIII, 3c, pp. 137-8.
5. *Visuddhi-magga*, chap. 18, p. 595.
6. *Mahāprajñāpāramitāśāstra*, 103 a. From E. Lamotte's French translation, *Le Traité, de la grande vertu de sagesse*, t. I, pp. 368-9.
7. *Samyutta-nikāya*, III, p. 138.
8. See *Dīgha-nikāya*, I, pp. 187-8; *Majjhima-nikāya*, p. 157, 426, 483-8; *Saṃyutta-nikāya*, III, p. 258, IV, p. 286, 391-2; *Abhidharmakośa*, V, p. 43; *Prasannapadā*, p. 446, etc.
9. B.K. Matilal, *Epistemology, Logic and Grammar in Indian Philosophical Analysis*, Mouton, 1971, chap. 5, pp. 146-67.
10. *Vigrahavyāvartanī*, 29.

References

Bernard, Jean. *Et l'âme? demande Brigitte* (And the Soul? a little girl asks): A methodological and serene investigation of the great scientist. Buchet-Chastel, Paris, 1987.

Changeux, J.P. 'Les Progrès des sciences du système nerveux concernent-ils les philosophes?' *Bulletin Société Française de Philosophie*, A. Colin, Paris, juil-sept. 1981.

Changeux, J.P. *L'Homme neuronal*. Fayard, Paris, 1983. English translation; *Neuronal Man*, Pantheon Books, New York, 1985.

Jayatilleke, K.N. *Facets of Buddhist Thought*, Buddhist Publication Society, Kandy, 1979. Especially pp. 1-32: 'The Contemporary Relevance of Buddhist Philosophy'.

Ramana Maharsi on the theories of creation in Advaita Vedānta

ARVIND SHARMA
McGill University, Canada

I

It is sometimes claimed that Advaita Vedānta, in general, does not take theories of creation seriously. 'To a system which regards creation as illusory, the order of the evolution of the world and the types of evolutes that compose it are of no importance whatsoever.'[1] Thus T.M.P. Mahadevan on Gauḍapāda. It has also been observed that, 'Śaṅkara finds it difficult to reconcile the Upaniṣadic statements about creation taken in the literal sense, with those denying the world of multiplicity.'[2] As Advaita is basically concerned with this denial one can see why the system would seem less concerned with matters of creation. Nevertheless, in much of Advaita Vedānta, there is a standard view of the world and its creation. This view may be summarized as follows:

> Īśvara is the creator of the world when Brahman is the locus of all superimposition: when we confound the infinite and the finite, and it is natural that we do this, Brahman, as Īśvara, is the material and the efficient cause of the world.
>
> The world is a manifestation of Īśvara; it is brought forth and it is reabsorbed in recurring cycles. The world is without an absolute beginning in time.
>
> From the standpoint of Reality, though, there is no creation and there is no creator god.[3]

Thus we obtain two views of the world pertaining to the two levels of truth: from the standpoint of the absolute there is no creation; from an empirical standpoint the world is the creation of God.

It seems, however, that there is another view of creation identifiable within Advaita, which views creation from the *prātibhāsika* (illusive) point of view in addition to the *pāramārthika* (absolute) and the *vyāvahārika* (empirical) points of view already mentioned.

It is the purpose of this paper to probe this approach to creation—an approach somewhat neglected in the existing literature on the subject.

II

The clue to the role of this view of creation in the study of Advaita is

provided by the following remarks of the well-known modern expounder of Advaita, Ramaṇa Maharṣi (1879-1950). Therein he distinguishes among three theories of creation: *ajātavāda* (or the doctrine of non-origination of the universe), *dṛṣṭi-sṛṣṭi-vāda* (or the doctrine of creation simultaneously with its perception, also known as *yugapatsṛṣṭi* or the doctrine of instantaneous creation) and *sṛṣṭi-dṛṣṭi-vāda* (or the doctrine that creation precedes its perception).

> The *ajata* school of Advaita says, 'Nothing exists except the one reality. There is no birth or death, no projection or drawing in, no *sadhaka* (practiser), no *mumukshu* (one who desires to be liberated), no *mukta* (one who is liberated), no bondage, no liberation. The one unity alone exists for ever.' To such as find it difficult to grasp this truth and ask, 'How can we ignore this solid world we see all around us?' the dream experience is pointed out and they are told, 'All that you see depends on the seer. Apart from the seer there is no seen.' This is called *dṛṣṭi-sṛṣṭi-vāda* or the argument that one first creates out of his mind and then sees what his mind itself has created.[4]

Ramaṇa then goes on to explain:

> To such as cannot grasp even this and who further argue: 'The dream experience is so short, while the world always exists. The dream experience was limited to me. But the world is felt and seen not only by me but by so many and we cannot call such a world non-existent,' the argument called '*sṛṣṭi-dṛṣṭi-vāda*' is addressed and they are told, 'God first created such and such a thing out of such and such an element and then something else and so forth.' That alone will satisfy them. Their mind is not otherwise satisfied and they ask themselves 'How can all geography, all maps, all sciences, stars, planets and the rules governing or relating to them, and all knowledge be totally untrue?' To such it is best to say: 'Yes. God created all this and so you see it.' All these are only to suit the capacity of the hearers. The absolute can only be one.[5]

It is a matter of some interest that while standard works on Advaita discuss versions of the first and third types of views mentioned in the above passage, Ramaṇa tends to give 'equal time' to the second type of view, namely, that of *dṛṣṭi-sṛṣṭi-vāda*, as well. In fact, he even seems somewhat favourably disposed towards it for he said:

> The Vedanta says that the cosmos springs into view simultaneously with the seer. There is no creation by stages or steps. It is similar to the creation in dream where the experiencer and the objects of experience come into existence at the same time. To those who are not satisfied with this explanation theories of gradual creation as found in the books are offered.[6]

The view deserves serious consideration. As a disciple of Ramaṇa, David Godman points out:

> Literally, *drishti-srishti* means that the world only exists when it is perceived whereas *shrishti-drishti* means that the world existed prior to anyone's perception of it. Although the former theory sounds perverse, Sri Ramaṇa insisted that serious seekers should be satisfied with it, partly because it is a close approximation to the truth and partly because it is the most beneficial attitude to adopt if one is seriously interested in realising the Self.[7]

Two reasons are thus given by Godman in support of Ramaṇa's view—one that it is 'true' and the other that it is 'beneficial'. Ramaṇa describes its 'beneficial' aspect as follows:

> A dreamer dreams a dream. He sees the dream-world with pleasure, pains, etc. But he wakes up and then loses all interest in the dream world. So it is with the waking world also. Just as the dream-world, being only a part of yourself and not different from you, ceases to interest you, so also the present world would cease to interest you if you awake from this waking dream (*samsara*) and realize that it is a part of your self, and not an objective reality. Because you think that you are apart from the objects around you, you desire a thing. But if you understand that the thing was only a thought-form you would no longer desire it.[8]

However, the fact that the doctrine may be beneficial does not mean that it must necessarily be held to be true on that account, specially in Advaita wherein practical utility need not rest on metaphysical validity[9] and it is admitted that 'a false means may lead to a true end—a position which may appear untenable; but there are many instances in life when this happens. The image of a person as reflected in a mirror is not real, but it does not therefore fail to serve as a means of showing to him so many facts about his appearance.'[10]

It is, therefore, important to assert that according to Ramaṇa *dṛṣṭi-sṛṣṭi-vāda*, as he understands it, is not only a beneficial but also a correct doctrine. Ramaṇa states:

> So then this is what happens. When a *vāsanā* is released and it comes into play, it is associated with the light of the Self. It passes from the heart to the brain and on its way it grows more and more until it holds the field all alone and all the *vāsanās* are thus kept in abeyance for the time being. When the thought is reflected in the brain it appears as an image on a screen. The person is then said to have a clear perception of things.[11]

It is clear that the *vāsanās* provide the link between the beneficial and

veridical aspects. The world is projected by the mind under the influence of *vāsanās*—this is a fact. When this fact is realized—that the world is not an objective but an objectified reality—it loses its grip on the mind which then turns towards seeking *mokṣa*.

The novelty of this view of creation posited as an intermediate doctrine between the views that there is no creation at all on the one hand and that it is the work of God on the other can be seen on bringing it in relation to certain other standard doctrines of Advaita.

III

In terms of Advaitic doctrines Ramaṇa's views on *dṛṣṭi-sṛṣṭi-vāda* could be brought in relation to (1) the *prātibhāsika* level of truth; (2) the doctrine of *eka-jīva-vāda* and (3) the doctrine of *dṛṣṭi-sṛṣṭi-vāda per se*. Ramaṇa himself places it in apposition with the *prātibhāsika* level of truth when, commenting on 'three outlooks possible' he states, the *prātibhāsika*: the *jagat*, *jīva* and *Īśvara* are all cognized by the seer only. They do not have any existence independent of him. So there is only one *jīva*, be it individual or God. All else is simply a myth.'[12] This sounds suspiciously like *eka-jīva-vāda* and the suspicion seems to be confirmed when we read:

> A question was asked why it was wrong to say that there is a multiplicity of *jīvas*. *Jīvas* are certainly many. For a *jīva* is only the ego and forms the reflected light of the Self. Multiplicity of selves may be wrong but not of *jīvas*.
>
> M: *Jīva* is called so because he sees the world. A dreamers sees many *jīvas* in a dream but all of them are not real. The dreamer alone exists and he sees all. So it is with the individual and the world. There is the creed of only one Self which is also called the creed of only one *jīva*. It says that the *jīva* is only one who sees the whole world and the *jīvas* therein.
>
> D: Then *jīva* means the Self here.
>
> M: So it is. But the Self is not a seer. But here he is said to see the world. So he is differentiated as the *jīva*.[13]

Upon closer examination it becomes quite clear, however, that Ramaṇa does *not* subscribe to the doctrine of *eka-jīva-vāda* although he refers to it. This point is important as the two doctrines—those of *eka-jīva-vāda* and *dṛṣṭi-sṛṣṭi-vāda*—are often associated. As Eliot Deutsch and J.A.B. van Buitenen have pointed out:

> In the latter development of Advaita, a doctrine known as *eka-jīva-vāda*, the theory that there is only one individual, was also put forward (namely by Prakāśānanda in *Vedāntasiddhāntamuktāvali*) which tended towards a kind of solipsism and 'subjective idealism' (*dṛṣṭi-sṛṣṭi-vāda*—the theory that perception is or precedes creation), but this extreme doctrine is not really part of the classical Vivaraṇa school and it would clearly have been rejected by Śaṁkara.[14]

That Ramaṇa does not subscribe to *eka-jīva-vāda* is clear from the fact that he believes in the possibility of liberation being achieved by the *individual* ego.[15] This is not possible under the doctrine of *eka-jīva-vāda*, for 'If all the different souls are only one *jīva* then when for the first time any soul attains liberation, bondage should have terminated for all which is not the case.'[16] Moreover, if there is only one *jīva* one would have to posit a universal mind, but Ramaṇa denied this in the following conversation with Major Chadwick who asked Ramaṇa Maharṣi one night:

> The world is said to become manifest after the mind becomes manifest. There is no mind when I sleep. Is the world not existent to others at that time? Does it not show that the world is the product of a universal mind? How then shall we say that the world is not material but only dream-like?

Ramaṇa replied:

> The world does not tell you that it is of the individual mind or of the universal mind. *It is only the individual mind that sees the world.* When this mind disappears the world also disappears.
>
> There was a man who saw in his dream his father who had died thirty years earlier. Furthermore he dreamt that he had four more brothers and that his father divided his property among them. A quarrel ensued, the brothers assaulted the man and he woke up in a fright. Then he remembered that he was all alone, he had no brothers and the father was dead long ago. His fright gave place to contentment. So you see—when *we see our Self there is no world, and when we lose sight of the Self we get ourselves bound in the world.*[17]

IV

It is clear, therefore, that for Ramaṇa the doctrine of *dṛṣṭi-sṛṣṭi-vāda* stands in its own right. It is not to be confused with *eka-jīva-vāda*. (If anything Ramaṇa's position should be called *pratyeka-jīva-vāda*!) But what is its relation to *prātibhāsika* level of truth? In standard Advaita the *prātibhāsika* level is associated with dreams and illusions and this provides one clue to Ramaṇa's position. For the *prātibhāsika* level of reality relates to the 'illusory existent'[18] which lasts only so long as the illusion lasts. Objects perceived in a dream last only so long as the dream lasts. The snake mistakenly perceived in the rope only lasts for the duration of that illusion. The example of dreams is specially relevant here[19] as Ramaṇa places the waking and the dream state on par in this context.

Q. Is there any real distinction between dream and waking?

A. Only apparent, not real. The dream is for one who says that he is awake. Both are unreal from absolute viewpoint.[20]

Elsewhere Ramaṇa states: 'There is no difference between dream and the waking state except that the dream is short and the waking long. Both are the result of the mind.'[21]

Ramaṇa's position here differs somewhat from that of standard Advaita, as represented by Śaṅkara. Standard Advaita also places waking and dreaming on par in *one sense*—that knowledge in both cases has an objective counterpart.

> Dreams, so far as they are direct experience, should be placed on par with waking; and it is accordingly assumed that objects are present then, apart from their knowledge....The character of dream-objects, however, is held to be different from that of the objects of wakeful experience.[22]

The distinction between illusory and non-illusory knowledge thus turns on the *type* of objects cognized and not on their presence in one (waking state) and absence in another (dream). The distinction is usually perceived as twofold. For one, the objects in an illusion are private, not collective. If I dream of a river I see it, but a river in the waking state is seen by me as well as others in common. But, 'objects of illusion are not common to several or general, their presence not being vouched for by collective experience.'[23] For another,

> While an object of illusion lasts only as long as its knowledge lasts—neither for a longer nor for a shorter period—that of ordinary knowledge is more enduring. The latter is already there before it comes to be apprehended and, generally speaking, continues to be after its apprehension ceases, as is shown for instance by our recognition of it later; the former on the other hand comes to exist *as* we apprehend it and ceases to be when our apprehension of it ceases. The one is described as vyavahārika or empirical; the other as prātibhāsika or apparent. Dream objects, to whose difference from those of the waking state we have already referred, are of the second type.[24]

Ramaṇa essentially denies these differences. One may present his position by asserting his commitment to the doctrine of simultaneous creation.

> The *Vedanta* says that the cosmos springs into view simultaneously with the seer and that there is no detailed process of creation. This is said to be *yugapat-sṛṣṭi* (instantaneous creation). It is quite similar to the creations in dream where the experiencer springs up simultaneously with the objects of experience. When this is told, some people are not satisfied for they are deeply rooted in objective knowledge. They seek to find out how there can be sudden creation. They argue that an effect must be preceded by a cause. In short, they desire an explanation for the existence of the world which they see around them. Then the *srutis* (scriptures) try to satisfy their curiosity by theories of creation. This method of dealing with the subject of creation is called *krama-srishti* (gradual creation). *But the true seeker can be content with yugapat-srishti, instantaneous creation.*[25]

In effect Ramaṇa does not concede the twofold distinction based on the *type* of objects experienced in waking and dream states. He makes the startling assertion that although the empirical world in the waking state appears as a public domain it is in fact our private world. 'Just as in a dream false knowledge, knower and known rise up, in the waking state the same process operates.'[26] According to Ramaṇa the world is projected anew every time we wake up from sleep. 'You exist in sleep even without the body. Then ego arises, and then the mind which *projects* the body exists....The body is a mental *projection*.'[27] Not just the body, the whole world is a mental projection:

> Just as a miser keeps his treasures always with himself and never parts with them, so the Self safeguards the vāsanās in that which is closest to itself, i.e. within the Heart. The heart radiates vitality to the brain and thus causes its function. The Vāsanās are enclosed in the heart in their subtlest form, and later projected on the brain, which reflects them with high magnification. This is how the world is made to go on and this is why the world is nothing more than a cinema show.
>
> *The world is not external.* The sense impressions cannot have an outer origin, because the world can be cognized only by consciousness. The world does not say it exists; it is you who say it exists; it is your impression. Yet this impression is not unbroken. In sleep the world is not cognized; it exists not for a sleeping man. Therefore the world is the result of the ego.[28]

According to Ramaṇa, then, the world we live in, the external world, is in us, in our mind. This immediately throws up several difficulties.

(1) If my world is withdrawn in sleep, how come other people continue to see the same world when I am asleep and no longer projecting it, so to say?

(2) What is the status of the people in my world—what about their projections? Or are they just like the phantoms in my dream who *disappear* when I wake up? Then how do I see them again the next time I wake up?

(3) Dreams vary for a person and among persons but the waking world is comparatively consistent and stable.

Ramaṇa answers the first question, namely, 'If during my sleep I did not see it [the world], how did others who were not sleeping see it', by maintaining that the others saw *their* world, not yours, and the sleeping *you* in

their world and that 'those others can tell you having seen the world during your sleep *only when you yourself are awake*', that is, you are in your world![29] Ramaṇa drives the point home as follows:

> In sleep there is neither mind nor world. When awake there is the mind and there is the world. What does this invariable concomitance mean? You are familiar with the principles of inductive logic which are considered the very basis of scientific investigation. Why do you not decide this question of the reality of the world in the light of those accepted principles of logic?[30]

Here, of course, Ramaṇa is referring to a fact known to all philosophers, but drawing a conclusion not drawn by all of them.

> It is admitted by all that the outside world is known to us through the mind, which is assisted in its operation by the senses. This fact has led to a very important controversy among philosophers, viz., whether we can talk of the existence of external objects without reference to any mind. The Nyāya-Vaiśeṣika, like Jainism believes that the being of the external world, although necessarily known through the mind, is in no way dependent upon it. If all the minds in the universe should cease to be, even then the objective would, in its view, continues to exist. It sides in this respect with common sense.[31]

Ramaṇa takes the opposite view—that the invariable association of the world with the individual's mind suggests that it is a projection of that mind. It is obvious that we are face to face here with the dangers of the Yogācāra idealism:

> This doctrine is analogous to what is described in modern philosophy as subjective idealism or subjectivism. The chief objection to it is that it places all experience on a level with dreams. In other words, it abolishes the distinction between truth and illusion, since in both alike there is no object outside knowledge. But it is hardly a defensible position. We infer the falsity of dreams by comparing them with waking experience. If the latter also is likewise false, we may ask by what experience it is shown to be so. Whatever the answer of the Yogācāra to this question may be, his position becomes untenable, for he will have to admit either that there is a higher kind of knowledge which is not false or that waking experience itself is true. Further, as a consequence of rejecting external objects, the subjectivist must deny the existence of all selves besides his own, for, if there is not reason to believe in external physical objects, there can be none to believe in other people except as part of his dream. The doctrine will thus be reduced to solipsism, or the theory that there is only a solitary self and that everything else is mere fancy. It is clear that such a theory, though it cannot be logically proved to be wrong, stultifies all the presuppositions of practical life and puts an end to all philosophical controversy.[32]

The first criticism as presented above does not apply to Ramaṇa as he clearly admits to a higher kind of knowledge which he calls *jñāna*. The second point presents greater difficulties. We know that Ramaṇa *rejects* solipsism but at the same time he seems to deny the existence of other selves at least in certain contexts.

> People often say that a Realized Man should go about preaching his message. They ask how a man can remain quiet in Realization when there is misery also existing. But what is a Realized Man? Does he see misery outside himself? They want to determine his state without themselves realizing it. From his standpoint their contention amounts to this: a man has a dream in which he sees a number of persons. On waking up he asks, 'Have the people in the dream also woke up?' It is ridiculous! Again, some good man says, 'It does not matter even if I don't get Realization. Or let me be the last man in the world to get it so that I can help all others to become Realized before I do.' That is just like the dreamer saying: 'Let all these people in the dream wake up before I do.' He would be no more absurd than this amiable philosopher.[33]

A few points need to be considered here. In a dream in which a person sees himself along with others he sees his dream-self and the selves of others in a dream. In a way his self is on par with the selves of others—he himself is as unreal in the dream as the other selves. When the person wakes not only do all the other selves disappear, his own dream-self also disappears. In other words, those *vāsanās* which were responsible for his appearance as well as that of others and the world—his world—have ceased to be. In Ramaṇa's scheme (1) the Self, (2) the pure mind close to the Self and (3) the *vāsanās*, constitute the seer or *jīva* in whom creation is comprised. On the analogy of projection, the Self = lamp; the pure mind = lens; the film = *vāsanās*.

> Just as the pictures appear on the screen as long as the film throws the shadows through the lens, so the phenomenal world will continue to appear to the individual in the waking and dream states as long as there are latent mental impressions. Just as the lens magnifies the tiny specks on the film to a huge size and as a number of pictures are shown in a second, so the mind enlarges the sprout-like tendencies into tree-like thoughts and shows in a second innumerable worlds. Again, just as there is only the light of the lamp visible when there is no film, so the Self alone shines without the triple factors when the mental concepts in the form of tendencies are absent in the states of deep sleep, swoon and *Samādhi*. Just as the lamp illumines the lens, etc., while remaining unaffected, the Self illumines the ego (*chidābhāsa*), etc., while remaining unaffected.[34]

The point to be made here is that in the state of Realization as described by Ramaṇa there are no others, not because the others have vanished and the dreamer continues to be, but because in self-realization. 'Inasmuch as there is no ego in him [the *jñāni*], there are not others for him', for 'when there is no mind he cannot be aware of others.'[35] It is not subjectivism but impersonalism which accounts for the *jñāni's* state—*including* the dissolution of his own person. Says Ramaṇa: 'The *jñāni* sees no one as an *ajñāni*. All are only *jñānis* in his sight. . . .In the state of *jñāna*, the *jñāni* sees nothing separate from the self. The self is all shining and only pure *jñāna* so there is no *ajñāna* in his sight.'[36] Ramaṇa also explains how the doctrine of *yugapat sṛṣṭi* is related to this condition: 'Ignoring the self the *ajñāni* thinks the world is real, just as ignoring the screen he sees merely the pictures as if they existed apart from it. If one knows that without the seer there is nothing to be seen, just as there are no pictures without the screen, one is not deluded. The *jñāni* knows that the screen and the pictures are only the self.'[37]

It is clear, therefore, that Ramaṇa's statement regarding the absurdity of attending to dream-persons on the part of one who has woken up is intended as a *reductio ad absurdum* criticism of the common version of the Bodhisattva ideal of Buddhism, an ideal which compromised his own view that 'each man's first duty, is to realize his true nature.'[38] Ramaṇa's criticism of the popular version of the Bodhisattva ideal has been anticipated in Buddhism itself.[39]

We are now in a position to answer the second question posed earlier. Ramaṇa seems to suggest that we are involved here in a multi-level situation.

Dṛṣṭi-sṛṣṭi-vāda and Dreams

Simultaneous creation takes place in dreams as the dream comes into existence with the dreamer. However, although the triad of dreamer (subject), dream-objects (objects) and a dream-world (relating the two) is involved here, the dreamer can refer to any of two subjects: (1) the dream-self of the person who appears in the dream along with other objects and persons, or (2) the 'dreamer', who in this case is the person asleep. When we say that the dream is comprised in the seer we can mean (1) either that the dream is projected by the dream-self (which may or may not itself be visible *in* the dream), or (2) that the dream—inclusive of the visible or invisible dream-self—is projected by the asleep dreamer, or (3) both. Much of the difficulty in understanding Ramaṇa on this point seems to arise from this ambiguity. For although both the asleep dreamer and the dream-self can be looked upon as the projectors of the dream their ontological status differs—the asleep dreamer is more real than the dream-self as he does not disappear with the dream.

Dṛṣṭi-sṛṣṭi-vāda and the Waking State

Ramaṇa seems to maintain that although in comparison with dreaming we accord greater reality to the waking state, it is just like the dream state, only

longer. The full force of Ramaṇa's claim here must be carefully grasped. Because dreams are of shorter duration than the waking state, there is a tendency among idealists to make dreams a subset of the waking state even when the waking state is considered analogous to a dream. One common way of doing this is to regard the waking state world as the dream of God and ordinary states within it as our personal dreams. This easily accounts for the fact that although we all have different private dreams, on waking up from them we return to a commonly shared world—which is also a dream, not ours but God's. Another possibility would be to treat ordinary dreams as short dreams within a longer dream—all our own. For instance, one could go to bed and dream a dream; and dream in that dream that one has gone to bed and is having another dream. On waking up from this sub-dream one would find oneself back in the original dream which will, on the face of it, exhibit the regularity and stability of the real world.

It is significant that Ramaṇa takes neither of these routes when expounding *dṛṣṭi-sṛṣṭi-vāda*. The first route is a standard one in Advaita wherein Īśvara may in some sense be 'described as an eternal dreamer' and may have been welcomed in the Advaitic scheme, among other reasons, as a safeguard against solipsism. As M. Hiriyanna remarks:

> The contradictions and anomalies of ordinary experience have at first to be resolved at least in the seeming orderliness signified by the ideal of the saguṇa Brahman, if we are to reach the advaitic ultimate unerringly. Without the synthesis effected in it, or, to express the same thing differently, without the jīva's avidyā being universalized as Māyā, we would land ourselves in subjectivism reducing the world to a mere private show, for there would then be no reason for postulating anything beyond what is present to individual consciousness.[40]

The second option possesses a certain logical convenience. It is significant that Ramaṇa does not resort to either the doctrinal or the logical options conveniently on hand. For him the waking state despite its character of being something like a dream must be placed *alongside and not within* dream phenomena as such—macrocosmic or microcosmic.

In treating the waking state like a prolonged dream Ramaṇa seems to be saying that unlike our normal belief that dream and sleep are part of an extended waking state of which these are modifications, in keeping with the *avasthātraya* analysis of Advaita he insists on treating them as separate and distinct categories. In this view, despite the dream-like quality of waking state, each state is in a way unique. In deep sleep the distinction between subject and object vanishes—this makes it unique. In dream states the dream body may or may not be included in the dream while in the waking state the body is always part of that state. In the present context this would be an important distinction, for the body would provide a relatively fixed point in relation to which the projection of the waking state world must

take place, making it less arbitrary than dream-world projections, and may account for the fact that we wake up back into a similar world.

However, the crucial point here concerns the nature of the subject in the waking state as in the dream state. In the dream state we know that the subject could be taken to be the visible or invisible dream-self or the asleep dreamer or both. In the case of the waking state similar options seem to be available in an Advaitic framework. The subject could be (1) the waking self, specially as characterized by a physical body; (2) the *ātman*, covered with nescience as the 'dreamer' was with sleep; or (3) both.

But there is one important complication—the *ātman* is universal, it is Brahman. Hence one could either relate *dṛṣṭi-sṛṣṭi-vāda* to the individual projections of *jīvas*; or to the aggregate of such projections as *ātman* obscured by *avidyā* or both. Ramaṇa seems to use it in all the three senses; although most of his spiritual instructions are given in the context of individual projections he does refer to the sum-total of projections as *virāṭ*.[41]

Ramaṇa does not suggest the exact way in which the individually projected worlds are integrated. He keeps the discussion focussed on the fact that the waking state world is a projection. He does not suggest, after Bradley,[42] that the different individual worlds may involve overlapping projections, so that while a few projectors may fall asleep or become liberated the show—while having the appearance of being common but really uniquely individualistic—may still go on. Ramaṇa makes no such suggestion. Why? It will help to review his comparison of the dream and waking state for a possible clue. Ramaṇa is keen on the analogy between dream and waking. In response to the question: Does a *jñāni* have dreams? he remarked, 'Yes, he does dream, but he knows it to be a dream, in the same way as he knows the waking state to be a dream. You may call them dream No. 1 and dream No. 2.'[43] Once when Arthur Osborne entered the hall he was answering some questions and was saying: "There is no difference between the dream and waking states except that the former is short and the latter long. Both are the product of the mind."[44] From the fact that both are product of the mind it follows that 'if there were no such activities as waking-thoughts and dream-thoughts, there would not be the corresponding worlds i.e., no perception of them.'[45] From this it also follows that the states cannot exist without the seer. This is more apparent in the case of dream but is also true according to Ramaṇa for the waking state. When asked: Is the waking state independent of the existing objects? he replied:

> Were it so, the objects must exist without the seer; that is the object must tell you that it exists. Does it do so? For example, does a cow moving in front of you tell you that she is moving, or do you say of your own accord 'there is a cow moving'. The objects exist because the seer is cognizing them.[46]

Thus 'the objects exist because the seer is cognizing them', contrary to our normal belief that the seer is cognizing them because they exist. Ramaṇa's most forthright statement on this pertains to two questions. (1) Is then the world no better than a dream? (2) As dreams differ from person to person and with regard to the same person and the world does not, does this fact not establish the objective reality of the world? In response to the first he said:

> What is wrong with the sense of reality you have while you are dreaming? You may be dreaming of something quite impossible, for instance, of having a happy chat with a dead person. Just for a moment, you may doubt in the dream, saying to yourself, 'Was he not dead?', but somehow your mind reconciles itself to the dream-vision, and the person is as good as alive for the purposes of the dream. In other words, the dream as a dream does not permit you to doubt its reality. It is the same in the waking state, for you are unable to doubt the reality of the world which you see while you are awake. How can the mind which has itself created the world accept it as unreal? That is the significance of the comparison made between the world of the waking state and the dream world. Both are creations of the mind and, so long as the mind is engrossed in either, it finds itself unable to deny their reality.[47]

The response to the second question was as follows:

> All this talk about inconsistencies in the dream-world arises only now, when you are awake. While you are dreaming, the dream was a perfectly integrated whole. That is to say, if you felt thirsty in your dream, the illusory drinking of illusory water quenched your illusory thirst. But all this was real and not illusory to you so long as you did not know that the dream itself was illusory. Similarly with the waking world. The sensations you now have get co-ordinated to give you the impression that the world is real.[48]

It appears that the reason why Ramaṇa is not concerned with the problem posed by the plurality of dream-projections is that for him the experience of the waking state is really taking place *within us*, in our minds, just as the dream occurs within us. The moment we talk of reconciling projections we have given them a reality outside of the mind of the subject and created an artificial problem. But just as dreams are perceived *within us* without having to be reconciled with the dreams of others, waking states are also perceived *within us* and do not have to be reconciled with the waking states of others!

V

The question may now be asked: In what ways does Ramaṇa's espousal of *yugapatsṛṣṭi* affect our traditional understanding of Advaita?

(1) It seems to explain the tendency of Advaitic thought in the direction

of *eka-jīva-vāda*. By the analogy with dreams it is easy to conclude that just as many persons can appear in a dream when there is only one transcending dreamer, multiplicity of *jīvas* can be postulated in the waking state consistently with only one transcendental *jīva*. However, Ramaṇa's thought helps identify the fallacy which may be involved here. Within the context of a single *jīva*, the dream-self has a unique relation to the waking-state self so that the dream-self (visible or invisible) is conscious of its separate existence from other selves and upon waking, of its identity with waking-self. But while the *jīva* in the waking state is conscious of its individuality *vis-à-vis* other *jīvas* (like the dream-self in a dream in relation to otherselves) this *jīva cannot* have a unique relationship with the impersonal infinite *ātman*/Brahman upon Liberation. Hence the nature of the *ātman* as postulated in Advaita leads to *ekātmavāda* rather than *eka-jīva-vāda*.

(2) It has been suggested that the concept of Īśvara is not vital to the system of Advaita, that maybe it is a 'practical requirement' rather than a 'theoretical necessity', to rephrase Eliot Deutsch, who also quotes Śaṅkara as saying: 'Those who think about creation (*sṛṣṭi*) think that creation is the expansion of Īśvara.'[49] In terms of the three views of creation successively elaborated by Ramaṇa this statement would fall in the category of *sṛṣṭi-dṛṣṭi-vāda*. Ramaṇa's espousal of *dṛṣṭi-sṛṣṭi-vāda* raises questions about the status of God in Advaita. Ramaṇa's position here needs to be understood carefully. He is not an atheist, but to the extent that he supports the idea of *yugapatsṛṣṭi* God is relatively relegated into the background.

(3) In view of the importance Ramaṇa attaches to *vāsanās* the following comments of Appaya Dīkṣita are worth injecting into the discussion:

> Now, if basing oneself on [the view of] perception as creation, one admits of the whole world of waking that it is assumptive, who is he that posits it? Is it the unconditioned self or the self conditioned by nescience? Not the first; for, since, even in release there exists the person who posits without the need of any other instruments, the world would persist, and there would be non-distinction from the state of migration. Not the second; for, since nescience has itself to be posited, the establishment of the person who posits has to be declared even prior to the assumption of that (nescience).
>
> *To this some say thus: he who is conditioned by the earlier posited nesciences is he who posits the subsequent nesciences. And since, in the case of the stream of positer and posited, it cannot be said 'This is the first', there is not the defect of infinite regress. . .*[50]

Ramaṇa would seem to be inclined towards such a position in relation to the individual *jīva*.

(4) Ramaṇa's position, as developed in the light of the doctrine of *yugapat-sṛṣṭi* seems to differ from that of Śaṅkara (despite the fact that their positions share a broad convergence).[51] Radhakrishnan remarks:

> It is not fair to represent Śaṅkara's view as illusionism. Śaṅkara repudiates the subjectivism of Vijñānavādins and affirms the extramental reality of objects. His theory is not *dṛṣṭi-sṛṣṭi-vāda*, that objects rise into being when we perceive them and disappear when we do not. We perceive objects and, do not simply contemplate apparitions. Śaṅkara distinguishes dreams from waking experiences and warns us against a confusion between the two.[52]

The point to be made here is that Ramaṇa does all that Śaṅkara does but sometimes on different grounds. How his position differs from that of the Vijñānavādins was shown earlier. He is closer to their form of subjective idealism than Śaṅkara but his belief in the Self requires that it be viewed in a different light. Moreover even according to him, one does not contemplate apparitions, but projections. He also distinguishes waking from dream inasmuch as only in waking one can actively pursue the path to *mokṣa*.[53] Thus Ramaṇa and Śaṅkara seem to hold *similar* positions but on *different* grounds and this phenomenon can be explained by Ramaṇa's appropriation of an otherwise neglected theory of creation in Advaita.

Notes and References

1. T.M.P. Mahadevan, *Gauḍapāda: A Study in Early Advaita*, University of Madras, 1960, p. 159.
2. Satischandra Chatterjee and Dhirendramohan Datta, *An Introduction to Indian Philosophy*, University of Calcutta, 1950, p. 375.
3. Eliot Deutsch and J.A.B. van Buitenen, *A Source Book of Advaita Vedānta*, The University of Hawaii Press, Honolulu, 1971, pp. 309, 310.
4. A. Devaraja Mudaliar, compiler, *Gems from Bhagavan*, Sri Ramanasramam, Tiruvannamalai, 1985, pp. 3-4.
5. Ibid.
6. Ibid., p. 7.
7. David Godman, ed., *The Teachings of Ramana Maharshi*, Arkana, London and New York; 1985, p. 183.
8. *Talks with Sri Ramana Maharshi*, Sri Ramanasramam, Tiruvannamalai: 1984, p. 588.
9. M. Hiriyanna, *Outlines of Indian Philosophy*, Blackie and Sons, Delhi, 1983, p. 377.
10. Ibid., p. 359.
11. *Talks with Sri Ramana Maharshi*, p. 577.
12. Ibid., p. 579.
13. Ibid., pp. 530-1.
14. Eliot Deutsch and J.A.B. van Buitened, op. cit., p. 224.
15. *Talks with Sri Raman Maharshi*, p. 530.
16. S. Radhakrishnan, *The Brahma Sūtra: The Philosophy of Spiritual Life*, George Allen and Unwin, London, 1960, p. 222.
17. *Talks with Sri Ramana Maharshi*, p. 518 (emphasis adden). In the last line the sense becomes clearer if one reads 'bound in the world' as 'bound in our world'.
18. Eliot Deutsch, *Advaita Vedānta: A Philosophical Reconstruction*, East-West Center Press, Honolulu, 1969, p. 26, note 10.
19. M. Hiriyanna, *Outlines of Indian Philosophy*, pp. 347-8.

20. Paul Brunton, *Conscious Immortality*, Sri Ramanasramam, Tiruvannamalai, 1984, p. 101. Also see p. 104.
21. David Godman, ed., op. cit., p. 16. Also see *Talks with Sri Ramana Maharshi*, p. 469.
22. M. Hiriyanna, *Outlines of Indian Philosophy*, pp. 347-8.
23. Ibd., p. 350.
24. Ibid., pp. 350-1.
25. David Godman, ed., op. cit., p. 185, emphasis added.
26. David Godman, ed., op. cit., p. 191.
27. Paul Brunton, op. cit., p. 65, emphasis added.
28. Ibid., pp. 65-66, emphasis added.
29. David Godman, ed., op. cit., p. 189, emphasis added.
30. Ibid., p. 190.
31. M. Hiriyanna, *The Essentials of Indian Philosophy*, George Allen and Unwin, London, 1948, p. 85.
32. Ibid., p. 81.
33. Arthur Osborne, ed., *The Teachings of Bhagavan Sri Ramana Maharshi in His Own Words*, Sri Ramanasramam, Tiruvannamalai, 1971, pp. 241-2.
34. *Spiritual Instruction of Bhagvan Sri Ramana Maharshi*, Sri Ramanasramam, Tiruvannamalai, 1974, pp. 12-13.
35. *Talks of Sri Ramana Maharshi*, p. 552.
36. David Godman, ed. op. cit., p. 40.
37. David Godman, ed., op. cit., pp. 36-7.
38. A. Devaraja Mudaliar, op. cit., p. 56.
39. See R.C. Zaehner, ed., *The Concise Encyclopedia of Living Faiths*, Beacon Press, Boston, 1959, pp. 300-1.
40. M. Hiriyanna, op. cit., p. 377.
41. *Talks with Sri Ramana Maharshi*, p. 535.
42. '. . . an indefinite number of persons might, for all we know, dream a world of identical contexts, in which each with a difference occupied his proper place', quoted in T.M.P. Mahadevan, op. cit., p. 126, note 45.
43. David Godman, ed., op. cit., p. 37.
44. Arthur Osborne, ed., op. cit., p. 250.
45. Paul Brunton, op. cit., p. 104.
46. Ibid.
47. David Godman, ed., op. cit., p. 188-9.
48. Ibid., p. 189.
49. Eliot Deutsch, op. cit., p. 38. For Ramaṇa on God in the present context see *Talks with Sri Ramana Maharshi*, pp. 286-9; Paul Brunton, op. cit., pp. 89, 103, 180-1, 187; etc.
50. Eliot Deutsch and J.A.B. van Buitenen, op. cit., pp. 306-7, emphasis added.
51. Arthur Osborne, ed., op. cit., p. 11.
52. S. Radhakrishnan, *The Hindu View of Life*, Macmillan, New York, 1929, p. 47.
53. *Talks with Sri Ramana Maharshi*, p. 563.

A genetic exploration of women's subjugation: the adventures of a gadfly

ADITYA BARNA MITTRA
Fellow, Indian Institute of Advanced Study, Shimla

I

A corporate manager was once asked how many people worked for him. He replied: 'About half of them.'

The other half were also working, of course, although not in quite the manner our manager would have understood. All living beings work. What the plant does when it turns to catch the sun or bends away from shade, is work. What the sparrow does when it feeds itself, is work; when it builds its nest and breeds, it works; the swallow, or the weaverbird, work, creating nests that are technical marvels; social insects, such as the hymenoptera, display an amazing organization as they work. And, of course, humans are at work too, even when it appears to our corporate manager that they are not. The *Gītā* proclaims: '*Śarīrayātrāpi ca te na prasiddhyedakarmaṇaḥ*.[1] A straightforward rendering of this in English is: 'Even keeping the body alive cannot be accomplished without work.'

What is all this work for? If we were to interpret *Śarīrayātrā*, literally the journey of the body, not merely as the act of the organism keeping itself alive, but also of perpetuating its life into the future, after its own death, we might find a clue in the half *śloka* quoted above. *Śarīra* derives from *śṛ*, meaning 'that which is easily destroyed or dissolved',[2] yet the essence of *śarīra*, life, continues in its journey into the future through the perpetuation of genes by procreation. This requires work. The fundamental purpose of all work of all living beings, is to maintain the continuity of life by perpetuating their genes. The propensity to do this is built into every living organism.

It is tempting to wonder if there would have been much less social tension, and if human society would have been a vastly more harmonious mess, had humans been haploids. Unfortunately, we are not. And the best we can do is to attempt to unravel the roots of our travails in order to try and reduce them, as we continue on our mysterious journey through life bearing our diploid cross.

If we were to transcend the precepts of sociology, it may not be entirely illegitimate to assume that men and women work at the most fundamental level for the perpetuation of their genes. But they do so in modes that are almost antagonistic, as the eternal 'battle of the sexes' would seem to suggest. Yet male and female must collaborate if they are to succeed. Humans have not yet found the means for doing away with this need for collabora-

tion, although there are lowering clouds on the horizons of genetics and molecular biology that threaten such a possibility. Should this become a reality, human society will surely become a 'joyless assembly' in fulfilment of Emerson's ominous warning: 'Things are in the saddle and ride mankind', a warning bravely articulated by Huxley in apprehension of a *New World*, and visualized, although somewhat differently, as *Modern Times* by Chaplin.

The most fundamental difference between man and woman, one that forces behavioural differences between them as they work to ensure the continued journey of their *śarīras*, is that while man produces millions of spermatozoa everyday of his procreative life, woman, in contrast, produces only a few hundred ova between menarche and menopause. This stunning imbalance in procreative resource virtually creates two separate social worlds in which men and women live.

It may not be entirely illegitimate also to say that all living things are resource-maximizing organisms, at least as far as the fundamental procreative impulse is concerned. For a community of humans, the maximization of the male procreative resource would be possible if all women of child-bearing age were to be engaged to the maximum extent possible in pregnancy, parturition, and the post-natal care required to ensure the survival of offspring. As a result it must have been natural for the pleistocene male to maximize the use of his abundant procreative material, albeit unknowingly, by finding as many mates as possible to beget as many offspring as possible and impregnating them as many times as possible. There was a safety in numbers as it led to a corresponding reduction of uncertainty. The probability for the continuity and multiplication of the male gene was improved by a large brood, for some would surely die early in a hostile world, and some others fail to procreate. In choosing his mating partners, the primary quality that man looked for was fecundity. He looked for women who would invest his seed with life.

Woman too was moved by genetic forces to look for mates who could bring her eggs to life. But her very limited procreative resource would have ensured that her urges were very different to that of the male. Quite apart from the limited number of ovulations during her procreative life, woman was further limited in her procreative function by the time and tremendous energy needed to convert a fertilized egg into a person. And because all this must happen inside her body, she could hope, even if she lived in a state of nature, to bring forth, at the most, a couple of dozen offspring in her life—although the complementary resource, the male sperm, required by woman for perpetuating her own genes was virtually boundless in its availability. In contradistinction to the male, whose procreative capacity was limited by the female resource, woman was limited in her own capacity of perpetuating her genes.

This limitation of procreative resource ensured that woman had behaviours different to that of man. She had to be more selective in her search for mates: she had to look for qualities other than mere virility. Because of the very limited number of offspring she could produce, woman's chances of projecting her genes into the future were very much leaner, what with death, sterility, infertility and other uncertainties likely to be inflicted on her progeny. Woman had therefore to be very selective in her mates and, for identical reasons, very protective about her offspring.

With genetic intuition early woman would have looked for mates who would not only be virile, but who would also be most likely to help her in raising the young. In modern parlance, she sought security. For woman this need for security was not for her own protection. Simone de Beauvoir wrongly surmised that woman sought security to evade the economic and metaphysical risks of liberty.[3] We are of the opinion that such a view has no legitimacy, and is depriciatory of feminine psychology. Woman sought security for the survival of the limited number of her offspring who would bear her genes into the future. This was necessary if she were to make the most of her very meagre procreative resource. While man and woman needed to collaborate with each other for the perpetuation of their genes, woman additionally required, and sought, assistance from her partners.

And by that she may well have sown the seeds of her own domination by man.

It is worth noting here that the feminine need for security has had momentous spin-offs for the human race. In his monumental work *The Mothers*, Robert Briffault has convincingly shown, on the basis of a massive body of evidence, that although women are, as a general rule, smaller than men of the same race, they are unlikely to have been the 'weaker sex' in the remote past, and were in fact, larger and more muscular in many cases.[4] The primitive woman was as adept at hunting and fishing as her male counterpart, fully equal to man in her capacity to provide for her needs from her environment.[5] There was not likely to have been any cause for her to seek economic, much less metaphysical, security from her men. There is ample evidence that primitive women, *ferae naturae*, as it were, were as warlike, brave, capable of bearing physical pain as men, commonly participating in wars and raids, and were even generally distinguished by greater cruelty.[6]

Why are things so different now? In Briffault's opinion the current dominance of the male is the result of acculturation:

> ...sexual differences, both mental and physical, between men and women are products of social development, and are largely the effect, rather than the cause, of differentiation and the division of social functions. As we recede towards more primitive conditions, they become less pronounced, not only in temperament and mental aptitudes, but even in physical conformation and development, the two sexes approximate in their characters

to one another. Primitive woman is anything but 'effiminate', she is anything but delicate and soft, she is, it must be admitted, anything but beautiful.[7]

In attempting to explain how the change came about, Briffault falls back on an economic explanation. 'The differentiation of man as warrior and fighter is certainly not due to any constitutional indisposition or incapacity in primitive woman, but to economic necessities.'[8]

It is generally accepted now that agriculture and all home and cottage industries were developed by women. Providing an impressive catalogue of instances of primitive and tribal women engaged in leather-work, embroidery, weaving, basketry, pottery, medicine and surgery, and also making the tools required for their crafts,[9] Briffault prologues the information with the view that women undertook these economic activities because they were essentially home-makers:

> ...the constructive occupations which have given rise to the development of material culture belong, in the rudest societies, almost exclusively to the sphere of women's work, and the men take no share in them. All industries were at first home industries, and developed, therefore, in the hands of women, who were the home-makers and stayed at home.[10]

The foregoing is offered as the explanation for the transformation of woman. Although this view is eminently satisfactory up to a point, Briffault, in our opinion, actually stops one step short. He does not explain *why* women are home-makers and why it should have been exclusively their business to develop agriculture, basketry, pottery and so on. We suggest that women learnt to be home-makers because home is, essentially and above all, a place of security. Once again, the security was not for the woman herself but for her offspring. Woman is not merely the home-maker, she *invented* home. She invented home for the safety of her children who were to project her genes into the future. It followed logically that women were also the first to build dwelling houses.[11] Having built her house woman became truly the mistress of it, an epithet she retains to this day in most societies. Among several primitive people she alone dwells in it with her children while the men sleep elsewhere, or are admitted only as her guests.[12]

Woman also found it useful to stay at home when men went hunting, raiding, or on war parties, in order to ensure the safety of her offspring, who were, as we have seen, for genetic reasons, more precious to her than they were to their fathers. The invention of the home would have made it more interesting, pleasurable, and worthwhile to stay back. In doing so, woman also had the leisure and opportunity to observe and experiment, and so developed agriculture, home industry, and even trade.

Evidence from tribal societies worldwide suggests that trade was also developed by women.[13] The custom among the Khasi, Garo, Mizo and Naga tribes in the eastern Indian states of Manipur, Mizoram, Nagaland and Meghalaya, where women are in charge of shops: buying and selling, and related economic activities, and the existence of a market at Imphal wholly 'manned' by women, are perhaps the lingering vestiges of a primordial practice.

It is generally believed that women invented magic, which can be described as a set of beliefs and practices which seeks to alter the course of nature in favour of humans by direct intervention, without any appeal to divinity. In this sense, magic is proto-science, and the world owes science to women who were its initiators in its primitive form.

Both primitive material culture and magic were technologies for human progress. Technology does not merely produce goods, it expands the human imagination by creating new relationships between humans and their environment. Since 20 July 1969, when Neil Alden Armstrong stepped from the 'Eagle' onto the dusty surface of the moon with the words: 'That's one small step for a man, one giant leap for mankind,' we are unable to relate to our satellite in any of the old ways, we have an entirely new relationship with it. In the same way, when early humans learnt to pluck fruit from trees using sticks, it was a step in technological progress: their relationship with trees altered radically. When fruit was first gathered in bulk in baskets, the existential value of fruit as food underwent a sea-change in the human mind. We can safely say, women were the first technologists and thus the initiatory agents of the extension and expansion of the human imagination through technology.[14]

Although the acquired quiescence of women when they became home-makers led to breathtaking breakthroughs in human economy and lifestyle, it also had a deleterious result. Political power passed into the hands of men. Admittedly, in pre-class societies there does not seem to have been a concept of power whereby those invested with it had control over the actions of others.[15] The genesis of power lay in wars, which were more common than we can imagine today. The unceasing frequency of wars can be glimpsed in the etymology of the Sanskrit word for war, *saṁgrāma*. It derives from *sam grāma*, the meeting of villages. Village communities, it would appear, met only to fight and fought whenever they met.

It is not difficult to believe that the situation in pre-Sanskrit times was no better. The first manifestation of political power was probably that of the victor over the vanquished. As women began to stay at home and the warrior class gradually came to consist only of men, authority and dominance over the conquered, taken as slaves, passed into the hands of men.[16]

This early manifestation of political power developed both in outreach and in complexity, as human societies passed from a pre-class state to

feudal organization. But this power remained with men who continued to perform the warrior's functions and eventually power became an instrument for the subjugation of women as a 'class'.

The few powers that women enjoyed in some societies were also whittled away as men accumulated political power which acquired additional dimensions as society became more complex. Thus, in the instances of women performing important economic functions in the eastern states of India, the economic *control* is in the hands of men.

II

The preponderance of mother goddesses, fertility rites, the worship of fecundity, in all early societies worldwide, is perhaps an indicator that, for a very long time, the part played by the male in the procreative process was not known. There may, however, have been an intuitive awareness, as can be inferred, as we shall note later, from the behaviour of higher primates. But this intuition would have become knowledge only at a later stage of human development. Among the recent archaeological finds of the Indus Valley (in Pakistan) there are early figurines of woman holding child. Figurines of man holding child appear at a much later period.[17] The two are separated by almost a millennium. Is it possible that fatherhood became known, at least to that particular society, sometime during the intervening period?

The discovery of man's role in the procreative process, earlier perceived as an exclusively female office, would have caused a great deal of confusion, even upheavals. It would have been an important juncture in human history during which human social behaviour changed tack. Man's new knowledge of his own function in begetting offspring would have filled him with wonder, boosted his ego, given him a sense of power over his mate, invested him with a new arrogance, and also introduced him to the pleasures and pangs of fatherhood. Simultaneously, the idea of a family as opposed to a mere group, albeit genetically held together as kin, would have been born.

III

And woman lost out. She was already dependent on man due to genetic compulsions; now she had to relinquish half of the glory of being the creator of life. The mother goddess lost her paramountcy, as new male gods infiltrated the pantheon.[18] *Paśupati* of the Harappan seal,[19] his phallus pointing heavenward, throbbing with life, could well be a symbol of man's celebration of his first victory over woman.

This is not to suggest that the discovery of man's procreative role reversed all social beliefs and practices. Quite the contrary. The belief in the

autogenerative procreativity of the woman, and therefore, in the supremacy of the Female Principle, in most cases submerged in the folk subconsciousness, manifests itself in many patriarchal societies even today. The supremacy of the Female Principle is evident in the extant *Śākta-Tantric* tradition of Hinduism where *Puruṣa*, or the Male Principle, which must have entered cosmogonical speculations after the discovery of the male procreative role, is assigned a static function and is little better than a corpse.[20]

The belief in the primary function of the Female Principle is found in later religions as well. The myth of the immaculate conception of Christ perhaps reflects a concession to the primitive wisdom of a time when procreation was thought to be an exclusively female undertaking: the Virgin Mary conceived Jesus without male intervention.

There is a striking parallel in Islam. Mary, who was a virgin in Christian mythology, gave birth to Christ who was to preach the Gospel, and Muhammad, who was illiterate, produced a book which was to deeply influence a vast multitude. The virginity of Mary is comparable to the illiteracy of the Prophet, and Christ can be compared with the *Qur'ān*.[21]

A myth in contraposition to the place of *Puruṣa*, the birth of Christ, and the illiteracy of the Prophet, can be found in a Vedic story which occurs with some variations in the *Ṛgveda*, the *Aitareya Brāhmaṇa*, the *Maitrāyaṇī Saṁhitā* of the *Black Yajurveda*, and perhaps in other later texts as well. It is as follows.[22]

At the beginning of Time, when Time had not yet begun, the black cows of the cosmic night mingled with the red cows of the morning, heralding the cosmic dawn. At that primordial moment, two actors appear on the scene. One the Father, who is *Prajāpati*, and the other *Uṣā*, his virgin daughter, born of his own body. The Father develops an incestuous desire for his daughter, and is about to embrace her in lust. She takes the form of *Rohiṇī*. He becomes a *ṛṣya*, an antelope, and pursues her.[23] The gods in heaven see this and are afraid that if these two beautiful animals, one the Father and the other his daughter, mate, eternity will never be the same again. In their horror and fear the gods assemble their fright and create the Terrible One and ask him to shoot the Father, the antelope, with an arrow.

Just as the antelope is about to take his perverse pleasure in *Rohiṇī*, he turns around and sees the archer aiming his arrow. In fear he cries out: 'Spare me, I make you *Paśunām pati*, Lord of animals.' Thus does the Terrible One come to be known as *Paśupati*. But the Terrible One does not desist. He howls in anger, *ārodit*, and is hence known as *Rudra*, and shoots his arrow. The consummation of the Father's passion is brought about as he is pierced by *Rudra's* arrow.

The antelope, pierced, flies upward and becomes the star *Mṛga*, the deer. The hunter too flies to heaven and becomes the star *Mṛgavyādha*, the hunter of *mṛga*. The daughter, *Uṣā*, becomes the star *Rohiṇī*.

The seed of the Father, after he was pierced by *Rudra's* arrow, fell on the

earth, the place of sacrifice, and became a lake of sperm. The gods surrounded the lake with fire so that the heavenly seed would not be contaminated, *māduṣa*. From this lake of sperm shed by *Prajāpati*, the Father, the Lord of Generation, were born *mānuṣa*, humans.

This cosmogonic vignette is entirely male-biased. Humans, animals, all living creatures, are born out of the male seed alone, without female participation in the act of creation. There is, in this story, a recognition of male promiscuity, as also of the need for social control of such behaviour. The errant male is punished, the woman he stalked is allowed to escape and remain chaste—chastity being, as we shall note later, an important male consideration for subjugating women. Simultaneously there is a celebration of male procreativity when the gods are called in to protect the seed of a lecher.

The male's serendipitous discovery of his procreative role, however, created new problems for him, as does every eating of the fruit of the Tree of Knowledge. Now that he knew, genetic compulsions forced him to make sure that his mates, in conceiving, were perpetuating *his* genes and not those of another male. This could obviously be best done by tying the woman irrevocably to himself, by ensuring that she did not cohabit with other men. The compulsions of all males would have been the same and the synergy born of the identity of interests gave rise to the first male 'conspiracy' against the female: the institution of marriage in its first and most primitive form was born.

It is reasonable to assume that woman acquiesced to the new arrangement, for it relieved her of the odium and uncertainty of sifting through swains to find good partners, and gave her a sense of security. It also freed her from the demands and quarrels of her numerous mates, all of whom she needed, some to bring up children already born, and others to beget more.

It is reasonable to argue that marriage was not merely an extension of 'pairing', which is an inescapable outcome of procreative needs. Marriage was one of the earliest institutions of man, and introduced, as all institutions must, structural changes in society, through which all subsequent social processes were to take place.[24] Pairing was the product of procreative needs and took place on the basis of genic intuition. Primitive 'marriage' was the result of the male need for certainty concerning the perpetuation of his own genes, born of his new knowledge of his own procreative role. Polyandry and promiscuity, both customs derived from sexual practices previous to the discovery of man's procreative role, largely disappeared, and were replaced by polygyny. The polyandry glorified in the *Mahābhārata* may well be a nostalgic recounting of tales about vanished social customs received through folk memory.

With the development and establishment of the institution of marriage, which maximized her limited and physiologically circumscribed procreative

resource, woman gradually became a 'property' of man. And only through the institution of marriage could man be certain about the successful propagation of his own genes. He could now ensure that no other male 'sowed' in the 'field' where only his seed was to sprout. *Kṣetrabhūtā smṛtā nārī*:[25] by the sacred tradition woman is declared to be the arable field, and only the rightful owner can work the patch. *Kṣetra* derives from the root *kṣi*, meaning to dwell, to inhabit, and one of the first meanings of the word is 'landed property'. The field-female analogy can also be found implied in the Sanskrit word *lāngalam* which means both the 'plough' and the 'penis'.

It can perhaps be said in defence of the 'conspiring' male, that man, while making woman a property, probably did not actually invent the notion of *ownership*. He merely institutionalized a trait which is observed in animal behaviour and therefore can be safely assumed to have been present in primitive humans as well. Baboons and butterflies, for instance, exhibit owner-like behaviour on questions of property.

Although the lot of the female olive baboon is comparatively better,[26] in that her 'society' does not require her to be 'owned' by the male, among hamadryas baboons the aggressive males distinctly treat females as 'property' and herd them around. In a fight between two males over a female, the combat is always resolved in favour of the 'owner'[27] indicating that some sort of 'bourgeois legal system' among the hamadryas baboons protects ownership rights. This owner-like behaviour of the male hamadryas can perhaps be explained by the possible presence of an intuitive awareness of the male role in procreation.

Respect for property has been observed among butterflies as well. It has been found that, as in the case of baboons, disputes among speckled wood butterflies competing for the same resource are resolved in favour of the 'owner'. Even tatty, old butterflies have been known to vanquish young males in mint condition, when the former was the rightful 'owner' of a 'property', which in this case, was a sunspot. In a delightful paper N.B. Davies describes how speckled wood butterflies (at Wytham Woods, near Oxford, England) competed for pools of sunlight which were the best places for attracting females.[28] Individual male butterflies would spend an entire day in one sunspot, always remaining inside it and moving with it, as the sun moved across the sky. It would perch on a frond of bracken, or on a bramble leaf, and fly out to inspect every passing object, ignoring the thing in transit if it were not another speckled wood male. Whenever another male speckled wood approached the sunspot, a contest would take place. The original owner and the intruder would engage in a spiral flight, appearing to bump into each other, rising up toward the tree canopy, until one would throw in the towel and fly away. In every case it was the intruder that was driven away. The rule for settling disputes was, 'resident wins, intruder retreats'.

Quite apart from the need for certainty about the future of his genes,

there was another, more pragmatic, need for man to imprison 'his' women. In cases of infidelity, all that the woman lost was the companionship of her chosen partner; but if adultery produced offspring, an unsuspecting male was committed to the prolonged labour of bringing up children which were not his own. Therefore, man, after having circumscribed the activities of woman through the institution of marriage, would have found it necessary to further reinforce the bastions against even stealthy adultery. This was achieved by constructing new and ingenious fencing around woman: whole systems in religion, morality, ethics, literature and the arts were raised, enjoining the woman to absolute fidelity. She was threatened, cajoled, pleaded with, and brainwashed, into remaining chaste. Gushing expressions of admiration for the 'virtuous' woman were used as a coercive tool for the promotion of the stainless woman, and the ones that got 'tainted' were reviled into shameful coverture. Men were warned of the power of woman to lead them astray, by portraying her in art and literature as the lascivious seductress.

In a somewhat different creative area, words of abuse are founded on images of women being violated. Although the most picturesque of the more penetrating ones are based on incest, a subset of adultary, they nonetheless refer to adulterous situations. The man most vile is the one who has sown in another's field. We have already noted the popularity of this agricultural imagery.

This kind of depiction of women in word and image has occurred in varied fora in many societies at different times. It is not suggested that all depictions of women have always been in this mode. Assuredly not. The creative artist, who is also in a sense the liberator of human thought, has often shed the shackles of genetic bondage. However, there is no escaping the feeling that the promotion of feminine virtue, defined as female sexuality under male control, has been a major preoccupation of human creative endeavour. It is worthwhile to look at one instance of this, European oil painting, in some detail.[29]

One of the recurring categories in the visual arts, particularly in European oil painting, is the naked woman. In these visualizations the woman is not merely naked, she is nude. Nakedness is merely an uncovered state, nudity is *display*. She is a sight to be surveyed and judged—by men of course. This is explicitly stated in pictorial renderings of the favourite theme of *Susannah and the Elders*. This is the bibilical story of a beautiful and virtuous woman who is seen taking her bath by two elders who then make advances which Susannah repulses. The two lustful men threaten to bear false witness against her, and do. Susannah is indicted, but is later acquitted by the intervention of Daniel. We meet this theme early on in Christianity in the paintings of the Catacombs and on early sarcophagi. The bathing and peeping scene again becomes a favourite subject for painting during the Rennaissance, and Rembrandt and others use it. The theme must owe its

popularity to the fact that the story is about a virtuous woman who preserves her chastity.

In one version by Tintoretto, Susannah acknowledges being looked at by looking at the spectators looking at the painting. In another version by the same painter, she looks at herself in a mirror, thus joining the spectators and the peeping elders in viewing the spectacle which is she herself.

Another favourite theme, *The Judgement of Paris*, which has attracted a master like Rubens and also others like Lucas Cranach the Elder, shows not only men looking at nude women but also judging them. Paris awards the apple to the woman he finds most beautiful. In a painting by Lely commissioned by Charles II for private viewing by himself and his guests, charming Nell Gwynne, his mistress, offers herself as a spectacle in resigned surrender. Nell is included in the proceedings by making her look directly at her spectators, thus underscoring the statement that she is indeed conscious of being on display. The technique is the same as that used in girlie magazines today where the women are made to look into the camera lens.

Lely's painting of Nell Gwynne seems virtually to be a visual translation of a *śloka* from *Gitagovindam* of Jayadeva. Kṛṣṇa, unable to bear his longing for union with his beloved, sends a woman accomplice to seduce Rādhā on his behalf. The woman advises Rādhā:

Vigalitavasanam parihṛtaraśanam ghaṭaya jaghananapidhānam
Kiśalayaśayane paṅkajanayane nidhimiva harṣanidānam (5.13)

Let your clothes fall away, cast away the covering of your breasts, uncover your loins, and thus, O Lotus Eyed One, lie down on a bed of young leaves and shine forth like a jewel to give pleasure (to the beholder).

The statement of display is extended in *The Dream* by Henri Rousseau, a folk artist *par excellence* and a genius, in which two feline animals gawk at a reclining nude woman, while a man, fully clothed, plays a woodwind, perhaps in celebration of the event.

The point of display is that the object must be shown in a form in which the viewer would want to possess it. This is as true of modern-day advertisements as it was of old masters. During the age of agricultural improvers in eighteenth-century England, painting of livestock emphasized the pedigree of animals and the paintings hung in affluent homes alongside portraits and landscapes. Witness Robert Bakewell astride a splendid bay cob by John Boultbee or the *Lincolnshire Ox* by Stubbs. At a time when food, particularly meat, could not have been as freely available in Europe as it is now, a genre of paintings displayed fruit, cheese, game and meat. Witness *The Meat Stall* by Peter Aersten, *Still Life with a Lobster* by Jan de Heem, *Still Life* by Pierre Chardin displaying wine and cheese, and *Still Life* by Goya displaying flanks of beef and the dressed head of the slaughtered animal. Livestock and food are displayed in these paintings in the

form in which the viewers, who are the clients of the painter, would desire to possess them.

Although the display of nudity in paintings is more complex, one important facet of it is sexuality: the naked body of a woman has to be displayed in a particular manner in order to make it a nude. The conventions that developed over, and prevailed for, about four centuries in European oil painting were aimed at controlling the lived sexuality of the women portrayed. (Manet's defiant *Olympia* signals the break from this tradition.) For example, in Bronzino's famous *Venus, Cupid, Time and Love*, a painting primarily about kissing, Cupid is portrayed administering the kiss whereas Venus is placed in an odd and unnatural position, the purpose of which can only be to display her nude body to the viewer. The painting does not depict her sexuality. The appeal is to the sexuality of the man looking at the picture. In *Les Oréades* by Bouguereau, a crowd of tellingly depilated nude grotto nymphs in impossible postures, each entangled with another, flows diagonally heavenward. Sexuality has been cleverly taken away from the women and transferred to the male viewer of the painting by placing three male satyrs in the foreground with whom the male viewer is expected to identify and who are obviously ogling the women. The women themselves are emptied of *their* sexuality and brought under the sexual control of the male viewer via the satyrs. Painting the woman's body without hair is another convention by which women are deprived of their sexuality. Body hair is associated with passion and sexuality, perhaps because of its appearance at puberty. Denying women their body hair can be seen to be a way to bring female sexuality under male control. The women who are virtuous are those who are under the control of men. The common practice among some prostitutes of removing body hair is perhaps a symbolic surrender of their own sexuality to the control of the customers.

Any suggestion of autonomous sexuality in women has been so unnerving for men down the ages, its potential for productive adulterous situations so unsettling, that a whole male cognitive sub-universe has been created in most societies, and other drastic provisions made to prevent adultiery. In some societies, adultery is punished even today with savage severity. Mythologies, too, often portray sanctions against any manifestation of female sexuality. In the *Rāmāyaṇa*, when Śūrpaṇakhā tries to seduce the virtuous Lakṣmaṇa, her nose is cut off, an operation that has been interpreted as a clitoridectomy,[30] an attempt no doubt at emptying the ogress of her sexuality. The severity of the punishment for an amorous advance is startling. Some cultures try to prevent premarital copula among unmarried women by surgical infibulation, which involves the removal of the clitoris (an attempt, once again, to minimize the woman's sexuality), the removal of the entire labia minora and adjacent parts of the labia majora, and then stitching together the two sides of the vulva, leaving a small aperture for urination and menstruation.[31]

IV

To these many and imaginative male strategies to subjugate her, woman, in her infinite wisdom, not only acquiesced, but even contributed actively, solely to promote her own genic interests.

Since man perhaps was never completely in a state of nature, but always in a state of culture, the process of the subjugation of woman could be expanded and completed only culturally. In this largely male endeavour, man may have even succeeded in constructing what one could perhaps call 'male rationality'.

Is the human power of reasoning culturally constructed? We suggest it probably is. The concern of contemporary philosophy on the ideals of rationality shows a substantial preoccupation with relativism. This preoccupation, it may be argued, arises from a sense of unease that truth, after all, might be relative to particular cultures at particular times. This relativism about truth also removes the Realist difficulty regarding the cognizability of truth: that if truth exists independently of the mind, there is no way for us to know that we have found the truth even when we have in fact found it. In one philosophical view, that of Wittgenstein, language is a social phenomenon, which is implicit in the sharing of a social form of life, the existence of which presupposes an agreement not only on the concepts people have, but also on the judgements they make in the course of a social life. Human agreement on the use of language determines what is taken as true or false, rational or irrational. 'It is what human beings *say* that is true or false; and they agree to it in the *language* they use. That is not agreement in opinion but in form of life.' Further: 'If language is to be a means of communication there must be agreement not only in definitions but also... in judgements.'[32]

Thus, rationality which is arrived at in language itself turns out to be a 'form of life', an embodiment of a cultural universe. A brief and tentative argument as an attempt to root rationality in culture is offered in the Appendix.

In the softer and more pragmatic relativistic view, it may not be entirely presposterous to argue that if rationality is culture-dependent, it cannot be gender-free. Human rationality may be sexually relative, just as it might be culturally relative, and there may exist male and female 'reasons'.[33] It has been argued that an examination of philosophy reveals an isomorphism between philosophy and the male body, which implicitly privileges the masculine form in Western constructions of logic and metaphysics.[34]

It seems possible to develop, then, the argument that since reason does not transcend gender, it cannot possibly transcend the contingent historical circumstances that have the potential to differentiate male and female minds. As we have already noted, there have been enough genetic-historical circumstances to create two separate social realities for man and woman—

realities which can only be culturally expressed. Man's massive cultural domination may well have engendered the dominance of male reasoning. The subjugation of woman, which was born in biology, became complete with the construction of masculine rationality. Woman did not protest, for the whole sordid business suited her genic needs (until, it seems, the development of science and technology began changing the form of the expression of these needs, tilting the balance away from man).

The question then arises, if the foregoing is valid, can there ever be true equality between man and woman? In the trajectory of our assumptions, it seems not. Perhaps they are destined by nature to live, in the best circumstances, as co-equals.

The genetic model of woman's subjugation in its outcome agrees with Simone de Beauvoir's 'woman as other'. In her model of the male-female relationship, she extends the Sartrean struggle for dominance between the looker and the looked-at in which one sex is permanently the privileged 'looker'. The other, engaged in struggle, but not seriously antagonistic, connives in its own defeat. de Beauvoir deviates from the struggle of the Sartrean model, in which there is an ongoing combat of looks. Woman, in Beauvoir's model submits to become the permanent 'other'.[35] To quote from *The Second Sex*:

> To decline to be the Other, to refuse to be party to the deal—this would be for women to denounce all the advantages conferred upon them by their alliance with the superior caste. Man-the-sovereign will provide woman-the-liege with material protection and will undertake the moral justification of her existence. Thus she can evade at once both economic risk and the metaphysical risk of a liberty in which ends and aims must be contrived without assistance.[36]

Shorn of the polemical slant, this only means that woman acquiesced to her own subjugation. She did so because of genetic compulsions. As the social ecology, in which the compelling needs are expressed, is altered by science, a new struggle begins for changing the structure of gender relationships.

V

There are theoretical grounds for believing that sociobiology, lately termed evolutionary psychology, cannot directly explain all human behaviour. This is so because of the existence of the excess and parallel capacity of the human brain beyond that which is called for by the needs of a genetic response to evolutionary pressures. It is legitimate to hold that the development of the human brain has been along the trajectory of biological needs, as the human organism evolved through the more or less two million years of the pleistocene period. The brain developed by learning to cope

with the evolutionary demands made upon it. However, because of the very nature of the brain, its capacity could not remain limited to responses to biological needs alone. It was simultaneously invested with other capacities, both in excess and in parallel, and thus became capable of generating behaviours other than those required to meet purely biological needs.

This can best be appreciated by an analogy with the nearest thing to a brain, the computer. Imagine that in the beginning there is only a programme and no computer. (In the case of the human brain this 'programme' would be one for responding to evolutionary pressures.) If we now built a computer to run the programme, we would have created a machine which would be capable of running other programmes as well. By chance we might create a computer which could run bigger programmes at speeds faster than those dictated by the original design requirements. The computer might even write new programmes for itself.

In some manner similar to our computer, the human brain may well have, and by all indications it indeed has, acquired capacities vastly in excess of the original demand. It is now capable of generating behaviours which do not seem to have biological origins. For example, it has propelled humans to create mathematics. Even lower mammals exhibit behaviours that cannot be biologically explained. For instance, the altruistic behaviour of an untrained but pet dog, when its master is in danger, can scarcely be explained by the socio-biological theory of 'inclusive fitness' (or 'kin selection'). Furthermore, the brain seems also to have acquired a capacity to *thwart* biologically demanded behaviour and replace it by other behaviours.

However, sociobiology has a seductive charm. The elegance of any field of human inquiry is always enchanced when the number of assumptions on which it is founded is reduced. The most elegant of all subjects, mathematics, for example, has reduced its foundation to a single assumption, that of set membership; it is possible, although somewhat difficult, to construct all of mathematics from the single assumption: the concept of a set.[37] Sociobiology, despite criticisms levelled against it, may light the path toward reducing the number of assumptions in the social sciences.

To draw again upon the brain-computer analogy, a study of the original programme around which the computer was built may enable us to understand the internal logic of the computer (which, this time round, assume we do not know) and thus help us in understanding the other programmes. Sociobiology has the potential of giving us access to the logic of our own brains, and therefore provide explanations of our behaviour, through the study of the original, biologically determined, 'programme'. It would then have reduced the assumptions to a single one, namely, that the development of the brain has been fashioned around biological determination.

Sociobiology burst upon the scene with the publication of Edward O. Wilson's *Sociobiology* in 1975. It has been a subject of great controversy since then. A lot of serious writing has been published to debunk it. But at

the same time, more and more serious and committed thinkers have been drawn toward it. The controversy continues, but, in the meantime, like the cold fusion of Fleischmann and Pons, or like the formative causation of Sheldrake, sociobiology promises to be great fun.

Appendix: Toward a Cultural Ontology of Rationality

Rationality is not a concept as well defined as we may wish to have it. However, it can be agreed that rationality is something that arises out of what we may call Reason, which is the human capacity 'to reason'. When we reason we normally come up with reasons for responding (which includes not responding) to something. One may have reasons to act (or not to act), reasons to love (or hate), reasons to feel angry (with something, or somebody including oneself), and so on. When one reasons, one takes up something like a Cartesian position of a subject in a non-indifferent relationship of binarity vis-à-vis an object. The object is a being, human or non-human, including an idea, a situation, an event, or whatever.

A relationship links the subject to the object. Transcending and unifying the triad of subject-relationship-object is an engagement. When one reasons one's mind is engaged. The transcendence can be appreciated if we take note that in a subject-object relationship, the subject *qua* subject comes into being by virtue of the apprehensibility of the object, just as the object *qua* object is created through the apprehension of the subject. And the single relationship which creates both the subject and the object cannot exist on its own. Engagement has the function of augmenting (or maintaining) coherence in an existential situation. Coherence is to be understood as a measure of internal accord in the order of the human universe. It is suggested that order is one of the most fundamental ingredients of human existence. Rationality is that aspect of engagement which justifies the type or nature of coherence that is created (or maintained) by an engagement. Rationality is the algorithm of justification, not with reference to right-and-wrong or other value positions but with reference to coherence, value positions being subsequent to rationality. Since existential situations can arise in different (and various) experience fields, rationality in this sense is a class of different principles that provides justification for the kind of coherence created or maintained in an engagement.

Rationality, as that aspect of engagement which provides justification for the result of the engagement, draws its sustenance from knowledge. Knowledge is information generated through another aspect of engagement, namely cognition. Engagement is the locus of cognition. The cognitive aspect of engagement converts the being (fact/s) into information which is structured by the mind to become knowledge about the existential situation. It must be emphasized that knowledge is never about facts, but always about information which is a situational value of facts. It may happen that knowledge becomes abstracted to produce a theory which is generative knowledge, in the sense that it can produce information about situations other than that in which the engagement is taking place. The justification in an engagement is always on the basis of knowledge.

The nature of information, and therefore of knowledge (including theory) generated in an engagement, will depend on the universe of discourse that is adopted or imposed on the engagement. A universe of discourse, in our sense, is a 'discursive formation' unselfconsciously placed by an *épistème* in the form of a categorical grid on reality as a means of comprehension. Simultaneously, it is also the rhetorical strategy of a group which seeks conformity in comprehension. For example: confronted with a rose, a botanist may proceed to analyse it 'objectively', in the sense of not allowing, as far as possible, the object in the engagement to affect or impinge on the latitudinarian prerogative of himself as the subject, and generate information and scientific knowledge which will make the rose more coherent, albeit in a special manner, to the human mind. The engagement takes place and its rationality lies in the experience field of science, and the justification is provided by the fact that the rose is now scientifically more coherent within the universe of scientific discourse.

In a contrary situation, a poet confronted with the same rose, may reject the objective position of the botanist and, instead of trying to maintain any semblance of insusceptibility, may allow the flower to 'act' upon him in ways (we will ordinarily call this process 'subjective') that will enable him to produce poetry. He will then have generated information and knowledge of a special (artistic) kind that did not exist earlier, and will have augmented the coherence of the existential situation in the sense that the rose can then be related to in new and additional ways. Such an engagement, in its rationality, lies in the experience field of arts, and the justification of the created coherence takes place within the universe of artistic discourse.

It is important to note that the justifying function of rationality can occur only within a particular experience field and a corresponding universe of discourse. For example, it may be theologically rational (in some hypothetical religion) to explain thunderclap as an act of God, but irrational to do so in science. It may be religiously rational to absolve a person of his crime after a confession, but it would be irrational to do so in law.

It follows, then, that the function of rationality, namely justification, has to follow certain rules which are enunciated by the experience field and its universe of discourse. Moreover, these rules have to be commonly accepted ones and not arbitrary. The true locus of the rules is the group-mind and not the mind of any individual. Asked to continue the number series 1, 4, 9, 16 . . . one may add 10, 12, 14, 16 . . . following the arbitrary rule that

the subsequent numbers in the series are to be formed by multiplying by 2 the integers beginning 5, but such a rule will not belong to arithmetic and the result will be arithmetically incoherent in that it cannot be rationally justified. (However, it will be arithmetic if a series is formed of sets of four integers obtained by the alternate application of the two arithmetical operations in the example. But that is not the point here.)

The rules by which rationality becomes functional are formed by the group-mind on the basis of knowledge for providing justifications of outcomes of engagements. The generation of these rules by the group-mind is done through group agreement. Language is perhaps the most prominent example of such an agreement. Other agreements too form other rules on the basis of the knowledge of the group about different existential situations based on experience. The rules are products of agreements which in their turn are the result of an unconscious 'logic' of the human mind which continually drives humankind towards higher and higher coherence. We have to accept this unconscious logic, evidence of which we see all around us, as something which is primary, innate, and irreducible.

The following of rules generated by the group has to be learned by the individual through training in the sense of acquiring access to the group knowledge. This training, this acquisition of access to group knowledge, is a cultural process and a result of the socialization of the individual. Through socialization and acculturation the individual acquires the rules generated within a culture for various existential situations using different universes of discourse as may be culturally perceived to be appropriate. In order to be rational, the individual has to learn the rules of the group which determine justifications of the results of all commonly conceivable engagements with coherence as the benchmark.

Not only are rules and their transmission cultural processes, but human knowledge, which is grist for the rule-making mill, itself has cultural origins. As we have already noted, knowledge is structured information and information is situational value of facts. The situational value of a fact is determined by the culture in which the information is generated. In this process culture and knowledge have a truly symbiotic relationship. Culture acquires its substance through knowledge, and knowledge, being a structure of situational values, gets its form from culture. The situational value of a cow in India, for example, can be *inter alia*, that of a sacred object, whereas it can be that of food in Europe. The situational value of a likeness of a religious prophet is that of an object of adoration in one religious culture whereas in another it can be that of sacrilege. In manners akin to that in the case of our cow and our prophet, the situational values (i.e. information) of all facts including physical objects, events, ideas, etc. are culturally determined. Knowledge as structured information is thus culture-dependent. To emphasize the symbiosis once again, the culture of a community

determines the kind of knowledge it acquires and the knowledge it acquires shapes its culture.

Assuming the existence of an unconscious 'logic' which propels humankind towards achieving higher coherence, and taking rationality as an aspect of engagement that provides the justification of coherence as an outcome of the engagement, we have noted that rationality is chained to double anchors: those of knowledge and of group rules. We have also seen how both knowledge and rules have their origins in culture and are culture dependent. In conclusion it seems reasonable to surmise that rationality, which is loosely and generally understood to be a product of the human power of reasoning, is culture-dependent notwithstanding any autonomy that the human mind itself may have over the milieu in which is becomes manifest.

References

Foucault, Michel, *The Order of Things*.
Mercier, Andre, 'On Reason and Rationality', in *Rationality and Philosophy*, edited by V.K. Bharadwaja, Northern Book Centre, New Delhi, 1984.
Winch, Peter, *The Idea of a Social Science*, Routledge and Kegan Paul, London, 1958.
Wittgenstein, Ludwig, *Philosophical Investigations*.

Notes

1. *The Bhagavadgītā*, 3:8.
2. Monier Monier-Williams, *A Sanskrit English Dictionary*.
3. Simone de Beauvoir, *The Second Sex*, translated and edited by H.M. Parshley, Penguin, 1972, p. 21.
4. Robert Briffault, *The Mothers*, George Allen and Unwin, London, 1952 (reprint), Vol. I, pp. 443-7.
5. Ibid., pp. 447-50.
6. Ibid., pp. 451-9.
7. Ibid., p. 489.
8. Ibid., p. 451.
9. Ibid., pp. 460-72, 485-9.
10. Ibid., p. 460.
11. Ibid., pp. 477-83.
12. Ibid., p. 487.
13. Ibid., pp. 483-5.
14. Cf. Ervin Laszlo, *Evolution: The Grand Synthesis*, New Science Library, Boston, 1987, pp. 92-101.
15. Robert Briffault, op. cit., pp. 491-7.
16. Ibid., pp. 495-6.
17. Alexandra Adrealeanue Jansen, 'Art and Artefacts in Prehistoric Cultures', illustrated talk delivered at The India International Centre, New Delhi, 9 September 1988.
18. N.N. Bhattacharyya, *History of the Tantric Religion*, Manohar, New Delhi, 1987 (reprint), p. 177.

19. Seal 420; Sir John Marshall, *Mohenjo-Dāro and the Indus Civilization*, 1931, Vol. I, pl. XII, No. 17; and E.J.H. Mackay, *Further Excavations and Mohenjo-Dāro*, Vol. I, 1938.
20. N.N. Bhattacharyya, op. cit., p. 59.
21. It has been absurdly and mischievously suggested that Muhammad wished to be thought of as ignorant and illiterate in order to raise the elegance of the *Qur'ān* into a miracle (Thomas Patrick Hughes, *Dictionary of Islam*, 1885, entry under *Ummī*). This wild speculation seems to be grounded more on *odium theologicum* than anything else. The application of the term *ummī* to Muhammad is quoted as evidence that he could not read or write. In reality the expression has no bearing on the question. *Sūrah* ii. 78 which gives rise to this assumption does not charge the *ummīyūn* (plural of *ummī*) with illiteracy but with a deficient knowledge of the holy scriptures. In *sūrah* iii. 20, Muhammad invites the *ahl-al-Kitāb* (peoples of the Book, i.e. the Jews and the Christians) and the *ummīyūn* to adopt Islam. *Ummīyūn* in this verse means 'heathen'. In verse 75 of the same *sūrah* the word is put into the mouths of the *ahl-al-Kitāb* which makes it possible that *ummī* is a word coined by the *ahl-al-Kitāb* to describe the heathen. The strangeness of the Prophet calling himself a 'heathen prophet' can be resolved by appreciating the fact that Muhammad was not, in all probability, fully aware of the full significance of the Jewish conception of 'heathen and he gives a new meaning to the word when he uses it. Nevertheless, this misinterpretation was generally adopted with the result that the Arabic word *ummī* now means illiterate. This cannot be construed to mean that the Muslim understanding of the word *ummī* is a polemical position to argue the miraculous quality of the *Qur'ān*. The uncreate prototype of the *Qur'ān*, the *Umm-al-Kitāb* (the Mother of the Book), lies in heaven, and for the believer the *Qur'ān* is miraculous, were the Prophet literate or not. (See *The Concise Encyclopaedia of Islam*, Stacey International, London, 1989; and *Shorter Encyclopaedia of Islam*, E.J. Brill, Leiden, 1961). Regarding parallelism between Islam and Christianity cf. Frithj of Schuon, *The Transcendent Unity of Religions*, translated by Peter Townsend, Harper and Row, 1975, pp. 112-5.
22. To make the story sequential and intelligible as a parable, the account given here has been obtained by combining all three versions of the texts mentioned as recounted by Stella Kramrisch in *The Presence of Śiva*, Princeton, 1981.
23. *Ṛṣya* is a male antelope. *Rohiṇī* connotes a red cow and also means a young girl who has just begun to menstruate.
24. Cf. Peter L. Berger and Thomas Luckmann, *The Social Construction of Reality*, Allen Lane, London, 1967, e.g. 'The Institutions, as historical and objective facticities, confront the individual as undeniable facts. The institutions are *there*, external to him, persistent in their reality. . . He cannot wish them away. . . They have coercive power over him, both in themselves, by the sheer force of their facticity, and through the control mechanisms that are usually attached to the most important of them.' (p. 78).
25. *Manusmṛti*, 9:33.
26. Phillip Kitcher, *Vaulting Ambition: Sociobiology and the Quest for Human Nature*, The MIT Press, 1985, p. 102.
27. Ibid., p. 96.
28. 'Territorial Defence in Speckled Wood Butterfly (Pararge Aegeria): The Resident Always Wins', *Animal Behaviour*, 1978, *26*, pp. 138-47. Also quoted in Phillip Kitcher, op. cit.
29. The following discussion is after John Berger, *Ways of Seeing*, BBC and Penguin, 1972.
30. Sudhir Kakar, *The Inner World: A Psychoanalytic Study of Childhood and Society in India*, Oxford, 1978, p. 99, quoted in Wendy Doniger O'Flaherty, *Sexual Metaphors and Animal Symbols in Indian Mythology*, Motilal Banarsidass, Delhi, 1981, p. 84.

31. Wendy Harcourt, 'Gender, Culture, and Reproduction: North and South', *Development*, 1988, 2/3, p. 69.
32. Ludwig Wittgenstein, *Philosophical Investigations*, translated by G.E.M. Anscombe, 1953, I:241, 242.
33. Genevieve Lloyd, *The Man of Reason: 'Male' and 'Female' in Western Philosophy*, Methuen, 1984, pp. viii-x.
34. L. Irigaray, 'Women's Exile,' Ideology and Consciousness I, mentioned in Moira Gatens, 'Towards a Feminist Philosophy of the Body', in Barbara Caine et al., eds., *Crossing Boundaries: Feminisms and the Critique of Knowledges*, Allen and Unwin, 1988, p. 63.
35. Genevieve Lloyd, op. cit., pp. 96-102.
36. Simone de Beauvoir, op. cit.
37. John L. Kelley, *Algebra: A Modern Introduction*, D. Van Nostrand, 1965 (East-West edn.), pp. 30-1.

Discussions

HISTORY, INDIAN SCIENCE AND POLICY-MAKING: A PHILOSOPHICAL REVIEW

I. Summer School in History and Philosophy of Science

The positivist slogan that 'There is no logic of discovery'[1] is known for its anachronism in recent philosophical thought of the West. Philosophy of science, in answering the question, 'What is science?', looks wryly upon historically sterile attempts to define scientific statements as functions of facts. It is philosophically old-fashioned, if not totally erroneous, to claim that theory is a compendium of observation-statements or a summary of facts, as Mach and others once believed. Recent researches in the history of science make one sceptical of the earlier normative attempts that tried to define what science should be. Positivism, in its attempt to demarcate science from 'non-sense' in this fashion, showed itself to be partisan. The impact of history on science has been to reveal to philosophers the naiveté of reducing the privilege of discovery to a mere enlistment of logical propositions.

It is in the light of these modern philosophical reflections upon science, that we shall review the summer school on 'History and Philosophy of Science', held at the Indian Institute of Science, Bangalore.[2] The school was novel and interesting: novel because an assortment of scientists, philosophers, and administrators had gone into the making of the school; interesting because this assortment did not make communication impossible, and on the contrary, proved to be a productive arrangement. The lectures, delivered by four Westerners and fourteen Indians, were aimed at illuminating specific histories of the natural sciences, in three broad aspects: the genesis of different branches of science in Europe, ancient Indian science, mathematics and science policy.

Our efforts, in this review, will be invested in three directions. First, situating ourselves within contemporary philosophical discourses on science, we will indicate the limitations of positivistic[3] ideas about science. Lectures at the summer school showed some general problems with these ideas. However, our interest here is not really to show how positivism stands refuted. We are more inclined towards indicating the epistemological debates which have arisen through new directions of research in philosophy of science.[4] Second, we will address ourselves to contextualized questions about science. Here, we refer to the widespread concern with modern technocracy and its social impact, specially in the Indian context.

Third, we will elucidate the ground and direction provided by policy-making for modern research, raising the question of whether autonomous science is possible or even desirable.

II. Positivism Under Attack

The positivist foundations of science is, these days, questioned from several academic fronts:

1. With the coming of quantum theory, physics, which was considered by the Positivists as the vanguard of the sciences, ruptures within itself. While the older physical theories are tailormade to positivism, the New Order, ushered in by Einstein, calls their assumptions into question. The hegemony of physics is no longer absolute, and physics has begun to redefine itself in the light of theoretical discussions now flourishing on its border.

2. A parallel task carried on by philosophers of science of reading old texts by Galileo, Kepler and others, has only augmented this redefinition. The history of science has shown that positivistic ideas about science have not acknowledged the importance of articulating a scientific methodology in the context of the activity of scientists, but rather normatively described what such activity should be. We already know how 'Philosophy of science without history of science is empty; history of science without philosophy of science is blind.'[5]

3. The autocracy of physics thus vanquished, the other natural sciences have come into their own. They no longer perceive a need to gauge themselves against the standards set by the Ideal Science. Thus, in biology, chemistry, palaeontology, genetics, evolution theory and several other sciences, work on the exploration of their theoretical foundations has begun.

4. The social sciences, which had at one time come under the siege of positivistic science, are now reasserting their independence. The work done in these sciences has proved not only that their conclusions are to be seriously reckoned with, but also that they are the only tool with which measurement of the impact of science itself is possible.

III. Epistemological Limitations of Positivism

Any theory has to answer some questions about the possibility of knowledge. The Kantian question remains open in modern philosophical discourse. Some questions that a theory of knowledge must confront are: What is the relation between 'theory' and 'observation'?; how is 'reality' known?; what counts as 'evidence' for a theory?; when is a theory 'adequate'?; and so on. The problem with positivism lies in its epistemology, as we will show below. We will focus only on the general question of what science is, and of the contemporary challenge to the positivist demand of validating a theory on the basis of observation or verification. This delimitation will make it possible for us to provide an overview of the summer school.

One positivistic assumption about science which has come under attack is hyperfactualism—the idea that science is founded upon 'observable' facts, and that generalization not based on facts is not science, but speculative metaphysics. This idea can be traced even in Popper, an explicit dissenter to Positivism. All positivism presupposes a strictly definable dichotomy between fact and theory. Theory is assumed to mirror facts. The validation of a theory then involves verification or refutation by empirical testing of particular propositions of the theory. Upon the assumption of hyperfactualism, theoretical generalizations become legitimate only in so far as they are corroborated by facts and in so far as they closely mirror reality.

Hyperfactualism, however, has been shown to be an unrealistic demand made upon science. Scientific theories have been built upon recognizably false facts, even by some of the most prodigious thinkers in scientific history. For Galileo,[6] to cite an instance, one of the strongest proofs in favour of a sun-centered universe came from its 'successful' explanation of tides. If this explanation were true, tides would rise and recede every twelve hours, contrary to the observed six. This observation could have demolished Galileo's sun-centered universe, and yet, he would have none of it. Was he being unscientific because he rejected facts? One would say no, unless one wants to perversely commit the entire scientific history to flames.

Confirmation and refutation of hypotheses is an epistemologically secondary task in the development of any science. Heuristics, or proposals for explanatory hypotheses, is the primary one. Conjectures and refutations[7] of hypotheses by experimentation is only part of the scientific game. The more important task for the philosopher of science is to explore the logic that underlies the discovery of these conjectures. The philosopher has to address himself to the question, 'how is creative science possible?' The Vienna school did not raise this question and could not, therefore, provide a 'logic of discovery'.

Connected with the hyperfactualism of the Positivists is their 'sensationism'. A 'psychology of observation'[8] underlies all positivism. The premium placed upon fact by positivism is based upon the belief in the legitimacy of the senses in providing an indubitable foundation for any theory. The senses are believed to be in a position to pronounce the verdict of infallibility on any piece of knowledge. Sensationism underlies the rather naive conception of perception as being self-evident, an idea now challenged by many researchers on perception. Even the possibility of perception without inferencing has been questioned by these researchers. R.L. Gregory says, 'Since perception is a matter of reading non-sensed characteristics of objects from available sensory data, it is difficult to hold that our perceptual beliefs—our

basic knowledge of objects—is free of theoretical contamination. We not only believe what we see: to some extent we see what we believe.'[9]

The argument for sensationism can possibly be sustained if experiment in the sciences were restricted to gross observables like test-tubes, measuring glasses and solid bodies. The opening up of micro-horizons of reality, with its own subtly powerful testing methods, has made it clear that epistemology has to take into account the magnitude of instrumentation. The positivistic demand for founding science on observation would put the modern scientist in a dilemma. He would have to redefine observation to include cognitive material like charts, graphs, numbers and equations, as is done in nuclear experiments, or he will have to reject these modern boundaries of the 'hard' sciences as unscientific, because of his philosophical inclinations.[10]

Experimentation appears to follow its own logic.[11] It is impossible to 'observe' and describe the world without a theory of the instrument. The difficulty is compounded in modern instrumentation which presupposes much background theory. Observation makes sense only upon acquaintance with this theory. Cognitive components are surely involved in deciphering measurements of these instruments. Gross observation without cognitive skills will not render the instruments even 'readable.'[12] Objectivity of science is thus constituted and limited by available technology. Positivism was not sensitive to this added dimension to the question of founding science upon observation mediated by a theory of the instrument.[13]

Linked with the positivist demand for observational testability of scientific theories is their 'propositionalism' the idea that it is possible to break up scientific theories into a series of particular propositions, each of which is then testable in itself by 'crucial experiments'. This stand is blind to the problem-solving nature of scientific theories. Justification of propositions in experimentation is a later task in scientific activity, one that happens in what has often been called 'normal' science. 'Revolutionary' science arises at a critical point in history when observation is rendered inexplicable by available theories. Fresh questions have to be asked and new explanatory models proposed. The question of rejecting an entire theory on the basis of experimental results therefore is unrealistic.

Lakatos says,

> ...What if we put Popper's question to the Newtonian scientist: 'what kind of observation would refute to the satisfaction of the Newtonian not merely a particular Newtonian explanation but Newtonian dynamics and gravitational theory itself? And have such criteria, ever been discussed or agreed upon by Newtonians?' The Newtonian will, alas, scarcely be able to give a positive answer. But then, if psychoanalysts are to be condemned as dishonest by Popper's standards, must not Newtonians be similarly condemned?[14]

Secondly, the value of a theory can be seen in the generality of its questions, and its capacity to solve problems outside of the domain which it was primarily designed to handle.[15] In biology, for intance,[16] research was carried forth by the interest of researchers to answer one primary question: how is biological design possible, within a variety of multi-patterned, multi-coloured, complex-structured organisms? With this research programme, problems in cell biology, embryology, evolution theory, genetics and palaeontology could be brought together under a common conceptual theme.

The problem-solving nature of scientific theories has been emphasized by recent philosophers of science.[17] Scientific theories are, upon this view, considered holistically, rather than atomistically. Scientific theories are an intricate 'scaffolding' of intermeshing ideas, rather than a collection of propositions. A scientific theory is founded upon a 'Weltanschauung' from which inferences can be spun off and possible methods of testing devised. The Weltanschauung gives rise to the possibility of testing, rather than the reverse, which positivism demands.

A view which equates science with 'the completest possible presentation of facts with least possible expenditure of thought'[18] then has to be resigned to a long and possibly futile wait. Lakatos has pointed out that positivistic thinking can only wait for the final science: it cannot recognize science in its actual activity. This correctly indicates the futuristic, Utopian stance adopted by positivism. He says,

> If we accept the demarcation criterion of dogmatic falsificationism, *and* also the idea that facts can prove 'factual' propositions, we have to declare that the most important, if not all, theories ever proposed in the history of science are metaphysical, that most, if not all, of the work done is irrational.[19]

The central positivistic themes served the Positivists in their programme of strictly demarcating science from fantasy, fiction and speculation. The objectivity of science depended on its power to accurately describe the world through sense-perception; whereas metaphysics, not open to such sensationism, was to be rejected. But, scientific theories do make ontological truth claims. The claim that mataphysics is eliminable from science is a myth.[20]

History of science has shown even more: that the metaphysical interests of scientists have directed their decision in favour of particular theories. Leibniz, for instance, rejected Newton's[21] theory of gravitation on account of the 'occult forces' Newton invoked which could act at a distance through no medium. In Galileo, the heliocentric view was supported by a metaphysical principle: that circular motion was natural, and it was in fact perpetual linear motion which needed to be explained. History of science thus reveals no schism between the occult and the objective and attempts to

define such a schism have imposed their own demands of rationality on science. In the light of these considerations, one can only sceptically view the positivist's claim for science as the only valid epistemology.

This, clearly, is a claim which is insensitive to the socio-historical direction provided to science. The incorruptibility of science by subjective or political motives is an undercurrent accompanying the universal validity and objectivity of science. Yet, discourses on the sociology of science[22] have shown each one of these claims to be erroneous. It cannot be denied that there is an extra-theoretical advantage in assuming that science is objective. With this position, scientific theories can be granted an over-arching importance and autonomy in the conduct of life. Positivism succumbs to this enticing trap. But, recent philosophers and other interested thinkers have been pondering upon the possibility or even the desirability of an autonomous science.[23]

IV. Indian Science

Positivism, in a dynamic sense, is not dead. Even though positivism is a Western concept in terms of its historical origins, its essence can be seen in the contemporary Indian ethos. Popular visions of science reflect positivistic thought when they portray 'science as apolitical, amoral, and without any social and cultural roots, specific to a culture area'.[24] A positivistic climate pervades recent literature in India on the basis of which crucial policy decisions are made.[25]

The implications of this 'positivization' of the Indian ethos are two. First, only natural science gets recognition as science. This bias against social science was also seen in the organization of lectures in the summer school. There were no lectures on even one representative social science. The second implication is the thoughtless Westernization of Indian science. The universalist programme of Positivism to unify all the sciences implies the romantic idea of an 'internationalist' science: that science is global and fraternal.[26] However, looking at it practically, this internationalism for India seems to imply only a unidirectional transfer of concepts, technique and machinery from the West to India. Science and technology, in the Indian context, is Western rather than international. The questions before us in the context of this Westernization and consequent alienation of science from the Indian socio-cultural framework then are: 'What is Indian science?' 'Is such a thing even possible?'

There are two ways of answering questions about the foundational status of any science. First, one could undertake historical researches into ancient Indian scientific texts. The other way is to explore the methodological and theoretical problems of the Indian sciences and to make these sciences contribute to contemporary theoretical debates in the field. The latter was

unfortunately not attempted at all[27] in the summer school, and consequently lectures on Indian science tended to be only historical studies.

Indian scientific history too is studded with intellectual giants with impressive achievements. Scientific knowledge in mathematics, metal technology, astronomy, and botany were available.[28] The rationalist basis of ancient Indian medicine was also quite evident.[29] However, the natural sciences did not fare very well. The histories of these sciences is educative especially in the light of the irruption of Indian history by foreign cultures and colonialism. The historical points of these irruptions can illuminate sociological aspects of the dissemination and diffusion of scientific thought in India. However, the work done in these areas is negligible and a concerted effort at reconstructing the dim scientific past of India needs to be undertaken.

Reconstruction of this past cannot be merely an enlistment of historical 'facts', but of rewriting history. Historiography in the Indian context is a difficult undertaking. Ancient scripts are difficult to translate, and many are as yet undeciphered. Problems of interpretation appear to be insurmountable. The most frustrating problem for the historian is the unavailability of manuscripts: these are lost, damaged or did not survive the political vicissitudes of Indian society.

The method of 'retrospective probing' was suggested at the school to overcome some of these difficulties, especially in the context of knowing about science during the First Urbanization.[30] This is not a 'reading forward', but a 'reading backward'—from 'what there is', to 'what was'. An instance provided concerns the 'sulva-sutras', texts about brick technology. These texts do not date farther back than 600 BC, i.e., the Second Urbanization, and include sophisticated geometry on kiln-burning and manipulating brick shapes. Strangely, there was no sophisticated brick technology from the First Urbanization to about eighth century A.D. These texts were freak texts, and did not correspond with the period they were supposed to depict. The only possible conclusion available to the historian was that they belonged to the earlier period before the First Urbanization, when such technology was available.

It would have been easy to conclude, after these lectures on Indian science, that it failed somewhere in its historical development. However, such a conclusion may be premature, considering the involved problems of historiography. If one were interested in arguing the case for the 'failure' of Indian science, then these are some of the questions one may ask: (1) Why were not the insights of these theories followed to their logical end? (2) Why was not scientific knowhow disseminated to other places? A sociology of Indian science is an urgent need, so that one may know more, before making a decision on its 'failure'.

Two answers of this sort were given at the school: the first one questioned whether we can legitimately conclude that ancient Indian science 'failed'

Reference was made to the system through which knowledge was inculcated, i.e. the pupilar structure with primacy of the oral over the written.[31] Science was then an intellectual game, rather than a 'knowledge-constitutive interest' aimed at manipulating objects of the world.[32] Life came before technology. Dissemination of knowledge to other places is an inevitable demand only at a time when science is competitive, and scientists vie for intellectual competence and recognition; where what A. Rahman[33] has called 'scientific tourism' is culturally inherent; where life depends on technology, as it does now. Dissemination of scientific knowhow is then a modern concept. Looked at in this light, Indian science did not 'fail'. To look upon the status of ancient Indian science as a failure is to demand from ancient Indian science, community values which we have prescribed for science today.[34]

In contrast to this, the second answer was based upon the premise of the failure of ancient Indian science.[35] It addressed the possibility of urbanization itself. This is the old philosophical problem of 'how is society possible?'. Review of the historical circumstance during the time of the First Urbanization shows that while astronomy and mathematics were quite developed, the natural sciences were curiously underdeveloped. It could be suggested that this organization of the sciences had to do with the socio-cultural climate of the day. Religion was central to the lives of the people. Their religious needs were served by mathematics and astronomy. The revenue records of gods or god-kings had to be maintained; also, for the construction of grand religious structures, astronomy was essential. On the other hand, the natural sciences could function only after 'depopulating' the world of gods and spirits, and other mystical elements. Religion and the natural sciences were not theoretically commensurate, and so these sciences did not develop.

It is curious that speculative thinking in India was very sophisticated in contrast to the status of science. One possible explanation of this contrast could be that critical science was not possible. The concept of rationality was very much extant in Indian philosophy,[36] and yet, the application of rationality to mastery over nature was probably poorly developed. Consequently, science could not have been self-reflective, making a 'science of science' impossible. Science probably tended to be skilful rather than technical. Here, again, we risk imposing upon the ancients epistemological demands crucial to modern science. Also, more evidence is needed for concluding these.

Many of the lectures at the school on ancient Indian science were not sensitive to the philosophical problems of history-writing. Most of the histories presented tended to be a chronicling of events, thereby providing a clinical picture of Indian science, outside of its socio-cultural context. The intimacy between science and society was lost. Attempts to raise the question of making science relevant to Indian society in the discussions emerging out of the lectures on Indian science proved to be largely unproductive, possibly due to the non-recognition of such an intimacy between science and society.

V. The Politics of Science

There is a close relation between philosophy of science and policy-making. Policies made for directing scientific research depend on certain conceptions of 'science', 'progress' in science, and so on. These are second-level reflections about science, which are assumed in the articulation of policies. In this sense, they belong to a philosophical area. These philosophical questions introduce 'the problem of uncertainty'[37] into the task of policy-making.

If science is assumed to be universalist and objective, a positivistic assumption made even in crucial policy literature, the outcome will be an asociological view of science. The 'problem of uncertainty' here would be the relevance of science policy when it rests on theoretical grounds which deny the socio-political constitution of science. The question is this: if science is considered 'sui generis', rather than directed by interests, then would the policies made under such an assumption be relevant or realistically aimed at the community it is made for? These policies would not recognize the fact that '... the philosophy and methodology of science relate intimately to the problem of implanting or developing science: to religion, to ideology, to education, to politics, to all that is embraced in the anthropologists' concept of culture. That is, they relate closely to the most important things in life.'[38]

The philosophical uncertainty regarding the relevance of policy decisions to society is visible in the articulation of the distinction between the so-called 'developed' and 'developing' countries. The distinction appears to be based upon 'an act of faith.'[39] The act of faith 'consists in believing that when science and technology are found in developed societies they *caused* the development rather than the reverse'. The indicator of progress in society would be defined in terms of mechanization and the availability of technical knowhow. Such a view of science is seen even in the policy literature of India. In the 1958 'Scientific Policy Resolution' brought out by the Government of India, one reads,

> The dominating feature of the contemporary world is the intense cultivation of science on a large scale, and its application to meet a country's requirements. It is this, which, for the first time in man's history, has given to the common man in countries advanced in science, a standard of living and social and cultural amenities .... Science has led to the growth and diffusion of culture to an extent never possible before.

The exclusive dependence of the idea of 'progress' on technocracy becomes clear when reference to people is made under the name of 'Man-

Power'. Progress becomes defined in terms of the commodity value of machinery, whether such machinery is automatoin or human. From the 'Scientific Policy Resolution' document, we read, 'The wealth and prosperity of a nation depend on the effective utilization of its human and material resources through industrialisation.... Industry opens up possibilities of greater fulfilment for the individual.'

However, policy-making in India must address itself to the definition of 'development' in the context of India. The crucial issue is to make scientific development possible even while identifying and preserving the cultural components that are uniquely Indian. This requires a holistic approach that surrenders the equation between progress and technocracy. Policy-makers could encourage communication with academicians in different social science areas which study native cultures, before devising an appropriate technical map. Given the socio-cultural parameters that decide and are decided by science, it seems that appropriate policy and planning for science can be made only in an integrated way.[40] All these reflections imply rethinking on the question of whether autonomy for the sciences is desirable.

We will now ask whether autonomy of science is even possible, given the progress of science *vis-à-vis* the interests of governments, technical institutions and other planning bodies. The politics of science is as much a reality as the sociology of science. The delimitation of funds by a government on R & D, the disbursement of such funds by technical institutions to various departments and so on, provide an 'interest'-ed direction to science research in the country. Specialization in research has led to disparate interests in the scientific community. Scientists then are inevitably drawn into a political pitching for funds, with all the tools of rhetoric and lobbying. Science research is directed by negotiating, exhibiting, advertising and selling the possible products of such research to serve the interests of various groups. Science is bought and sold in an intellectual free market.

Directing research in the country and abroad has been done under the programme of 'organizing science'.[41] In India, such organization is undertaken by the DST.[42] Science is becoming institutionalized, and the picture of the scientist working autonomously for the sake of an exalted science is no longer valid.

Organizing science has positive as well as negative implications. The founding of organizations to direct science research has led to the snatching away of research benefits from the scientists themselves. Consequently, scientists are denied the opportunity of directly applying their work to industry, or society at large. Funding bodies mediate between science and its applications. As a result, research and industry are severed from each other. Except for a rare and committed government, the coming together of research and industry seems difficult. In India industry has very little communication with the technical institutions and research laboratories;

research is divorced from the interests of industries and the industries do not depend on the academy for improvization of their techniques.

If such communication must be enhanced, effective organization of science must be possible. The deterrant to such effectiveness is seen to be the resistance provided by the indomitable bureaucratic structure of the bodies involved in organizing science. The organizational structure of the liaison bodies must be simplified. Recommending the constitution of crucial science-organizing bodies, for instance, the NSTC (National Science and Technology Commission), the 'Approach to a Perspective Plan for 2001 A.D.'[43] argues for simplifying the structure of such organizations so that different interests can come together and benefit from each other. It notes that 'a major restructuring and overhauling of the administrative and management machinery dealing with S & T' may be necessary.[44] Of course, given the political storms that the country is facing now, the value of these recommendations and their execution are open questions.[45]

Organizing science also limits the scope of a scientist's choice of research. The view that looks at scientists as being autonomous is too romantic. Further, the scientist is distanced from ethical questions relating to his research and its applications. The impact of research and its value is handled within the politics of funding organizations and the government's interests. The scientist does not feel answerable for the social impact of his work, because the mediating bodies take on the task of justifying research.

However, the positive implications of the organizing bodies to direct research possibly outweigh the negative ones. Within the scientific community, it is not possible to get an integrated picture of the needs of society or of science research, because different departments carry out research more or less in isolation. Stockman,[46] in his prefatory note, says appropriately that 'science is too important to be left to the scientists'. To bring them all together, and to provide a realistic, need-oriented basis to science research, an organizational structure is necessary. Organizations like the NSF and the DST provide such a structure.

VI. Conclusion

In this review paper, we have pointed out the limitations of a certain philosophical view of science, viz., positivism. Such a view has implications for a theory of knowledge, especially in the light of two questions: 'What is science?' and 'what part does observation play in the formation and validation of theories?' We have presented a general review of the direction taken by recent philosophers of science in order to overcome the limitations of positivism. Positivism seems to have made science impossible. At its best, positivism can recommend that we wait absurdly for the 'Godot' of sciences to arrive.

We have then pointed out the positivistic flavour of the Indian scientific

ethos with its emphasis on Westernization and mechanization. In this context, we have discussed some ways out of this native positivism through historical studies and through researches that will make Indian scientific history relevant to contemporary debates in particular sciences. The status of ancient Indian science has not been fully worked out for various reasons; and contemporary Indian science is heavily dependent on its Western counterpart. Denying the a-social, a-political positivistic implications for science, we have indicated in the last section the need for integrated approaches to science policy and research planning. The success of the summer school lies in the fact that it was able to bring together a variety of issues, allowing for different interests—scientific, philosophical, sociological and administrative—to constitute a productive dialogue.

Notes and References

1. D. Shapere, 'The Meaning of Scientific Change', in Ian Hacking, ed., *Scientific Revolutions*, Oxford University Press, Oxford, 1981, p. 30.
2. The school was organized by the Jawaharlal Nehru Centre for Advanced Scientific Research and the Centre for Theoretical Studies of the Indian Institute of Science, Bangalore. It was held between 2 and 14 July, 1990.
3. Positivism may refer to two things: (i) the school of Positivism, which began with the Viennese Circle, or (ii) the theoretical assumptions of this school which continue even today though technically no one would these days call himself 'positivist'. These assumptions are enlisted in, Section III. In this paper, when we use 'Positivism' we mean (i), and when we use 'positivism', we mean (ii).
4. Cf. Section II.
5. I. Lakatos, 'History of Science and Its Rational Reconstructions', in Ian Hacking ed., *Scientific Revolutions*, Oxford University Press, Oxford, 1981, p. 107. For a discussion of some of these ideas, see A. Gupta, 'The Concrete and the Abstract Science: Description versus Explanation', *JICPR*, VI, 3, 1989, pp. 67-88.
6. Dr. William Shea, from McGill University, Canada, lectured on Galileo.
7. K.R. Popper, *Conjectures and Refutations: The Growth of Scientific Knowledge*, Routledge and Kegan Paul, London, 1962.
8. I. Lakatos, 'Falsification and the Methodology of Scientific Research Programmes', in S. Harding, ed., *Can Theories Be Refuted? Essays on the Duhem-Quine Thesis*, D. Reidel, Dordrecht, 1976, p. 211.
9. R.L. Gregory, *The Intelligent Eye*, Second edition, Weidenfeld and Nicolson, 1971, p. 15.
10. These ideas were developed by Dr Ranjith Nair, from NISTADS, New Delhi, who gave an unscheduled talk on the Philosophical Foundations of Quantum Mechanics, in the context of the philosophical controversy between Pauli and Bohr.
11. Dr David Knight from University of Durham, UK, while lecturing on the History of Chemistry, also developed these ideas during his historical analysis of chemistry as an experimental science.
12. P. Heelan, 'Natural Science as a Hermeneutic of Instrumentation', *Philosophy of Science*, 50, 1983, pp. 183-204.
13. For a good analysis of these ideas with instances from various sciences, see H.I. Brown, *Observation and Objectivity*, Oxford University Press, Oxford, 1987.

14. I. Lakatos, *The Methodology of Scientific Research Programmes*, edited by J. Worrall and G. Currie, Cambridge University Press, Cambridge, 1978, pp. 146-7.
15. D. Shapere, 'Scientific Theories and Their Domains', in *The Structure of Scientific Theories*, edited by F. Suppe, University of Illinois Press, Illinois, 1974, pp. 518-65.
16. Dr Frederick Churchill from Goodbody Hall, Indiana, lectured on the History of Embryology.
17. See L. Laudan, 'A Problem-Solving Approach to Scientific Progress', in Ian Hacking, ed., *Scientific Revolutions*, 1981, pp. 145-55.
18. Mach, quoted in Gupta, op. cit., p. 70.
19. I. Lakatos, op. cit., 1976, p. 215.
20. E.A. Burtt, *The Metaphysical Foundations of Modern Physical Sciences*, second edition, Routledge and Kegan Paul, London, 1932.
21. Dr Shea's lectures.
22. See R.K. Merton, *Social Theory and Social Structure*, Indian editor, Gulab Primlani, Amrind Publishing Co., New Delhi, 1968, pp. 604-15.
23. Cf. Section V.
24. See A. Rahman's critical work, *Anatomy of Science*, National Publishing House, New Delhi, 1972.
25. Cf. Section V.
26. Rahman, op. cit., p. 61.
27. Except for a brief talk by Dr M.D. Srinivas from the University of Madras, on the epistemological foundations of Indian Science.
28. Prof. K. Balagangadharan from Calicut University lectured on the Kerala School of Mathematics; Prof. R. Sridharan from TIFR, Bombay and Prof. R.C. Gupta from Birla Institute of Technology, Ranchi on Indian Mathematics; Dr R. Sundararajan from St Joseph's College, Bangalore, on Indian Botany; Prof. S.D. Sharma from Punjabi University, Patiala, on Indian Astronomy.
29. Dr Valiathan from Trivandrum lectured on the History of Medicine in Ancient India and Dr K.L. Udupa, from BHU, Varanasi, on Ayurveda.
30. Dr D.P. Chattopadhyaya, the veteran philosopher now at NISTADS, Delhi, lectured on 'Science and Society in Ancient India'.
31. This interpetation was provided by Dr Balagangadharan in connection with the Kerala School of Mathematics, between A.D. 1350-1750.
32. J. Habermas, *Knowledge and Human Interests*, Heinemann, London, 1972, pp. 301-17.
33. Rahman, op. cit.
34. In this context, we recall Merton's recognition of the four 'institutional imperatives of science': its universalism, communism, its disinterestedness, and its organized scepticism. See Merton, op. cit.
35. Provided by Dr D.P. Chattopadhyaya.
36. Dr J.N. Mohanty posed arguments against the position that Indian philosophical truths were only 'religious' and not 'rational' in his talk on 'Phenomenology and Indian Philosophy: The Concept of Rationality', delivered at the First Binational Conference of the ICPR (India) and the Centre for Advanced Research in Phenomenology (USA), at New Delhi, between 5-8 January, 1988.
37. D. Waldo, 'Planning and Administration for Viable Policies: The Perspective of Official Responsibility', in Clare Nader and A.B. Zahlen, ed., *Science and Technology in Developing Countries*, Proceedings of a Conference held at the American University of Beirut, Lebanon (27 November—2 December 1967), 1969, pp. 392-5.
38. Ibid., pp. 392-3.
39. Ibid., p. 394.
40. Dr C.N.R. Rao, Director of Indian Institute of Science, Bangalore, indicated the importance for an integrated need-oriented realistic planning for S & T, rather than ad hoc policy-making.

41. Dr William Blanpied, of the NSF, Washington, lectured on the founding of NSF, its organization and activities.
42. Dr P.J. Lavakare from DST, New Delhi, lectured on the organization of DST and its research commitments.
43. The 'Approach to a Perspective Plan for AD 2001' was brought out by the Science Advisory Council to the Prime Minister then, Mr Rajiv Gandhi, in 1988.
44. Ibid., p. 7.
45. W.A. Blanpied, 'Science Policy in India: What Directions in a Multipolar World?', in *International Science and Technology Insight*, Winter 1990/91.
46. N. Stockman, *Anti-Positivist Theories of Sciences: Critical Rationalism, Critical Theory and Scientific Realism*, D. Reidel, Dordrecht, 1983.

Indian Institute of Technology,
Bombay

V. BHARGAVI
K. SUBRAMANIAM

Book Reviews

G. PARTHASARATHI AND D.P.CHATTOPADHYAYA (eds.): *Radhakrishnan Centenary Volume*, Oxford University Press, New Delhi, Rs. 250.

This book is a bouquet. Rich and variegated in content, it is an admirable blend of philosophic reflection and affectionate reminiscences. True, the essays it comprises are mostly tributes; but they had to be so in a work of this kind. Moreover, they have a clear warrant in the intrinsic excellences of the man whose birth centenary they seek to commemorate.

Dr Sarvepalli Radhakrishnan was no mere academician, though even as a teacher and expositor of philosophy he is the best known name in modern India. As the blurb rightly puts it, he was also an eminent statesman who 'made a lasting contribution to the way we think about the world'; 'a creative interpreter of Indian culture who awoke pre-Independence India to the great traditions of its philosophy' and succeeded in getting Indian philosophy a place in the syllabuses of leading universities 'throughout the world'; and, as a person, 'a truly great internationalist, in the mould of Tagore and Nehru'. It is only proper that the volume has been edited by two eminent persons of variform ability and experience. G. Parthasarathi has had an outstanding career as a journalist, diplomat and educational administrator, and D.P. Chattopadhyaya has served as Governor of Rajasthan, Chairman of the Indian Council for Philosophical Research (New Delhi), and is the author of quite a few important philosophical treatises. The essayists are no less eminent; they too are drawn from different walks of life. It is, therefore, no wonder that the work provides an authentic and absorbing account of the various facets of the personage that Sir Sarvepalli was.

The volume opens, rightly, with a well-written article by the President of India, Sri R. Venkataraman; and one is struck by the typically Indian images envisioned in the opening sentences:

> In Sarvepalli Radhakrishnan, history drew a mark of vermilion across renascent India's forehead... Schooled under the reflection of Tirupati's hillshrine, Radhakrishnan imbibed everlasting impressions of India's Vedic heritage during the formative years of his life. The chants of the *suprabhātam* in their bell-metal sonority, the soulful compositions of Tyāgrāja and Annamāchārya, and, above all, the ambience of religious scholarship intertwined with austere living permeated Radhakrishnan's consciousness. (p. 3)

The author has also taken care to cite some extracts from Radhakrishnan's own impassioned utterances:

> If Jesus should visit us today and find that we. . .have taken to worship of the most monstrous illusions like militant nationalism and are pouring molten steel into the veins of innocent youth that it may be used to undreamt-of heights in mutual destruction and ask: 'Why do you indulge, after so many centuries of civilization, in human sacrifices on this colossal scale?', our answer would be: 'Lord, you gave us eyes but no sight'; you gave us brains but no soul; you gave us science but no philosophy. (p. 7)

And in view of its obvious relevance to the ominous state of the country today, we should be grateful to the essayist for citing the following prophetic warning of Radhakrishnan on the historic night of 14-15 August 1947:

> Our opportunities are great, but let me warn you that when power outstrips ability, we will fall on evil days. . .From tomorrow morning—from midnight today—we can no longer throw the blame on the British. (p. 8)

J.N. Mohanty's essay, 'Radhakrishnan in the Light of Modern Thought', begins with a very apt compliment to Radhakrishnan: 'Philosophy and rhetoric were blended in a manner not achieved since Seneca'. (p. 13) What is, however, likely to serve as a healthy corrective in the case of those who tend to exaggerate the value of analytic philosophy is Mohanty's reference to Radhakrishnan's reasoned emphasis that 'philosophy, howsoever it may analytically focus on local, conceptual issues, cannot afford to shut its eyes to the larger concerns that make demands on wisdom and virtues'; (p. 13) and that,

> it is the function of philosophy to provide us with a spiritual rallying centre, a synoptic vision, as Plato loved to call it, a *samanvaya* as the Hindu thinkers put it, a philosophy that will serve as a spiritual concordat, which will free the spirit of religion from the disintegrations of doubt and make the warfare of creeds and sects a thing of the past. (p. 17)

Where the contents of *An Idealist View of Life* are outlined (pp. 15-16) the reader will probably be fascinated by the parallel Mohanty draws between the ways Radhakrishnan and Husserl diagnose 'the crisis of modern science and civilization'. From the third chapter on, Radhakrishnan's book, we are told, appears to claim that what we today need, as a reconciler of 'the claims of science and religion', 'is a spiritual worldview, a view which may look on the Spirit as the foundation of the world-process, and as manifesting Itself in and through it, as Absolute Freedom from one point of view, and as God, from another.' Husserl does not, of course, talk in terms of an idealistic metaphysics; but in a lecture delivered six years after the publication of *The Idealist View of Life*, he openly protested that 'the scientific world-view excludes all questions of meaning and value of life and the world, and as a consequence has nothing to say to us in our vital needs'; and that 'merely fact-minded sciences make merely fact-minded people' (p. 16). Mohanty ends his brief but thoughtful essay by making some points of value: first, that the idea of *a definitive* scientific method is hollow; second, that Radhakrishnan's dream of universalism can be realized perhaps only in

> a phenomenological way, which lets each form of consciousness present its world and lets these delivarances, by a process of communication, come to terms with each other such that a common world is shown in the process of 'coming to be' through communication and appropriation, *rather than being the pre-existent reality to begin with*
>
> (p. 18, emphasis added)

and, thirdly, that because (as Radhakrishnan shows in *The Reign of Religion*) religious interests can easily prejudice 'the thinking of some of the best minds', the path of philosophy, or of disinterested thinking, should be given the value it deserves. Not directly through the passionate insistence of belief, but only indirectly, by means of 'theoria', can the cause of the good life be promoted incontestably.

B.K. Matilal's essay, 'Ideas and Values in Radhakrishnan's Philosophy', opens with two affirmations: first, that Radhakrishnan's major contribution lies 'in his independent treatises'; second, that the eminent philosopher attaches greater value to the 'spiritual' side of man than to 'rational self-wisdom' (p. 20). By way arguing *for* the second emphasis, the essayist provides a moment of vital interest as he turns to illustrate the 'surplus' side of man, that is, that aspect of the human personality which cannot rest content with the merely material:

> Rare as it may be, it is still seen today that a pop. . .or. . .Hollywood star, who does not. . .lack. . .[any] mundane pleasure. . .still goes out of his or her way to approach the other side of world, to reach out to the poor. . .[and the] suffering. . . .This cannot be explained simply by an idle reference to Christian charity. [The truth rather is that] science does not *exhaust* the description of human being. . .; [our] moral being. . . still remains unexplained. It is *this* 'surplus', which concerns itself with meanings, values and ideals. (p. 21, emphasis and words in parentheses added)

Radhakrishnan, we are further told, strives for a synthesis of the scientific and humanistic conceptions of the universe; but what is perhaps a little more striking, philosophically, is his reasoned defence of 'intuition as a separate faculty for grasping certain truths' (p. 26):

> The deepest things of life are known only through intuitive apprehension ...The recognition and creation of values are due to intuitive thinking.

> *Judgements of fact require dispassionateness; judgements of value depend on vital experience. . . .Sensitiveness to quality is a function of life,* and is not achieved by learning. *It is dependent on the degree of the development of the self.* . . .No one can understand fully the force of human love or parental affection who has not himself been through them. (pp. 25-6, emphases added)

There is indeed admirable sense in the above. How does one come to know what serenity is? By growing into it, to be sure. How does one come to realize that one's home is a haven of peace and security? Surely not by description or mere acquaintance, but through a sharing of life with the members of one's family, or through 'vital experience'. Intuitive knowing, we may note, is no sudden happening; it is rather the direct seizure of a character or reality, and is prefaced, of necessity, by a long, prior training of our apprehending powers.

Gopal Singh's essay, which follows, is a bit too brief to do justice to the subject, 'Radhakrishnan as a Philosopher'. Perhaps the only detail of this essay which may be expected to add to the knowledge of the reader is the following remark: 'Even in his later life, when he entered the career of a diplomat. . .[Radhakrishnan] is known to have adopted a certain metaphysical stance, a vantage point of transcendental wisdom and neutrality... [or, we may say,] of a *sthitaprajña.*' (p. 31, words in parentheses added)

A.L. Herman's essay, 'Advaita and Religious Relativism', begins by rightly characterizing Radhakrishnan as 'one of the near-founders of comparative studies' in religion, but ends with a veiled criticism. We may accept the noble-minded philosopher's plea that whereas 'no religion is essentially unique. . .each contains within itself the Truth, the only Truth, that can ultimately set all religious believers free', and that therefore all religions may be said to be 'of equal value' (p. 38); but we are not told how all this squares with his own single-minded endeavour to exalt the Advaita religion as the one true religion above the many other 'large accidental religions' (p. 39).

As for D.P. Chattopadhyaya's essay, what is directly relevant in it to the subject, 'Radhakrishnan's Concept of Religion', is a string of clear comments on a favoured emphasis of Dr Radhakrishnan: 'the Religion of the Spirit'. The essayist outlines the matter as follows.

> The belief that the sensible alone is real is a mere dogma. Even in daily conversation, do we not freely speak of 'the spirit of the age', or of a poem (*kavyātmā*)? One can only say, yes. Nor is such talk meaningless. 'Spirit' is 'intended meaning', 'life breath and animating power', and it surely makes sense to say that the spirit of a poem is more than the measured words and cadences that embody it. The Religion of the Spirit is a quickening force; it liberates the mind and welcomes enquiry and the benefic pressure of truth. The Religion of Authority, on the other hand, is basically institutional; [it] must have its *unquestionable* scripture, spiritual head and some prescribed rites and rituals . . . [Here] the gap between the official doctrine and the individual's perception of truth can hardly be bridged . . . Consequently, the Religion of Authority makes itself a road-block to scientific progress. (p. 50, emphasis and words in parentheses added)

Contrarily, maybe because it is not 'revealed', the Religion of the Spirit is neither 'committed to a particular scripture' nor 'guided by an unquestionable spiritual head'. It can, therefore, easily admit the value of 'scientific temper and technological efficacy'. Above all, the self-sustaining Religion of the Spirit is 'life-affirming, world-affirming, and concerned with human misery, war, peace and politics, and yet it symbolizes the human aspiration for the transcendent, for the perfection yet to be achieved, for the progress yet to be made' (p. 50). Religion which is seated in the heart is no mere somnolence; it does not look on progress as inevitable, and so urges evermore both human 'aspiration and effort'.

Richard De Smet contends, with a due show of reason, that Radhakrishnan 'could not free his mind completely from the pervasive influence of the current interpretation of Sankara in terms of *vivarta* and illusionistic *māyāvāda*' (p. 55); that 'there is a deep discrepancy' between his and Sankara's own understanding of 'the place and availability of Vedantic intuition' (p. 57); that he does not duly distinguish the 'absolutely complete power of *brahman* from our misunderstandings of it', which is why he 'is inclined to reject the teaching of *brahman*'s causality', though he does not quite take the 'fatal step' (p. 65); and, finally, that he does not clearly realize 'that the whole process of *brahma-jijñāsā* is epistemological, intra-logical—a purgation of the mind and of language by way of enlightening the *mahāvākyas* (p. 59), and is therefore led to somewhat curtail his '"philologist's task" of perfectly reconnoitring Samkara's own conception' of the *jijñāsā* in question (p. 68). The essay merits a careful look.

One could say the same of the article that follows: Karl Potter's on 'The Development of Advaita Vedanta as a School of Philosophy', though it does not directly relate to Radhakrishnan. The first part of the essay (pp. 70-80) gives us a lucid account of the marks of a 'school' of philosophy—a rather uncommon subject; and the second part (pp. 80-9) illustrates, and so vindicates, this account by considering three well-known 'schools': analytic philosophy, pragmatism, and Advaita Vedanta. The essay ends with a brief, but very clear, projection of the problems that attend the possible answers to the question, 'Why did Dharamraja's work suddenly (apparently) terminate the systematic development of Advaita?' (pp. 97-9).

Narayana Moorty's essay on Radhakrishnan's view of Buddha's silence is, again, a professedly critical one. By way of opposing Radhakrishnan's

view that Buddha did have 'some positive philosophical views on the nature of ultimate reality. . . self . . . and liberated state', and that the reason why he yet 'kept silent in answer to questions concerning these matters is that he did not want to disturb the popular mind' (p. 100), Moorty contends that the real reason for the Enlightened One's studied silence is the realization that the holding of *any* such metaphysical view is 'not only not necessary for the understanding . . . [and] . . . transcendence of suffering', which is our most *pressing* problem, 'but in some ways . . . actually prevents us from doing so, for the simple reason that holding a view will at once create its own seeking and thus draw us back in the turmoil of suffering'. (p. 121) Here, it may at once be asked what suffering really is, according to Buddha. It is indeed Moorty's own attempt to answer this question, an attempt which aims at proving that (even from the Vedantic point of view) Radhakrishnan's understanding of suffering is 'rather superficial', that lends substance to the essay. But the essayist's conclusion is too categorical:

> Philosophical analysis...is hardly an instrument for self-realization for the simple reason that views concerning reality have *nothing* to do with realizing ourselves or being at one with reality. As a contemporary teacher [J. Krishnamurti] said, the word is not the thing.... So,...while we indulge in philosophical analysis...to clarify matters, we must not forget the teaching behind the philosophies we are discussing. (p. 125, emphasis added)

One may not straightaway dismiss Krishnamurti's negative insistence by rejoining that nobody thinks of *using* the word 'table' as an article of furniture, for in life we freely commit the mistake of believing that a merely verbal expression of sympathy for the good is all that we have to do with goodness. But, though it is surely often ruinous to identify mere talk with the substance of value and conduct, it cannot be held that words do not have *any* relevance to the latter; and if the 'teachings behind the philosophies we are discussing' are to be, and *can* at all be, borne in mind, surely they must be said to admit of some *helpful* verbal formulation.

Writing on 'Language and Religion', Prema Nandakumar does well to draw our attention to Radhakrishnan as a man and as a wielder of words. The essay closes with the following apt words of K.R. Srinivasa Iyengar:

> Without the reserves of the spirit, the inner poise, the hidden fire, all other endowments cannot count for much. And the spirit that moved our ancient *ṛsis and ācāryas* is not foreign to Professor Radhakrishnan, and it is this alone that can explain the splendour of his ministry over a period of half a century. (p. 134)

Earlier in the article, the distinguished philosopher is complimented on his excellences of writing and speech:

> ...Never any convoluted approach to the subject at hand. [But, instead] the refreshingly no-nonsense English of a person who is already absolutely sure of what he is going to say.... Even in the delivery of his speeches... there were no dramatic silences, whispers, sudden flights of fancy. Whether on stage or at his writing desk, his language flowed... [at] an unhurried pace. It never ascended to the feverish pitch of a visionary prophet, nor descended to the style of a street-corner preacher.... [Above all, he had] an uncanny flair for lucidity and epigrammatic strength. (pp. 127-9, words in parentheses added)

Many Indian readers whould perhaps also be struck by the following quotation, in the essay, of Radhakrishnan's own words: 'Thought, when it thinks itself out to the end, becomes religion by being lived and tested by the supreme test of life. The discipline of philosophy is at the same time the fulfilment of a religious vocation' (pp. 130-31).

Preoccupation with religion is, in fact, a distinguishing feature of Radhakrishnan's philosophic thinking, and J.J. Lipner's essay, 'Religion and Religions', should therefore be welcome to the general reader. I say so also because of the essay's intrinsic quality; it is rich in its expositive content and balanced in its critical parts. Lipner's main protest is that 'there seem to be plausible alternatives to Radhakrishnan's explanation of what passes for experience of the Real', and that, in the ultimate analysis, 'his own stance remains a faith-response' (p. 149) which is but '*selective* with the evidence' provided by authoritative books and men of religion. (p.147, emphasis added) But he hastens to add that the defect is by no means unique to Radhakrishnan's view, and that the 'rival points of view are in the same boat'. (p. 149) The essay, in fact, ends with the insistence that Radhakrishnan's account must be taken seriously, for 'it is, on the whole, well-argued and comprehensive', and also because

> Where religion is concerned, for half a century he upbraided the petty-minded, rebuked the arrogant, deplored blind obedience, [and] castigated overweening authority. Again and again, he insists—[and] with good reason...—that we face the challenge of a new age of Spirit and that we must face this challenge with unshakable faith in human nature, for it is the spirit within us that has guided us to this threshold...'It may not be given to us to see that the faith prevails; but it is given to us to strive that it should.'

But, could it not be, as Ernst Troeltsch and Toynbee believe, that in so far as they are inseparable from particular cultures, the various religions are likely to remain quite distinct, in spite of having 'a common goal in the "beyond"...and a common ground in the "Divine Spirit" '; that the 'earthly experience of the Divine Life is not [really] One, but Many'; and that, as Gandhi too believes, 'mutual understanding occurs when each religion

seeks to realize its own potential, yet, at the same time, is open to the influence of others in their quest for truth?' (pp. 155-6).

Glyn Richard's essay, 'Radhakrishnan's Essentialist View of the Nature of Religion', begins with an explicit notice of this very possibility, and, in the process, it refers to the views of Schliermacher (pp. 157-8) and Vivekananda as well, taking care to make quite a few salient points relating to the subject of the essay. First, we are told, Radhakrishnan shares Vivekananda's belief in the immutable essence of religion, the basic oneness of existence and the essential unity of all religions. (p. 160) Second, the essentialist conception of religion, according to which 'religion [is] a self-subsistent essence, or a transcendent entity underlying all [its] historical manifestations' is by no means the view of Radhakrishnan alone, but is manifest in the writings of Hegel and Schleirmacher too. (p. 157) Third, the essence of religion is the 'soul dissolved in the immediate feeling of the Infinite and the Eternal', (p. 158) or a 'sense or taste for the infinite'. (p. 164) Finally, '*such* essentialism is...favourable to the concept of monoreligion in the sense of a primordial essence or transcendental entity, though not to the exclusion of polyreligion, since the many are essential for a true manifestation of the one'. (p. 159) The 'immutable' essence or 'primordial form of religion' is not the monopoly of any one religion (p. 157) but is 'accessible to [the] immediate self-consciousness' (p. 165) of anyone who is 'pious'. (p. 157) If it be wondered, as the essayist himself does, as to how the awareness in question is to be identified and verified, Radhakrishnan's answer would be that it is non-sensuous, immediate and self-validating; that it springs 'from the fusion of mind and reality; and [that] as such it needs no external verification of its meaning or validity'. (p. 164) This is the truth, the essayist concludes, which 'Radhakrishnan seeks to convey in his concept of the religion of the Spirit'. (p. 165)

John M. Koller does well to open his essay, 'History, Time and Inter-Faith Dialogue', by inviting our attention to the following emphases of Sir Radhakrishnan:

(a) My one main interest has been to try to restore a sense of spiritual values to millions of religiously displaced persons [and to provide] a spiritual religion that is universally valid. (p. 167)
(b) Religion is the way in which the individual organizes his inward being and responds to what is envisaged by him as the ultimate Reality. (p. 167)

Later, Koller examines and rejoins to 'four interrelated challenges that post-modern sceptics' present to the study of comparative philosophy of religion, a subject which is so dear to Radhakrishnan. (pp. 170-9) In the process, the essayist rightly points out that in so far as all truthful concern with religion is just *being religious* in one's daily living rather than *having* a religion (as mere intellectual commitment to some beliefs), it is better to

speak of *being religious differently* than of *different religions* (p. 171); that the attempt to know 'other' religions involves only that decontextualization which is unavoidable for all theoretical understanding (p. 172); that even this defect can be attenuated by 'shared performances', that is, by trying out other religions in practice (p. 175), as was done, we may add, by Sri Ramakrishna with such signal success (and why not, indeed, if musicians from quite different cultural backgrounds, such as Yehudi Menuhin and Ravi Shankar can give duet performances!); that plural *views* of the world do not make *the world itself* many; and that, as Radhakrishnan insists, 'a fellowship of religions' *is* possible on the basis of 'the foundational character of man's religious experience'. (p. 179) Finally, one must remember that though tradition may not—and indeed cannot—be merely put aside, it is 'effective only when it is living, vibrant, dynamic. . . remaking itself in the crucible of encounter with the new and the different'. (p. 179)

That it is precisely this adaptation of tradition to the needs of the present which distinguishes Radhakrishnan as a philosopher, is the terminal note in Eliot Deutsch's essay: 'Time and History: East and West'. (p. 187) Its substance is, however, provided by the author's attempt to think 'through the problem of time and history' *quite generally*, and so in the spirit of Radhakrishnan's own 'wide-ranging interests and deep historical understanding'. (p.181) The penultimate part of the essay contains some thoughtful remarks on the concept of 'lived history', that is, on the way 'in which the accumulated experience of mankind gets appropriated, individually and collectively, and gives rise to "traditions" '. (p. 181)

In Radhakrishnan's case, however, the appropriation in question is not merely creative, but professedly humane. The words which open his last major work on *The Brahma Sūtra* are, in fact, the underlying motif in the bulk of his philosophic writing: 'We are in the midst of one of the great crises in human history, groping for a way out of fear, anxiety and darkness, wandering in search for a new pattern, in which we can begin life over again.' (p. 189)

This extract may also be taken as part explanation of what K. Sivaraman, in his article, 'Knowledge and Experience in Mystical Spirituality', rightly regards as the *creative* aspect of Radhakrishnan's task as a philosopher. Of the several significant points that the author makes in his essay the more important ones may be listed here.

'Mysticism and the most exalted ethics are [surely] not incompatible', though it is wrong to emphasize mere action at the expense of 'the inner life of the soul' (p. 190); collaterally, as is the teaching of Vedanta mysticism, 'there is no self-realization' which is not at the same time [a] self-loss from the standpoint of the world (p. 191); and ethics and morality, in spite of their undoubted importance, serve only 'to purge the soul of selfishness so that it may be lifted for the vision of, and participation in, the non-dual reality', which means that 'the rigorous moral effort needed at the preli-

minary stage has no place in the state of realization itself'. (p. 193) Yet the foundational 'spiritual experience' is not without important epistemological and ethical overtones; (p. 194) and this is indeed why 'active service' is a vital part of the lives of men of exalted spirituality. (p. 189) Finally, mystical experience, according to Radhakrishnan, is 'unmediated apprehension of the primordial spirit. . . accomplished by. . . a transformation of one's being, which means not merely a noetic illumination but a changed heart and a transformed will.' (p. 195)

But can such experience be said to give us *knowledge* of ultimate Reality? Radhakrishnan answers the vital question thus:

> When the Upaniṣads speak of *jñāna* or gnosis, when the Buddha speaks of *bodhi* or enlightenment, when Jesus speaks of the truth that will make us free, they refer to the mode of *direct spiritual apprehension of the Supreme in which the gap between truth and being is closed.* (p. 197, last emphasis added)

The essayist supports this affirmation by declaring his own inability to accept Wittgenstein's thesis 'that direct experience in the absence of outward criteria would in itself forfeit its title to be the subject-matter of true propositions.' (p. 200) But, one may here wonder, is the talk of such criteria irrelevant to spiritual realization? Do not the hard-won 'riches of the spirit' (or *dharmalakṣaṇas*), such as serenity, fortitude and limitlessness of love, here illumine one's everyday behaviour, and so bear witness to the finality of inner attainment?

The second of the questions I have just posed refers to a concept which Christianity shares, say, with the *Gītā* view of religiousness. This, however, is not the only detail which warrants the modern emphasis on 'the need for, and also [the] possibility of, inter-cultural understanding and fellowship of faiths'—the two goals which, as rightly pointed out by Debabrata Sinha in his essay: 'At the Crossroad of Philosophical Cultures', were so dear to Radhakrishnan. A part of the latter's defence of these two goals consists in his emphasis on 'the note of underlying compatibility between intellect and intuition'. Intuition, argues Radhakrishnan, is not, 'alogical but supralogical.' (p. 206) The essay rightly ends with the conclusion that 'Radhakrishnan's thought . . . although rooted in the best of the Indian tradition, is yet neither exclusively Indian or Eastern, nor exclusively Western, but is inter-human, inter-cultural.' (p. 213)

Fred Dallmayr's essay is entitled 'On Being and Existence: A Western View', but its explicit purpose, as stated by the author himself, is to illustrate some keys features of Radhakrishnan's outlook as manifest in his interpretation of the *Brahma Sūtra* and *Bhagavad Gītā*; and, in the end, to give 'a tentative assessment of his contributions by placing them in the context of current Western philosophical trends'. (p. 218) Before outlining this context, however, Dallmayer takes care to list some important emphases

of Radhakrishnan's thought, namely: 'the correlation of reason and faith, of secular and spiritual life' (p. 219); the importance of a creative rethinking of philosophical and religious traditions (p. 220); and the superiority of one's own 'encounters with reality' to 'the mere historical study of such encounters' as sources of 'philosophical learning and insight'. (p. 221) Turning to Radhakrishnan's *commentaries* on the *Gītā* and the *Brahma Sūtra*, and to *his own* 'Fragments of a Confession', the essayist raises some critical questions, but at no point as mere cavillation. (pp. 236-8) Finally, the essayist makes three positive suggestions: first, that 'the dialogue' between East and West can still be nourished [that is, in spite of Hegel] by the imaginative or metaphysical-ontological teachings of the past' (p. 241); second, that the Indian doctrine of 'Karma-yoga construed as a non-attached or non-possessive (or non-acquisitive?) mode of action' may be found quite relevant to our practical life today; and third, that 'Radhakrishnan can serve as a reliable guide' in this respect, by virtue of 'his life-long combination of thinking and political practice'. (pp. 241-2)

The next essay, by S. S. Rama Rao Pappu, shows how Radhakrishnan emphasizes 'the value of the religion of the spirit' for attainment of the ideal of a world community. Attention is here drawn, in the main, to Radhakrishnan's views on religion and politics:

> Politics is but applied religion . . . [because] religion includes faith in human brotherhood, and politics is the most effective means of rendering it into visible form. [Again] just as an exclusive religion makes demands on one's followers that they shall follow no other god except their own... so also a nation state enjoins unwavering patriotism from its citizens to the exclusion of the rest of humanity. (pp. 247-8)

The essay ends by stating the crux of Radhakrishnan's argument as to why the Vedantic tradition of Hinduism may be regarded as pre-eminently helpful in working for the ideal of a world community. The Vedanta, he declares, is 'an attitude of comprehensive charity... [not] a fanatic faith in an inflexible creed... [it] is not *a* religion, but *religion itself in its most universal aad deepest significance*.' (p. 252, emphases added)

The second part of the work under review comprises essays on Radhakrishnan as 'the universalist and world Statesman'. Here, in 'Remembering Radhakrishnan', G. Parthasarathi focuses on how, as a statesman, the philosopher propagated, with unmatched eloquence, 'the Gandhi-Nehru vision of both an equitable socio-economic order at home and of co-operative international living' (pp. 262-3); and rounds the essay with Radhakrishnan's apt obituary characterization of Nehru as: 'an earnest of the age to come, the age of world men with world compassion'. (p. 265) M.S. Adiseshiah too, in the next article, concentrates on 'the universalism and internationalism' of Radhakrishnan, quoting freely from the philosopher's own utterances. As the President of India, we are told, Radhakrishnan's

most moving addresses were on culture and education, with recurring emphasis on the following: preservation of 'the sanctity of the individual' along with an enlargement of his sympathies; the value of supplementing knowledge with wisdom, and commitment with discipline; and cultivation of both the scientific temper and a faith that is rooted in (though not confined to?) reason (p. 277). Adiseshiah also recounts quite a few interesting events relating to the philosopher's work with Unesco (pp. 273-5).

Philosophically, however, Arapura's essay, 'Idealism, Utopia and the Spiritual Commonwealth', is richer in content. The essayist seeks to show that Radhakrishnan could manage to do 'with supreme success' what H. H. Price once spoke of as the essential 'double task' of a philosopher, 'viz. to produce the philosophic good called wisdom and to purvey it to the public' (p. 278). This good (or wisdom) is, in the case of Radhakrishnan, the 'vision' that 'the chief vehicle and the most natural human resource for achieving... [the end of a 'spiritual commonwealth'] is the religion of the spirit which underruns history and the various cultures and religions (p. 280). Looking at the matter in its 'two fundamental dimensions'—that is, 'idealism and concrete religion'—the author makes comparative references to Whitehead's modification of the Platonic 'version of the cosmic process', and draws a parallel between the views of Radhakrishnan and St. Augustine on the way to realize 'the commonwealth of spirit, the kingdom of ends' (pp. 284-5), without forgetting to mark the difference that whereas Radhakrishnan is mindful of the element of value in all religion, Augustine focuses on revealed religion only (p. 286). Some key details of Radhakrishnan's view of religion are also brought out in this essay: it is religion which is the real actualizing agent of idealism (p. 286), indeed, of philosophy taken generally, for 'all philosophy is idealsitic' (p. 287); further, 'of all human phenomena, religion alone is marked by an orientation which is simultaneously to an *inner*, cosmic, *human* goal, and to one that is beyond it' (p. 289, emphases added); and, finally, even mystical experience can make for 'the cosmic and historical fulfilment of humanity', for 'a mystic who has attained such experience is utterly free and, therefore, he goes forth into the world to participate in its life... as a *jivanmukta* whose immense serviceability for the perfection of humanity is all too meagrely grasped' (pp. 288-9).

V.K.R.V. Rao's essay, 'The Universal Man', also emphasizes Radhakrishnan's 'universal outlook and passionate plea for a world society' (p. 296), and his conviction that 'restoration of religion as the consciousness of the spiritual element in man' is the only way to realize the ideal (p. 303). The author rightly points out that, according to Radhakrishnan, 'religion is not a creed or code but an insight into reality', and does well to emphasize the philosopher's 'synthesizing ability' in every area of philosophic reflection (p. 303). The conclusion, too, is truthful:

> Dr Radhakrishnan has taken religion out of the realm of dogma and authoritarianism, and has made it into a living philosophy of the spirit, in which he has imbued religion with depth and meaning and practicality both for India and for all mankind. (p. 303)

Indeed, it is not for nothing that Radhakrishnan has been called a *viśvamānava*, along with others like Tagore and Nehru. P.M. Gregorios explains the point further in his essay, 'The Secular State and the Upaniṣadic Politics of a Viśvamānava', partly by citing some of the philosopher's own utterances from his two well-known works: *The Principal Upanisads* and *Religion and Society*:

> If the old world has to die in violence... it is because [so far we have been unable] peacefully to adjust ourselves to the new world, which all the time has been *indivisible in essence* and now is pressing to become *indivisible in fact*. Essential unity with God is unity with one another through God... We are lifted out of provincialism into perspective, as we become aware of something vaster, profounder, more ultimate than the world....Nationalism is...an acquired artificial emotion....If today the feeling of national pride is intense, it only shows the prodigious capacity of human nature for self-deception. (pp. 304, 305, second emphasis added)

The author also cites, with obvious approval, Radhakrishnan's views that 'the aim of life is not merely to create an earthly Utopia, but to attain a higher and intenser form of consciousness'; and that the real transformation of society is to be expected from spiritually insightful individuals, and not from movements or institutions (p. 308). But to *me* the most striking detail of the essay is the author's own remark by way of validating the following prophetic words of Radhakrishnan on the 'purely secular materliaist Marxist movement': 'To gain the ends which Marx and his adherents have in view, to achieve the extinction of unhappy hates, we need a spiritual renewal. The new world order must have a deep spiritual impulse to give it unity and drive.' The essayist adds the following: 'It is this need of a spiritual or "moral" element that Soviet Marxism, specially under the leadership of M.S. Gorbachev, now seeks to recover.' (p. 306) It is indeed in recognition of his success in this direction that Gorbachev has been awarded the Nobel Peace Prize for 1990.

The piece which follows, Subimal Dutt's 'Some Personal Reminiscences', is no mere recollection of incidents. It brings out the many qualities of Dr Radhakrishnan as a person: his distaste for mere ostentation; innate humility and courteousness; sense of humour; and easy and informal manners in spite of his profound scholarship that would easily inspire reverence in his audiences.

S. Nurul Hasan writes on Radhakrishnan as our ambassador in Moscow,

and rightly wants us to acknowledge 'the tremendous contribution' which the distinguished philosopher made to the strengthening of Indo-Soviet friendship, a point which is emphasized by A. Litman too in his essay: 'An Advocate of Friendship with the Soviet Union' (p. 338), the only essay, I may add, which makes a mention of Radhakrishnan's sensitiveness to the true significance of art and literature (p. 334). Litman also draws attention to the philosopher's rejection of 'the Europocentrist notion of the opposition of the cultures of the East and West' on the ground that it is only 'a means to the spiritual enslavement of the Eastern nations'. (p. 334)

As for Natwar Singh's brief essay, 'Radhakrishnan: A Tribute', I expect it to bewitch the reader with its graphic beginning *and* moving close:

> Year: 1957. Place: Chung Nan Hai, Peking. Time: late evening. Vice-President Radhakrishnan is entering Chairman Mao Tse-tung's residence. The mighty Mao walks up to greet his distinguished guest midway in the courtyard leading to his study. They shake hands. Then the unimaginable happens; Radhakrishnan pats Mao on the cheek... Before the Chairman could show either surprise or annoyance, or his staff their outrage, Dr Radhakrishnan broke the tension by an exit line which would do any actor proud: 'Don't be alarmed, Mr. Chairman, I did the same thing to Stalin and the Pope'. (p. 328)

> One regret he certainly nursed. For several years he was a serious contender for the Nobel prize. Bertrand Russell, his friend and fellow philosopher, beat him to it. Without casting aspersions on Russell, all I can say is that Radhakrishnan was in the very great company in his fellow non-recipients: Tolstoy, Mahatma Gandhi and Pandit Nehru. (p. 331)

Margaret Chatterjee chooses to write on a subject which has so far received but meagre attention from students of Radhakrishnan's thought, that is, his concern with the problem of peace. She begins by pointing out that his 'crusade against narrow nationalism' (p. 342), is not merely academic, but duly buttressed with 'familiarity with the institutional apparatus of peace-making, as well as a scholar's grasp of the history of civilizations and cultures' (p. 343); and that it is this dual conversance with the theory and practice of peace that enables the philosopher-statesman to write and speak so insightfully on this most pressing problem of today. The more important of his insights in this context, as distinguished by the essayist, may be detailed as follows.

The ideal of international peace can be realized only as a direct extension of truly democratic behaviour within individual countries (p. 343); and in so far as democracy enjoins equal regard for all persons, we must begin to think of the world 'not in terms of maps and markets' which (I may add) project divisions and incite competition—and so conflict—'but of men and women' (p. 344). 'The removal of prejudices and stereotypes vis-à-vis our conception' of other individuals and nations is as much the moral duty of

a man as his own liberation from the 'veils of illusion', and from determination by forces like anger and greed. (p. 346) We have indeed to struggle hard 'to rise above group loyalties, sectional interests and regional pressures' (p. 347). The three main enemies of peace are 'anarchic individualism, the economic interpretation of history, and the materialist view of life' (p. 345). The last of these, in particular, appears to dominate the world today. Yet we need not lose faith in the innate goodness of Man. Everyone is blessed with 'a spiritual faculty which (can) enable him to respond to value and aspire to the highest'. (p. 347) In the region of political thought there is already a perceptible shift from the concept of 'international relations' to that of 'the world', and so peace may well be regarded 'as a genuine *telos* towards which humanity is actually moving'. (p. 348)

On the whole, the book under review is not merely informative, but educative. It should interest not only academics, but all those who want to improve their understanding of the making of independent India, and to see how it is possible to hold on to one's sense of values in the midst of active involvement in political affairs. I expect it to call for at least one more edition. But this at once makes it necessary for me to point out the many printing errors that disfigure it presently: 'reeded', p. 142, in place of 'needed'; 'religion', p. 171, second para, should be 'language'; 'beings', p. 188, should be 'begins'; 'released', p. 193, first para, to be replaced with 'realized'; p. 194, last para, a comma needed after 'Religion'; p. 197, the sentence: 'If the mystics.... apart' is, in its present form, meaningless; p. 198, 'expression', along with 'of the mystical experience', should be 'expressions'; p. 251, 'inspite of' to be 'in spite of'; p. 271, second para, the requisite comma after 'fail' is missing; p. 277, fifth para, 'were' in place of 'was' after 'addresses'; p. 324, second line, 'persuing the policy'; p. 346, second para, 'his', instead of 'is', after 'thanks to'; and p. 347, second para, 'rise *about*' should be 'rise *above*'.

I cannot, however, let this review end on a negative note. For, quite apart from the merit of its more serious essays, the book provides a good deal of interesting information about the power of Dr Radhakrishnan's work and personality. It indeed feels good to be told that because of their stylistic excellence his 'writings on philosophy have won him a place in Indian literature in English' (p. 127); that much of the renewed interest in Buddhism today must be traced to his 'brilliant choice of Gautama Buddha' as the 'subject for his British Academy Lectures' (p. 131); that when he patted Stalin on his back 'the iron-man remarked: "You are the first man to treat me as a human being and not as a monster"' (p. 353); and, finally, that 'Charles Hartshorne, the foremost process philosopher of our day, in a piece contributed to the Schlipp volume on Radhakrishnan (in the 'Library of Living Philosophers) observes that of all the wise men he had met, Radhakrishnan was one of the wisest'. (p. 279)

2/81 Roop Nagar, Delhi 110007 S. K. SAXENA

KAUSHAL KISHORE SHARMA, *A Commentary on Kant's Critique of Practical Reason*, Indus Publishing Company, New Delhi, 1989, 135.

Critique of Practical Reason does not seem to have had as much appeal for those philosophers who were interested in Kant's moral thought as had the *Groundwork of the Metaphysic of Morals*. *Groundwork* found several commentators (e.g., Manthey-Zorn, Paton, Ross, Duncan, etc.). Practical Reason has been commented upon in detail mainly by Lewis White Beck (*A Commentary on Kant's Critique of Practical Reason*, Chicago, 1960). The architectonic scaffold reminiscent of the first *Critique*, of which *Groundwork* is relatively free, may have been a detraction. Besides, *Groundwork* was meant by Kant to have an uninitiated readership.

The preference for *Groundwork* in comparison to *Practical Reason* has been responsible for a greater accent on categorical imperative than the notion of highest good which included the notion of happiness also. As pointed out by Sharma, for Kant the moral law would have been null and void if striving for the attainment of the highest good were not possible (p. 124.—page numbers refer to Sharma's *Commentary*). Moreover several considerations other than those that were dealt with in *Groundwork* needed investigation to complete the theoretical map of practical reason in its entirety, e.g., the presumption of empirical practical reason, unity of speculative and practical reason and a synthetic use of pure practical reason, among others (p. 31).

Most Indian philosophers have shown interest in Kant's first *Critique*. K.C. Bhattacharyya, A.C. Mukherjee, Ras Vihary Das, N.V. Banerjee, Bhola Nath Sharma and Humayun Kabir are some important names which come to mind in this context. There are some who have written on Kant's moral thought, among whome R.K. Gupta is an eminent name. However, none has attempted a detailed commentary on any of the Kantian moral treatises. Against this background, coupled with the well-known abstruseness of the Kantian style, an attempt to present a commentary on *Practical Reason* by Sharma is indeed a notable contribution to Indian Kantian scholarship. Ras Vihary Das had performed a singular service by writing a *Handbook* to the first *Critique*, which is perhaps the best unabstrusive presentation of *Critique of Pure Reason* for the Kantian student. Sharma's *Commentary*, though not a line by line paraphrase of it, does succeed in conveying the Kantian argument in its essential detail and divisions. The style is lucid, compact and remarkably simple. Only someone who has immersed deep and devoted considerable time to the study of the *Practical Reason* could produce a work like this. As Daya Krishna mentions in his foreword to this *Commentary*, the admiration for the work increases when it is realized that Sharma is not a regular academic. Thus, this *Commentary* can be said to be without exaggeration a result of genuine and authentic interest in Kant.

In a review of a work like this two things can be attempted. Either one comments on the way the text has been presented, interpreted and assessed by the commentator, or one raises some issues arising out of the text itself. Sharma's objective seems to have been primarily to present the *Critique* so loyally that the reader is left free to interpret the text for himself. He does, of course, annotate, gloss, comment wherever he thinks it is necessary to guard the reader against possible confusion or misunderstanding. I would, therefore, confine myself to highlighting a few disjointed issues which interested me while going through the *Commentary*.

Sharma has criticized Kant's doctrine of the categories of freedom. His criticism can be treated as a take-off point. Sharma's comment arises from Kant's observation on his categories: The categories 'proceed in order from those which are as yet morally undetermined and sensuously conditioned to those which, being sensuously unconditioned, are determined only by the moral law...' (as quoted by Beck in his *Commentary*, p. 142). Sharma has taken this remark as a concession to the empirical and he thinks that Kant's remark stands in flat contradiction to his general position that 'ought' cannot be derived from 'is'. The question is, can there be an alternative explanation of 'proceed in order' in Kant's remark? The division of categories into four classes—quantity, quality, relation and modality, follows the pattern in the first *Critique*. In the first *Critique* the third category is supposed to be a synthesis of the first two. This cannot be true of the relation of the first two categories and the third in the context of *Practical Reason*. For how can a moral category be a synthesis of two non-moral categories? For the same reason, it cannot be held that the third category can be derived from the first two. If that is so, Kant cannot be held responsible for deriving 'ought' from 'is'. Perhaps the categories relate to the various practical judgements, some having empirical bearing and others having a moral significance. The classes in which they are divided do not exhibit any strict logical relationship. But then how should one understand 'proceed in order?' Is the order merely enumerative? There is another problem. The third category both in quality and relation do not seem to have even moral significance (moral significance in the Kantian sense) at all. As Beck noted, Kant's remark 'could not have been illustrated with the categories of quality or relation' (p. 149, Beck's *Commentary*). Obviously, the issue needs a separate and detailed discussion.

Sharma raises another question relating to the categories of freedom. Could they be considered as *a priori* conditions of the possibility of moral experience (p. 77)? To him the answer is in the negative. For, he points out, moral experience or consciousness is a fact for Kant. By implication, Sharma seems to think that knowledge is not a fact—in the context of the first *Critique*—for it had to be shown to be possible. Categories in the first *Critique* are shown to account for the possibility of knowledge. This

however would not be completely correct. In the *Critique of Pure Reason* also knowledge has been taken as a fact. The question posed was, how could this fact be possible? If Kant considered moral experience to be a fact why could he not similarly ask about the conditions of its possibility? If he could, why could he not entertain the idea of categories of freedom as being the conditions of the possibility of moral experience? He did not. But this would not render 'could not' unintelligible. In fact, the issue relates to the larger problem—parallelism between the structures of the two *Critiques*.

Sharma draws our attention to a significant passage in the first *Critique* where Kant has pointed out the difference between transcendental philosophy and practical moral philosophy. Kant says (p. 23):

> Although the highest principles and fundamental concepts of morality are *a paiori* knowledge, they have no place in transcendental philosophy, because, although they do not lay at the foundation of their precepts the concepts of pleasure and pain, of the desires and inclinations, etc., all of which are empirical origin, yet in the construction of a system of pure morality these empirical concepts must necessarily be brought into the concept of duty, as representing either a hindrance, which we have to overcome, or an allurement, which must not be made into a motive. Transcendental philosophy is therefore a philosophy of pure and merely speculative reason. All that is practical, so far as it contains motives, relates to feelings, and these belong to the empirical sources of knowledge. (first *Critique* A 14-15, B 28-39)

As is clear from this passage, transcendental philosophy is concerned with that aspect of reason which is completely unmixed with the empirical. Kant himself remarks that the highest and fundamental concepts of morality are *a priori*. In his well-known assertion in the first *Critique* he wrote of delimiting the realm of theoretical in order to make room for morality and faith. These statements sometimes lead the Kantian student to think that the realm beyond the theoretical or phenomenal is both noumenal and practical. Thus the distinction between noumenal and transcendental is not always in focus, the consequence of which is that practical and transcendental are also thought to be identical by Kant's reader. Granting the distinction between theoretical and practical on the one hand, and the distinction between practical and transcendental on the other, the Kantian reader is led into the perplexity concerning the first distinction, i.e., between the theoretical and the practical. In the theoretical categories mould the sensible manifold. In the practical moral law determines the maxims of action. In both the cases one has to do with both—empirical as well as *a priori*—elements. Thus, once again, we encounter an issue which has to do with the parallel between the two *Critiques*.

Problems relating to *a priori* synthetic and 'type' also seem to point in the same direction. The notion of *a priori* synthetic has served as an explication of what Kant understood by knowledge in the theoretical realm. If restricted to that context alone, it is not very clear as to what role it could play in the realm of the practical. At least two instances of *a priori* synthetic propositions are there in *Practical Reason* as pointed out by Sharma: the 'categorical *ought* is *a priori* synthetic proposition. (p. 31) 'The highest good is the synthesis of two heterogeneous concepts. It is thus *a priori* synthetic connection of morality and happiness into a whole called the *highest good.* In Kant's practical philosophy *a priori*, practically necessary and morally necessary mean one and the same thing'. (p. 104) 'Ought' cannot be derived by analysis of the notion of good will nor can it be understood in terms of experience for no experience can be adequate enough to affirm it. (p. 31) Yet, as we have seen, Kant holds categorical ought as yielding an *a priori* synthetic proposition. In p. 31, note, Sharma clarifies that pure practical reason tries to over-reach itself when it seeks the source of the law in the supersensuous. Much remains obscure here. Does good will belong to supersensuous? Does it possess no obligating force? What else should one understand by the comment that the analysis of good will does not yield an ought? On the other hand, if ought cannot be determined by, or if it does not involve, the empirical how can it give us a synthetic proposition? 'X ought to do a.' How is a sentence of this form to be understood or interpreted as an *a priori* synthetic proposition? There is a necessity in 'ought to' and to that extent it can be said to be *a priori*. But how is it synthetic? Perhaps the idea may be that 'ought to' is a formal demand and by itself does not reveal the content or the direction of the action. Thus, when it is associated with some particular action in the form of a maxim it is having its content added to it. This is not the way in which *a priori* synthetic is explained in *Practical Reason*. Why? That is not very clear. In *Practical Reason*, for a proposition to be synthetic it is not necessary for it to be empirical. The additive character of the predicate is not, strictly speaking, empirical. In the practical realm the additive character may be non-intuitive or ideational, as the following analysis from Beck confirms:

> A good will [sc. a pure practical reason] has as its maxims only universal laws' claimed to be a synthetic a priori judgement, for 'by analysis of the concept of an absolutely good will, that property of the maxim cannot be found.' How, then, can it be confirmed. Not by finding an intuition (which would be the obvious step in theoretical philosophy) but by adducing some substitute for intuition. It must be purely intellectual... must, like intuition, have an independent warrant; . . . This third thing, this substitute for intuition, is the Idea of freedom. And freedom is not given at all! Only its idea is given. (p. 173, Beck's *Commentary*)

Thus the wider range of *a priori* synthetic in the practical realm seems to point to a wider range of cognitive as compared to the range of knowledge in the theoretical realm.

Schematism is supposed to be a weak point of the first *Critique*. The notion of 'type' seems to be weaker in the second one. Application of categories on an alien manifold required a mediating strategy. Kant's answer was schematism. In the practical realm also a mediating strategy was required to make the subsumption of action under a rule possible. Here Kant's answer was the notion of 'type'. The question is whether the requirement in this realm is genuine or demanded by a parallel to the structure of the first *Critique*? (One should bear in mind that the structures of the two *Critiques* are not exactly parallel, yet a demand of supposed parallelism seems to be operative on several points.) Sharma tells us, 'Since reason as practical operates not with schema of sensibility (condition of time) but with formal aspect of principles or laws, and as in the sphere of the practical reason the moral law is formal, the practical judgement does not employ a schema but a type' (p. 85). This is clarified by pointing out that moral law determines the moral action as a natural law would determine a natural event. It is on this analogy (typicality) that 'moral law must have the universality and inviolability characteristic of the law of nature' (p. 85). If, as Sharma remarks in a footnote on the same page, 'reason as practical must govern itself by the form of natural law and not by its contents', where lies the necessity of mediation? If, on the other hand, moral law, like theoretical category, were to mould the content of desire, moral law purely being a form and the content of desire being purely sensuous, then some strategy for mediation would have been necessitated. But in that case the notion of type could hardly have been a help.

The last comment could have been the first also. While talking about the title of the work Kant observed that pure practical reason can demonstrate its reality in action. There it requires no critical examination. But why? Couldn't one assert the same of pure reason? Doesn't pure reason demonstrate its reality in knowledge? On the reverse, if pure reason requires an investigation why not practical reason? It is said that theoretical reason tries to go beyond its area of legitimate application. And that claim needs to be examined. Doesn't the same apply to pure practical reason also? For it also tries to over-reach itself in looking for the source of incentive to action in the supersensuous (p. 31, note). This also occasions the question whether moral action was the primary concern of *Practical Reason*. In the total perspective one might think that Kant's main concerns were morality and rational faith—what man ought to do and what he could hope for. What he could know was a question in the nature of clarification. From this point of view even the first *Critique* can be understood as having for its primary concern morality and faith. But just as a general investigation had to

be undertaken in connection with knowledge, in *Practical Reason* a general investigation had to be conducted into the nature of action. Various categories of freedom have to do with volitional action in general. In contrast, the mechanical and deterministic aspect of action would fall in the realm of phenomena and would form the proper subject-matter of theoretical reason. Just as it is true that there can be no possibility of free action in a purely mechanical realm so it must be equally sensible to think that the notion of free action wouldn't make any sense in connection with holy will for there is nothing for the holy will to conflict with or to overcome. Holy will, of course, would be free *par excellence* but in a sense which would be radically different from moral freedom.

This is a book which every student of Kant's ethics must go through. A detailed subject index could have added to its worth.

University of Rajasthan, Jaipur RAJENDRA SWAROOP BHATNAGAR

RANJIT GHOSE: *Idea of a Person: Some Problems Relating to Body, Mind Identity and Death*, Punthi Pustak, Calcutta, 1990, 138 pages.

The book under review is principally devoted to the understanding of the concepts of 'Person' and 'Disembodied Survival'. The discussion of 'Personal Identity', commendable as it is, is subsidiary to the main themes, though its relevance to the discussion of the concept of 'Person' has been clearly spelt out.

The concept of person is dealt with in the book in so far as it forms part of our ordinary discourse about the world. Borrowing Sir Peter Strawson's diction, it may be said that the book understands the concept of person as part of our 'Descriptive Metaphysics'. There may also be a phenomenological exploration into the concept of person—as distinguished from the description of the logical behaviour of the concept in our thaught of the world—in which, *pari passu* with such exploration, there is a reflective disclosure of the person in his various societal, cultural and historical interrelations. But Ghose has not undertaken such a task. He confesses: '. . .the idea of a person could also be provided from a social or a *phenomenological* perspective . . . the scope of the book is extremely *limited*'. (Preface, emphasis added.) But within the defined parameters of the book, Ghose evinces his clear awareness of the issues he has to discuss; particularly, he *situates* Sir Peter's concept of person in the context of present-day controversies regarding the identity of mind and body, Ayer's thesis of a contingent relation between a person's body and his experiences, etc.

Ghose begins his discussion by maintaining that the conceptual enquiry into 'persons' should have the 'human being' as a 'paradigm' (p. 2). He points to the way we use the concept of person in our ordinary discourse: we make 'determinate claims' about persons, such as, 'That person is five feet tall' or 'He can solve mathematical problems.' Such claims, according to Ghose, 'remind us that the concept of a person is the concept of a minded, bodied subject' (p. 6). This is how Ghose tries to lay bare, in his own way, the functioning of the concept of person in our ordinary language.

As already pointed out, Strawson's point of view permeates the book. Ghose refers to Strawson's concept of person as a 'primitive' concept, i.e. the concept of a type of entity without admitting which 'states of consciousness' and 'corporeal characteristics' cannot be 'ascribed' together to a single individual (*of that type*). Ghose succeeds in bringing out that the concept of person cuts across the dualism of 'mind' and 'matter' (pp. 35, 43-4, 47 and 51). In this connection it is quite in order on Ghose's part (in pp.7, 49 and 50-1) to seek light from Hide Ishiguro's gloss on Strawson. The concept of person might be 'primary', in the sense that there is a huge cluster of predicates none of which we would understand unless we had already somehow grasped what a person is (*loc. cit.* in Ghose's book) *and* to follow it up with his observation containing well-chosen examples, viz., '. . .in examples like "is programming a computer" or "is speeding a car", programming and speeding involve a great deal of physical movement but certainly they are properties peculiar to human beings and not to the material things' (pp. 51-2). In Strawson's diction, they are P-predicates, as different from M-predicates, which can be 'ascribed' only to material bodies. For corroboration of Ghose's task, reference may be made to Strawson's way of clinching the issue against Cartesian dualism: 'P-predicates. . . will be very various. They will include things like "is smiling", "is going for a walk", as well as things like "is in pain", "is thinking hard". . .' (*Individuals*, p. 104). Again, '. . . though not all P-predicates are what we should call predicates ascribing states of consciousness (e.g. "going for a walk" is not), they may be said to have this in common, that they imply the possession of consciousness on the part of that to which they are ascribed' (*Individuals*, p. 105).

Ghose passes in review the different theories of the 'criterion' of personal identity, such as the memory-criterion, spatio-temporal continuity criterion, or body-identity criterion. He is clear that his task is not that of *'searching* for a unique criterion', but of enquiring into 'how a personal identity criterion *works*' (p. 69, emphasis added.) This is in accordance with his Strawsonian outlook.

In conformity with his 'descriptive' task, again, Ghose tries to establish that personal identity is 'something primitive' (p. 103). In this connection he quotes Swinburne's view that 'personal identity is something ultimate' (*loc. cit.* by Ghose on p. 103 of his book) approvingly. Equally approvingly,

he refers (on p. 106 of his book) to Thomas Reid's view that one's awareness of oneself 'needs no philosophy to strengthen it, and no philosophy can weaken it . . .' For Ghose, personal identity is primitive because 'bodily and memory continuities do not *constitute* but are mere *evidences* for personal identity . . .' (p. 103, emphasis added.)

The descriptive metaphysician that he is, Ghose evinces good commonsense when he takes the 'ordinary notion of a person as a *psychophysical* being' (p. 70, emphasis added) to be the starting point of the discussion on the criteria of personal identity. This starting point surely gives Ghose the warrant to conclude that 'the continuities of not merely M-predicates but of *P-predicates in conjunction with M-predicates* are relevant to judgements of personal identity'. (p. 70, emphasis added.)

The concept of 'survival after death' is taken by Ghose as 'parasitic' on our 'actual concept of person as an embodied subject of consciousness' (p. 109ff.) inasmuch as the 'individuation' (p. 112) of *a* disembodied person depends on the notion of the *same* person *having been previously* embodied. This is quite consistent not only with Ghose's Strawsonian aims but also with his criticism of the Cartesian view of person as a pure individual ego (pp. 28, 30 and 33), albeit in a Strawsonian vein.

One only wishes that Ghose's clarity of outlook and his steadfastness to 'descriptive' aims were not impaired on two counts. *First*, we turn to his use of the word 'primitive', both in respect of the concept of a person *and* in respect of personal identity. We should immediately observe that 'primitive' means quite different things in the two cases. Strawson holds that the concept of a person is 'primitive' because without understanding this concept we cannot explain how 'corporeal characteristics' and 'states of consciousness' are 'ascribed' to a single individual. It is thus conceptually 'primitive' to the 'ascription' of 'M-predicates' and 'P-predicates' to a single individual. But personal identity is 'primitive' or 'ultimate' or 'unanalysable' because one's awareness of oneself does not need the support of any criterion. One can *argue*: 'unless the concept of person is admitted, we cannot understand how the ascriptive task is performed'. But it will be odd to say that one has to *argue* to establish his own identity *to oneself.* One's identity to oneself is never argued, established, proved, etc., it being never *impaired.*

Second, a remark of Ghose on p. 24 of his book, innocuous though it may appear to be, may imperil his entire project. Heartily joining Ian Ramsey in opposing a 'scientific' account of person and quoting Ramsey *approvingly* that 'Every Scientific context for "observables", every brand of scientific discourse, presupposes an "observer". . .' (loc. cit. by Ghose on p. 23 of his book), Ghose writes, 'The person has a unique status in that he is not only an object in the world but as a *subject* is the condition of there being objects at all' (p. 24, emphasis added). *First*, how a subject can be object and subject as the 'condition' of their being objects at all' at once

passes one's comprehension. One can understand a Naiyāyika holding that knowledge of object may itself *be* object but then in his scheme of ontology knowledge is not 'condition' of their being object. *Second*, and this is where the ship runs aground for Ghose, 'subject' as the condition of objects is at the farthest remove from a person. It is no member of the world of objects, whereas the *Strawsonian* 'person' is just one among several others particularly for this reason that if it were the only 'I', then it could not just be. We can say, *a la* Strawson, that one can ascribe conscious states to oneself on condition that one ascribe them to others, i.e., *individuate* them, identify them and distinguish them from one's 'I'. With the subject as precondition of objects one can of course build a philosophy. Nearer home, Professor K.C. Bhattacharyya built up an entire philosophical system out of 'I' that cannot be spoken of as an object can be, that cannot be 'meant' or be a *padārtha*. The Strawsonian person, however, is very much within the field of meanable, communicable discourse. Well might, therefore, Ghose be cautioned against describing 'person' as 'subject'.

Visva-Bharati, Santiniketan K. BAGCHI

N.S. RAMANUJA TATACHARYA: *Pakṣatā with Dīdhiti, Dīdhitiprakāśikā of Gadādhara Bhaṭṭāchāryya and Bhāvabodhinī*, Kendriya Sanskrit Vidyapeetha, Tirupati, 1988.

The Navya-Nyaya school of philosophy has developed a dialectical terminology unknown before and has achieved mathematical precision in chiselling out the concepts of Indian logic. It has wielded its influence on almost all the Indian disciplines of thought. Even Poeticians, Grammarians, Vedantins and others started to present and argue their cases in the style and terminology of Navya-Nyaya.

The Navya-Nyaya work, which inaugurated this revolutionary change in the philosophical and other disciplines of this country, is the *Tattva Cintāmaṇi*, the masterpiece of Gaṅgeśopādhyāya, the master logician of Mithila. The various commentaries and sub-commentaries on this text by astute logicians belonging to the different regions of this country bear evidence to the awe and veneration it has commanded in the scholarly world. The text mainly deals with the various topics connected with the four *pramāṇas* accepted by the Naiyayikas and, accordingly, it is divided into four sections (*khaṇḍas*), namely, '*Pratyakṣa*', '*Anumāna*', '*Upamāna*' and '*Śabda*'. The topic '*Pakṣatā*' is included as part of the '*Anumāna*' section. This portion of the *Tattva Cintāmaṇi*, as the very title indicates, critically examines the various views on *pakṣatā*, i.e., being a *pakṣa*, the minor term in an inference.

The question as to what *pakṣatā* is has intrigued the minds of Indian

logicians since a long time. The *prācīna* Naiyayikas held the view that a *pakṣa* is that on which the doubt whether it has the *sādhya*—the major term—has arisen. Some other logicians argued that the main obstruction for employing an inference is the certainty of the *sādhya* that is already there. Hence, they thought it would be in the fitness of things if the absence of *siddhi* (the absence of the certainty of *sādhya*) is regarded as *pakṣatā*. Yet another group of logicians attempted to describe *pakṣatā* as '*siṣādhayiṣā*'—'the desire to prove'. Pointing out the logical difficulties in these explanations, Gaṅgeśa suggested a definition which is regarded as the final one. Accordingly, *pakṣatā is 'Siṣādhayiṣā viraha viśiṣṭa siddhyabhāva'*, i.e. the absence of the certainty of *sādhya* characterized by the absence of desire to prove.

It was argued that even this definition does not hold good in those instances where the 'desire to prove' occurs first and ceases to exist in the immediate previous moment of an inference as it is followed by many other cognitions required for the inference. Yajñapati Upādhyāya, Miśra and Sārvabhauma, the great logicians who followed Gaṅgeśa, made an attempt to overcome the difficulty by improving upon the definition formulated by Gaṅgeśa. Raghunātha Śiromaṇi rejects all these attempts, pointing out the defects in them. However, according to Gadādhara, Raghunātha Śiromaṇi favours the solution suggested by Yajñapati Upādhyāya: another 'desire to prove' will occur, so as to exist in the immediate previous moment of the inferential cognition.

The above is a very brief outline of the views on the concept of '*pakṣatā*. It only helps us to know the way in which the Navya-Naiyayikas proceeded to find a solution to the problem regarding the concept. In fact, the *Pakṣatā* portion of the *Tattva Cintāmaṇi* hardly runs to one full page. But Raghunātha Śiromaṇi, the celebrated author of *Dīdhiti on Tattva Cintāmaṇi*, whose sharp intellect saw the unfathomable depth and width of Gaṅgeśa's concise expressions, unfolded the logical and philosophical intricacies hidden in them. However, even Raghunātha's commentary on *Pakṣatā* is so terse that many astute logicians such as Jagadiśa Tarkālaṅkara, Mathurānātha Tarkavāgiśa and Gadādhara Bhaṭṭācāryya, felt it necessary to write elaborate commentaries on it.

For a modern student of Navya-Nyaya these commentaries are not of much use. He might be equipped with sufficient knowledge of the other *Śāstras* such as *Vyākaraṇa, Mīmaṁsā*, etc., but the moment he enters the field of Navya-Nyaya he finds himself lost. The hair-splitting analysis of the issues and the fierce employment of the peculiar terminology frustrate him, however keen he may be to continue his studies in Navya-Nyaya. The commentaries, sub-commentaries and *kroḍapatras* which concentrate on just a single issue and discuss it threadbare, take it for granted that the student has mastered the original text. All the efforts of these commentaries are

directed towards further arguments and counter-arguments. They do not bother either to explain the difficult sentences in the text or to bring out the gist of the arguments by which the students would be benefited. It is in this background that we have to evaluate the contribution made by N.S. Ramanuja Tatacharya through his commentary—*Bhāvabodhinī*—on Gādādharī *Pakṣatā*.

Ramanuja Tatacharya is endowed with many rare qualities required of a commentator. During his student career he had the fortune to be guided by the best scholars of the time. A sharp intellect and a calm and quiet temperament enabled him to acquire a perfect understanding of several *Śāstras* such as *Vyākaraṇa*, *Mīmāṁsā*, *Vedānta* and *Nyāya*. Besides, for more than three decades, he has been engaged not only in teaching the Nyaya classics but also in guiding several research scholars. Thus, today Ramanuja Tatacharya stands as one of the best scholars of the country in the field of Navya-Nyaya.

His commentary, *Bhāvabodhinī*, on *Pakṣatā—Dīdhiti Prakāśikā* of Gadādhara Bhaṭṭācāryya is, indeed, very valuable not only to students engaged in the advanced study of Nyaya, but also to teachers in the field. Tatacharya has evolved a very useful method of elucidation in his commentary. He gives the necessary introduction to the text wherever it is necessary and explains the difficult or ambiguous words, if there are any. Then, in a lucid style, he summarizes the argument contained in the text, by following which the reader would get a full grasp of the issues involved.

The commentary commands respect from another point of view also, which is where its significant contribution lies. The Navya-Nyaya tradition demands that a student not only acquire a thorough understanding of the text but also that he be perfectly conversant with the arguments and counter-arguments that follow, over and above the text. The student is also required to master the terse terminology through which alone it is possible to suggest a precise solution. It is heartening to note that Tatacharya has not neglected this point and has presented the elucidation of such arguments in his commentary. The elaborate elucidation leading to the perfect description of the cause and effect relation between *Sādhyasandeha* and inferential cognition (pp. 9-12); the lucid exposition of the causal relation between the destruction of the perceptible special qualities of a *Vibhu* substance and the succeeding special quality of the same substance (pp. 72-3); the elucidation connected with the description of *Siṣādhayiṣā* (pp. 155-7); and the comments offered in connection with *Sārvabhauma Pakṣatā* (pp. 255-61) are a few of this nature. A brief but scholarly introduction, both in Sanskrit and English, bringing out the essence of *Pakṣatā* enhances the utility of the book. I sincerely hope that Tatacharya will soon complete the writing of the commentaries on the remaining Gādādharī works and thus render a great service to the cause of the preservation of a branch of Indian learning which is on the verge of extinction.

It is a pity that the quality of printing is not commensurate with the intrinsic value that the book contains. Needless to say, care should be taken to avoid the errors, which cause so much trouble to both students and teachers alike, at least in the subsequent edition of the work.

Bangalore University, Bangalore D. PRAHLADA CHAR

JICPR

Journal of Indian Council of Philosophical Research

Contents

Vol. I, No. 1 (1983)—Vol. VII, No. 3 (1990)

BOOKS RECEIVED

Living Tradition by P.L. RATTAN
ABCO, Khanna

Unfathomed Knowledge, Unfathomed Wealth by WILLIAM BARTLEY
Open Court, La Salle, Illinois

Way of Life, King, Householder, Renouncer, Essays in honour of Louis Dumont edited by T.N. MADAN
Motilal Banarsidass, Delhi

Political Thought: An Interpretation by DAMYANTI GUPTA
Pointer Publishers, Jaipur

Karma Causation and Retributive Morality: Conceptual Essays in Ethics and Metaethics by RAJENDRA PRASAD
Indian Council of Philosophical Research and Munshiram Manoharlal, Delhi

The Philosophy of Nikunja Vihari Banerjee edited by MARGARET CHATTERJEE
Indian Council of Philosophical Research and Munishram Manoharlal, Delhi

Gadādhara's Theory of Objectivity: Viṣayātavāda Part Two by SIBAJIBAN BHATTACHARYA
Indian Council of Philosophical Research and Motilal Banarsidass, Delhi

The Bhagavadgita translated by S. RADHAKRISHNAN
Oxford University Press, Delhi

A Thinker's Guide to Living Well by DENNIS E. BRADFORD
Open Court, La Salle, Illinois

Saṅkara, The Man and His Philosophy by T.S. RILMAMO
Indian Institute of Advanced Study, Shimla and Manohar Publications, New Delhi

Philosophy and Religion: Essays in Interpretation by J.L. MEHTA
Indian Council of Philosophical Research and Munishilal Manoharlal, New Delhi

Explaining Human Action by KATHLEEN LENNON
Open Court, La Salle, Illinois

Myth and Philosophy: A Contest of Truths by LAWRENCE J. HATAB
Open Court, La Salle, Illinois

The Meaning of Socialism by MICHAEL HUNTLEY
Open Court, La Salle, Illinois

वैशेषिक सूत्र वृत्तिः देशिक तिलमलै तातार्चार्य शिरोमणि।, सम्पादक श्री रंग नाथाचार्य G.N. Jha
Kendriya Sanskrit Vidyapeeth, Allahabad

महामहोपाध्याय इन्द्रपति प्रणीतम् मीमांसा रस पल्वलम्, सम्पादक डा. किशोरनाथ झा G.N. Jha
Kendriya Sanskrit Vidyapeeth, Allahabad

भट्टव्रागीश्वर प्रणीता न्याय तात्पर्य दीपिका, सम्पादक डा. किशोरनाथ नाथ झा G.N. Jha
Kendriya Sanskrit Vidyapeeth, Allahabad

केशव मिश्र प्रणीतः गौतमीय सूत्र प्रकाश, सम्पादक डा. किशोरनाथ नाथ झा G.N. Jha
Kendriya Sanskrit Vidyapeeth, Allahabad

वर्द्धमानोपाध्याय विरचित, प्रन्चीक्षन यत्तत्वबोध, सम्पादक के. रघुनाथन G.N. Jha
Kendriya Sanskrit Vidyapeeth, Prayag

नीलकण्ठ विरचितः भाट्टार्क, सम्पादक श्री अनन्त-यम्बक पिंगले G.N. Jha
Kendriya Sanskrit Vidyapeeth, Prayag

अजिता श्री परितोष मिश्र विरचिता तन्त्रवार्तिकटीका सम्पादक डा. किशोरनाथ नाथ, डा. कमल नयन शर्मा, सुश्री अर्चना चतुर्वेदी, भाग प्रथम् G.N. Jha
Kendriya Sanskrit Vidyapeeth, Prayag

अजिता श्री परितोष मिश्र विरचिता तन्त्रवार्तिकटीका सम्पादक डा. किशोरनाथ नाथ, डा. कमल नयन शर्मा, सुश्री अर्चना चतुर्वेदी, भाग द्वितीय G.N. Jha
Kendriya Sanskrit Vidyapeeth, Prayag

Journal of Indian Council of Philosophical Research

VOL. VIII, NO. 2 JANUARY–APRIL 1991

ANNOUNCING

A forthcoming issue of the
Journal of the Indian Council of Philosophical Research
on the Philosophy of K.C. Bhattacharyya

The community of philosophers in India and abroad who have been interested in the work of Professor K.C. Bhattacharyya are invited to contribute articles on various facets of the writings of this seminal thinker from India.

Articles may be sent to: The Editor, Journal of the Indian Council of Philosophical Research, latest by March 31, 1992.

ANNOUNCEMENT

The JICPR announces the publication of a Special Issue on *Philosophy of Law—Some Indian Perspectives* under the Guest Editorship of Professor Chhatrapati Singh. The volume shall be devoted mainly to the following issues:

1. The Idea of Evidence—The Classical and the Modern Views
2. The Theory of Interpretation—The Classical and the Modern Views
3. Apavāda or the Theory of Exceptions—The Classical and the Modern Views
4. The Idea of Reasonableness—The Classical and the Modern Views

Scholars in the field of classical *Dharma Sāstra* and *Vyavahāra* texts on the one hand, and the modern Indian Jurisprudence, on the other, are invited to send papers latest by 31 July 1992. For more details please write at the following address:

Professor Chhatrapati Singh
Indian Law Institute
Bhagwandas Road
New Delhi–110 001

Available

The transcript of the oral elucidation of the following topics in Mīmāṁsā from eminent contemporary Mīmāṁsā scholars. The transcript has been prepared from the *oral* recording done at the Kendriya Sanskrit Vidyapeeth, Tirupati, in its Project on "Oral Shastra Tradition", under the Directorship of Dr M.D. Balasubrahmanyam.

Pramāṇām, by Prof. K.T. Pandurangi, 61 pages
Arthavāda-Vicāraḥ, by Prof. Romilla Suryaprakasa Shastri, 61 pages
Bhāvnā, by Prof. V.K. Dongre Shastri, 27 pages
Vidhitrayam, by Prof. R.S. Devanatha Tattacharya, 79 pages
Veda Apaursuséyatvam, by Pt. S. Subrahmanya Shastri, 41 pages
(total: 269 pages)

Scholars interested in getting copies of these transcripts may write to the ICPR Library, Butler Palace, Lucknow.

LIST OF ICPR PUBLICATIONS

ICPR Documentation Series, Book of Readings and Reference Publications

Who's Who of Teachers and Scholars in Philosophy in India
Compiled by DAYA KRISHNA
Munshiram Manoharlal Publishers Pvt. Ltd. Rs 20

A Union Catalogue of Philosphical Periodicals
Compiled by SUBHAS C. BISWAS and BIKAS BHATTACHARYA
Munshiram Manoharlal Publishers Pvt. Ltd. Rs 40

Select Bibliography of Journal Articles on Philosophy, Religion and Indian Culture
Compiled by DEBIPRASAD CHATTOPADHYAYA
Munishiram Manoharlal Publishers Pvt. Ltd. Rs 40

Author and Subject Index of the *Philosophical Quarterly*
Compiled by DAYA KRISHNA and R.S. BHATNAGAR
Munshiram Manoharlal Publishers Pvt. Ltd. Rs 28

Author and Subject Index of the *Indian Philosophical Annual*
Compiled by DAYA KRISHNA and R.S. BHATNAGAR
Munshiram Manoharlal Publishers Pvt. Ltd. Rs 14

Author and Subject Index of the *Journal of the Indian Academy of Philosophy*
Compiled by DAYA KRISHNA and R.S. BHATNAGAR
Munshiram Manoharlal Publishers Pvt. Ltd. Rs 20

Carvāka/Lokāyata: An Anthology of Source Materials and Some Recent Studies
DEBIPRASAD CHATTOPADHYAYA
Rddhi-India. Rs 200

Essays in Social and Political Philosophy
Edited by KRISHNA ROY and CHHANDA GUPTA
Allied Publishers Ltd. Rs 250 (hardback). Rs 90 (paperback)

A Critical Survey of Phenomenology and Existentialism
MRINAL KANTI BHADRA
Allied Publishers Ltd. Rs 100

ICPR Series in Contemporary Indian Philosophy

Philosophical Reflections
G.C. NAYAK
Motilal Banarsidass. Rs 65

Doubt, Relief and Knowledge,
SIBAJIBAN BHATTACHARYA
Allied Publishers Ltd. Rs 150

Towards a Critique of Cultural Reason
R. SUNDARA RAJAN
Oxford University Press. Rs 95

Language, Knowledge and Ontology
KALIKRISHNA BANERJEE
Rddhi-India. Rs 180

Karma, Causation and Retributive Morality: Conceptual Essays in Ethics and Metaethics
RAJENDRA PRASAD
Munshiram Manoharlal Publishers Pvt. Ltd. Rs 250

Philosophy and Religion: Essays in Interpretation
J.L. MEHTA
Munshiram Manoharlal Publishers Pvt. Ltd. Rs 175

The Art of the Conceptual: Exploration in a Conceptual Maze Over Three Decades
DAYA KRISHNA
Munshiram Manoharlal Publishers Pvt. Ltd. Rs 200

Sattāvisayak Anvikṣā (in Hindi)
JASHDEV SHALYA
Rajkamal Prakasan. Rs 75

Nāgārjunkrt Madhyamaksastra aur Vigrahavyāvartani (in Hindi)
JASHDEV SHALYA
Motilal Banarsidass. Rs 80

The Primacy of the Political
R. SUNDARA RAJAN
Oxford University Press. Rs 150

Reference and Truth
PRANAB KUMAR SEN
Allied Publishers Ltd. Rs 175

Works on Contemporary Indian Philosophers

Freedom, Transcendence and Identity: Essays in Memory of Kalidas Bhattacharyya
Edited by PRADIP KUMAR SEN GUPTA
Motilal Banarsidass. Rs 135

Ever Unto God: Essays on Gandhi and Religion
SUSHIL KUMAR SAXENA
Rddhi–India. Rs 110

The Philosophy of Nikunja Vihari Banerjee
Edited by MARGARET CHATTERJEE
Munshiram Manoharlal Publishers Pvt. Ltd. Rs 150

The Philosophy of J.N. Mohanty
Edited by DAYA KRISHNA and K.L. SHARMA
Munshiram Manoharlal Publishers Pvt. Ltd. Rs 175

Works on Classical Indian Philosophy

Natural Science of the Ancient Hindus
SURENDRANATH DASGUPTA
Motilal Banarsidass. Rs 50

India's Intellectual Traditions: Attempts at Conceptual Reconstructions
Edited by DAYA KRISHNA
Motilal Banarsidass. Rs 75

A Study of Patañjali
SURENDRANATH DASGUPTA
Motilal Banarsidass. Rs 100

Gadādhara's Theory of Objectivity (in two parts)
SIBAJIBAN BHATTACHARYYA
Motilal Banarsidass. Part 1: Rs 90. Part 2: Rs 90

Saṃvāda: A Dialogue between Two Philosophical Traditions
Edited by DAYA KRISHNA et al.
Motilal Banarsidass. Rs 200

CONFERENCE OF PHILOSOPHICAL SOCIETIES

John A. Loughney, President
Department of Philosophy
Westfield State College
Westfield, MA 01086

Nancy Simco, Calendar Editor
Department of Philosophy
Memphis State University
Memphis, TN 38152

The Philosophical Calendar is published six times a year by the Conference of Philosophical Societies, the umbrella organization for philosophical societies in the United States and Canada. Member societies receive the Calendar upon payment of dues; non-members and individuals may also subscribe. The Calendar welcomes notification of all meetings of philosophical interest open to philosophers. The Conference of Philosophical Societies invites societies and journals to reprint its Calendar in whole or in part with appropriate acknowledgement to the Conference.

PHILOSOPHICAL CALENDAR
May 1, 1991

MAY

7–11 **2nd International Colloquium on Cognitive Science**
Donostia-San Sebastian, Spain
Abstracts due: February 19, 1991
Contact: J. Ezquerro, ICCS–91, Logic and Phil. of Sci., Univ. Pai Vasco, Apdo, 1249 20080 San Sebastian, Spain <ICCS–91@fil.ehu/es>

11–12 **9th Annual Conference: Belief and Belief Attribution**
University of Rochester
Contact: David Braun, Philosophy, U. of Rochester, Rochester, NY 14627

15–18 **American Weil Society**
College of Wooster
Theme: Simone Weil and the Philosophy of Culture
Papers due: January 31, 1991
Contact: Eric O. Springsted, Philosophy and Religion, Illinois College, Jacksonville, IL 62650

MAY

16–18 **International Association for Philosophy and Literature**
University of Montreal
Theme: Change: Arts/Politics/Science
Papers due: October 15, 1990
Contact: Christie McDonald, Etudes francaises, U. of Montreal, Montreal, Quebec, H3C 3J7

22–24 **International Husserl and Phenomenological Research Soc.**
Verona, Italy
Theme: The Call for a Renewed Critique of Reason: Reason and Life
Papers due: March 15, 1991
Contact: Anna–Teresa Tymieniecka, 348 Payson Rd., Belmont, MA 02178

23–26 **Society for Exact Philosophy**
University of Victoria
Theme: Automated Theorem Proving for Non-Classical Logics
Contact: Charles Morgan, Philosophy, U. of Victoria, Victoria, B.C., V8W 3P4 <morgan@uvphys.bitnet>

North American Association for the Study of Jean-Jacques Rousseau
Boston College
Theme: *La Nouvelle Heloise*
Contact: Ourida Mostefai, Romance Languages/Literature, Boston College, Chestnut Hill, MA 02167

*24–26 **Conference: Dialectic, Science, and Logic in Aristotle**
Kansas State University
Contact: Robin Smith, Philosophy, Kansas St. U., Manhattan, KS 66506 <rsmithi@ksuvm.ksu.edu>

* **The World Phenomenology Institute**
Verona, Italy
Theme: Phenomenology of Life and of the Human Condition
Papers due: May 1, 1991
Contact: A–T. Tymiemiecka, 348 Payson Rd., Belmont, MA 02178

MAY

24–June 4 **Third Conference of North American and Cuban Philosophers**
Havana
Theme: The Future of Socialism: The View from Cuba
Abstracts due: January 11, 1991
Contact: Cliff DuRand, Radical Philosophy Assoc., 1443 Gorsuch Ave., Baltimore, MD 21218

26–29 **The Multiple-Valued Logic Technical Committee of th IEEE Computer Society**
University of Victoria
Theme: 1991 International Symposium on Multiple-Valued Logic
Papers due: November 1, 1990
Contact: D.M. Miller, Computer Science, U. of Victoria, Victoria, B.C. V8W 2Y2 <dmill@csr.uvic.ca>

27–31 **International Symposium on Godel's Theorem**
Paris
Theme: Commemoration of the 60th Anniversary of Godel's Incompleteness Theorem
Contact: Zbigniew W. Wolkowski, P. and M. Curie U., B.P. 56, 75623 Paris Cedex 13, France

29–30 **Society for the Promotion of Classics**
Bar-Ilan University
Contact: Menahem Luz, Philosophy, Haifa U., Haifa 31999 Israel <RHPH303@HAIFAUVM>

*30 **International Society for Philosophy of Law and Social Philosophy—Canadian Section**
Kingston, Ontario
Theme: Causation and the Law
Contact: A.W. Cragg, Philosophy, Laurentian U., Sudbury, Ontario P3E 2C6 <WCRAGG@Lauvax01>

30–31 **Sixth Annual Multidisciplinary Conference: World War II—A 50 Year Perspective**
Siena College
Papers due: December 15, 1990
Contact: Thomas O. Kelly, II, History, Siena College, Loudonville, NY 12211

MAY

*30–31 **XXVIth International Phenomenology Congress**
Arezzo, Italy
Theme: Phenomenology and History
Papers due: March 15, 1991
Contact: A–T. Tymieniecka, World Phenomenology Inst., 348 Payson Rd., Belmont, MA 02178

JUNE

6–8 **East Meets West: Conference on Comparative Philosophy**
University of Mysore, India
Contact: B. Srinivasa Murthy, Philosophy, California St. U., Long Beach, CA 90840

9–11 **Society for Philosophy and Psychology**
San Francisco State University
Papers due: January 5, 1991
Contact: Jerry Samet, Philosophy, Brandeis U., Waltham, MA 02154

12–15 **Summer Seminar: The Significance of Christian Tradition for Contemporary Philosophy**
Valparaiso University
Papers due: April 1, 1991
Contact: Thomas D. Kennedy, Philosophy, Valparaiso U., Valparaiso, IN 46383

13–14 **Swiss Logic Society Symposium on Godel's Theorem**
University of Neuchatel
Contact: Denis Mieville, Logic, U. of Neuchatel, Espace Louis-Agassiz 1, CH–2000 Neuchatel, Switzerland

*14–16 **Conference: Russell and the Rise of Analytic Philosophy**
University of British Columbia
Contact: Andrew Irvine, Philosophy, U. of British Columbia, Vancourver, B.C. V6T 1W5 <irvine @mtsg.ubc.ca>

*16–29 **Bar-Ilan Symposium on Foundations of Artificial Intelligence**
Ramat Gan
Papers due: March 1, 1991
Contact: Ariel Frank, BISFAI–91 Math. and Computer Sci., Bar-Ilan U., Ramat Gan, Israel <ariel@bimacs.bitnet>

JUNE

18–22 **Conference on Constructivity in Computer Science**
Trinity University, San Antonio
Abstracts due: January 31, 1991
Contact: J. Paul Myers, Computer Science, Trinity U., San Antonio, TX 78212 <pmyers@trinity>

27–28 **Conference on Methodological and Ethical Issues in Clinical Trials**
London School of Economics
Contact: Peter Urbach, Ctr. for the Philosophy of the Natural and Social Sciences, London School of Economics, Houghton St., London WC2A 2AE, England

27–30 **Third International Conference in History and Philosophy of General Relativity**
University of Pittsburgh, Johnstown Campus
Contact: John Norton, History and Philosophy of Sci., U. of Pittsburgh, Pittsburgh, PA 15260

28–30 **Husserl Circle**
Seattle University
Contact: Burt Hopkins, Philosophy, Seattle U., Seattle, WA 98122–4460

30–July 3 **6th Annual Conference on Structure in Complexity Theory**
University of Chicago
Papers due: January 23, 1991
Contact: J. Royer, Computer and Inf. Science, Syracuse U., Syracuse, NY 13244 <structures@top.cis.syr.edu>

JULY

5–7 **Conference: Philosophical Hermeneutics and Greek Philosophy**
Universitat Heidelberg
Contact: James Risser, Philosophy, Seattle U., Seattle, WA 98122

*8–13 **International Conference on Frege**
Munich
Contact: Kardinal W. Haus, Mandlstr. 23, 8000 Munchen 40, Germany

JULY

12–14 **American Society for Aesthetics—Rocky Mountain Division**
Santa Fe
Contact: Thomas Havessler, Comparative Literature, California State College, Long Beach, CA 90840

*15–17 **Teaching Philosophy in a Multicultural Context**
San Jose State University
Papers due: March 31, 1991
Contact: Cynthia Rostankowski, Philosophy, San Jose St. U., One Washington Square, San Jose, CA 95192–0133

15–18 **6th Annual Logic in Computer Science Symposium**
Amsterdam
Abstracts due: January 2, 1991
Contact: Gilles Kahn, INRIA Sophia–Antipolis, 06565 Valbonne Cedex, France <kahn@mirsa.inria.fr>

15–21 **World Phenomenology Institute (with WCP, below)**
Nairobi
Theme: The Human Predicament and Nature
Papers due: March 15, 1991
Contact: Anna-Teresa Tymieniecka, 348 Payson Rd., Belmont, MA 02178

20–21 **Linguistics Society of America Conference: Logic and Linguistics**
University of California, Santa Cruz
Contact: W. Ladusaw, Linguistics, U. of California, Santa Cruz, CA 95064

21–25 **World Conference of Philosophy (WCP)**
Nairobi
Theme: Philosophy, Man, and the Environment
Papers due: September 30, 1990
Contact: Congress Secretariate, c/o Kenya Academy of Sciences, Community Bldg., P.O. Box 39450, Nairobi, Kenya

International Society for Value Inquiry (with WCP)
Papers due: December 1, 1990
Contact: Ruth Lucier, P.O. Box 35, Bynum, NC 27228–0035

Society for the Philosophical Study of Marxism (with WCP)
Theme: Marxism on Man and the Environment
Contact: Gordon Welty, Sociology and Antropology, Wright State U., Dayton, OH 45435

JULY

21–27 **Eighth International Congress on the Enlightenment**
University of Bristol
Abstracts due: March 31, 1990
Contact: Enlightenment Congress, French, U. of Bristol, 19 Woodland Road, Bristol BS8 17E, England

22–25 **Royal Institute of Philosophy**
Liverpool University
Theme: Philosophy, Religion and the Spiritual Life
Papers due: February 1, 1991
Contact: Michael McGhee, Philosophy, U. of Liverpool, P.O. Box 147, Liverpool L69 3BX, United Kingdom

29–August 1
Conference: Process Philosophy of Education, Confluence and Construction
Cornell University
Contact: Malcolm Evans, 85 DeHart Dr., Belle Mead, NJ 08502

AUGUST

4–7 **11th Annual International Conference on Critical Thinking and Educational Reform**
Sonoma State University
Theme: Teaching Students Intellectual Standards They Can Use
Contact: Ctr. for Critical Thinking and Moral Critique, Sonoma St. U., Rohnert Park, CA 94928

4–8 **First International Conference on Technical Higher Education**
Jerusalem, Israel
Abstracts due: March 1, 1991
Contact: Oscar Mohl, Humanities, New York City Technical College, 300 Jay St., Brooklyn, NY 11201

7–14 **Ninth International Congress of Logic, Methodology, and Philosophy of Science (LMPS)**
Uppsala, Sweden
Abstracts due: February 1, 1991
Contact: Dag Prawitz, Philosophy, U. of Stockholm, 106 91 Stockholm, Sweden

Association for Symbolic Logic European Summer Meeting (with LMPS)
Contact: LMPS, Philosophy, U. of Stockholm, S–10691 Stockholm, Sweden

AUGUST

8–11 **Seventh International Conference on Social Philosophy**
Colorado College
Theme: Celebration of the Bi-Centennial of the Bill of Rights
Papers due: March 1, 1991
Contact: Iris Young, Graduate School of Public Affairs, U. of Pittsburgh, Pittsburgh, PA 15260

10–12 **6th International Conference on Computing and Philosphy**
Southern Connecticut State University
Abstracts due: March 1, 1991
Contact: Terrell Ward Bynum, Research Ctr. on Computing and Society, Southern Connecticut St. U., New Haven, CT 06515 <bynum@ctstateu.bitnet>

12–16 **Eighteenth Hume Conference**
University of Oregon
Papers due: September 15, 1990
Contact: Dorothy Coleman, Philosophy, College of William and Mary, Williamsburg, VA 23185

* **National Conference on Computing and Values**
Southern Connecticut State University
Contact: Walter Maner, Computer Science, Bowling Green St. U., Bowling Green, OH 43403 <maner@bgsuopie.bitnet>

14–19 **Institute for Advanced Philosophic Research**
Allenspark, Colorado
Theme: The Ethics of Democracy
Papers due: March 31, 1991
Contact: R. Paul Churchill, Philosophy, George Washington U., Washington, D.C. 20052

18–23 **International Association for Philosophy of Law and Social Philosophy**
Gottingen
Contact: Robert C.L. Moffat, Exec. Dir., Amintaphil, U. of Florida Law Center, Gainesville, FL 32611

18–25 **Fifteenth International Wittgenstein Symposium**
Kirchberg/Wechsel
Theme: Applied Ethics and its Foundations
Abstracts due: May 31, 1991
Contact: Philip Hugly, Philosophy, U. of Nebraska, Lincoln, NE 68588