Economics, Econometrics and Modelling in Economics

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When talking about the methodology in economic sciences, I have always found it utterly inadequate to focus attention only on these special fields without seeing them in a much broader perspective. Therefore, it was inevitable that I included in the field of vision of this paper some branches of science of economics as well.

Several ancient philosophers made various economic observations. Aristotle was concerned with transactions aimed at monetary gain and the wealth they yielded. The *Arthaśāstra*[1] is a treatise on statecraft and economic policy which identifies its author by the names Kautilya and Viṣṇugupta, who are traditionally identified with the Mauryan minister Canakya. The traditional identification of Kautilya and Viṣṇugupta with the Mauryan minister Canakya would date the *Arthaśāstra* to the 4th century BC. *Arthaśāstra* argues for an autocracy managing an efficient and solid economy. It discusses the ethics of economics and the duties and obligations of a king. The scope of *Arthaśāstra* is, however, far wider than statecraft, and it offers an outline of the entire legal and bureaucratic framework for administering a kingdom, with a wealth of descriptive cultural detail on topics such as mineralogy, mining and metals, agriculture, animal husbandry and medicine. The *Arthaśāstra* also focuses on issues of welfare (for instance, redistribution of wealth during a famine) and the collective ethics that hold a society together. Medieval Muslims also made contributions to the understanding of economics. In particular, Ibn Khaldun of Tunis (1332–1406) wrote on economic and political theory in his *Prolegomena*. Niccolò Machiavelli (1469–1527) in his book *The Prince* was one of the first authors to theorize economic policy in the form of advice. Anders Chydenius (1729–1803) a Finnish priest published a book called *The National Gain* in 1765, in which he proposed ideas of freedom of trade and industry and explored the relationship between economy and society.

Adam Smith, Economist and Philosopher (1723–1790), published *An Inquiry into the Nature and Causes of the Wealth of Nations* in 1776 which examined in detail the consequences of economic freedom. It covered such concepts as the role of self-interest, the division of labour, the function of markets, and the international implications of a laissez-faire economy. *Wealth of Nations* established economics as an autonomous subject and launched the economic doctrine of free enterprise. Smith laid the intellectual framework that explained the free market and still holds true today. He is most often recognized for the expression 'the invisible hand', which he used to demonstrate how self-interest guides the most efficient use of resources in a nation's economy, with public welfare coming as a by-product. To underscore his laissez-faire convictions, Smith argued that state and personal efforts to promote social good are ineffectual compared to unbridled market forces.

In the 19th century, Karl Marx synthesized a variety of schools of thought involving the social distribution of resources, including the work of Adam Smith, as well as socialism and egalitarianism, and used the systematic approach to logic taken from the philosopher Georg Wilhelm Friedrich Hegel to produce *Das Kapital*. His work was the most widely adhered-to critique of market economics during much of the 19th and 20th centuries. Marxist economics is based on the labour theory of value.

Turning now to the more specifically subject matters, it is inevitable that I should begin by making a brief survey of the development of the science of economics as much as I know. In the middle of the 19th century, John Stuart Mill (1806–1873) in his famous work *Principles of Economics* laid down the general principles of the theory of value and price. In Mill's *Principles*, the ideas of Adam Smith, David Ricardo (1772–1823) and Thomas Robert Malthus (1766–1834) had been knit together into an organic, logically and seemingly complete whole.

The economic theory was completely renewed in the years between 1870 and 1890 when a number of Austrian

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economists headed by Karl Menger (1840–1921) undertook a systematic study of the human wants and their place in a theory of prices. Similar thoughts were expressed also by the Swiss Léon Walras (1834–1910) and the Englishman Stanley Jevons (1835–1882). This was the first breakthrough since Stuart Mill. The Englishman Alfred Marshall (1842–1924)[2] subsequently did much to combine the technological viewpoint and the cost of production viewpoint. This led to what we now usually speak of as the neo-classical theory. Neither the classicists nor the neo-classicists did much to verify their theoretical results by statistical observations. The reason was partly that the statistics were poor, and partly that neither the classical nor the neo-classical theory was built out with the systematic statistical verification in view. A crucial point in this connection is the quantification of the economic concepts, i.e. the attempts at making these concepts measurable. There is no need to insist on what quantitative formulation of concepts and relations has meant in the natural sciences.

John Maynard Keynes (1883–1946)[3] is doubtlessly one of the most important figures in the entire history of economics. In 1930, Keynes brought out his heavy, two-volume *Treatise on Money*, which effectively set out his theory of the credit cycle. In it, the rudiments of a liquidity preference theory of interest are laid out. He revolutionized economics with his classic book, *The General Theory of Employment, Interest and Money* (1936). This is generally regarded as probably the most influential social science treatise of the 20th century; in that it quickly and permanently changed the way the world looked at the economy and the role of government in society. The heroic entrepreneurs are resurrected in *The General Theory*. Investment, in the Keynesian system, is an independent affair contingent upon finance and the 'animal spirits' of entrepreneurs.

In the 1930s, Professor Jan Tinbergen (1903–1994)[4,5] devised the first macro-economic model ever. In this model, the focus of economic analysis was no longer on the abstract relation between individual goods and prices. Instead, it was shifted to the concrete relationships between economic aggregates like total income, consumption and investment. His work involved the statistical observation of theoretically founded concepts, namely mathematical economics working with concrete numbers. In his Nobel lecture of December 12, 1969, Professor Tinbergen discussed the experience he had with the method of model building as a contribution to economic science and the prospects for its further application. First of all he reminded of the essential features of models. In his opinion they are: (i) drawing up a list of the variables to be considered; (ii) drawing up a list of the equations or relations the variables have

to obey, and (iii) testing the validity of the equations, which implies the estimation of their coefficients, if any. As a consequence of especially (iii), the econometricians may have to revise (i) and (ii) so as to arrive at a satisfactory degree of realism of the theory embodied in the model. Then, the model may be used for various purposes, that is, for the solution of various problems. The advantages of models are, on one hand, that they force the econometricians to present a 'complete' theory that is a theory taking into account all relevant phenomena and relations and, on the other hand, the confrontation with observation, that is, reality. The utility of models goes beyond their didactic value. They are a real and essential element in the preparation of well-coordinated policies. But they cannot do this job all by themselves. Models constitute a *framework* or a *skeleton* and the flesh and blood will have to be added by a lot of common sense and knowledge of details. Again, as a framework they can be of vital importance. The framework as being referred to supplies the main ingredients for coordinating government policies at the level of a central government.

The models should have widening scope to specify optimum socio-economic orders. Optimization is not a new subject, of course. Mathematical programming models are now widely used, both on the level of the production unit and on higher levels. Scientific development took place along various tracks. Among the most sophisticated we have, in recent years, dynamic models for long periods, such as developed by Edmund S. Phelps (Nobel Prize in Economic Sciences in 2006) in his analysis of intertemporal tradeoffs in macroeconomic policy and those developed by Tjalling C. Koopmans[6,7,8] in his work for the contribution to the theory of optimum allocation of resources. Among the results attained by these authors are the limits set to our freedom to choose some parameters which we might have thought we are free to choose, such as the time discount occurring in a preference function. For some value intervals of this parameter, Koopmans has shown that no preferential ordering of the various conceivable development paths is possible. Results such as these belong to the really fundamental features of economic science.

Professor Ragnar Frish[9] (1895–1973) observed, 'Deep in the human nature there is an almost irresistible tendency to concentrate physical and mental energy on attempts at solving problems that *seem to be unsolvable*. Indeed, for some kinds of active people only the seemingly unsolvable problems can arouse their interest. Other problems, those which can reasonably be expected to yield a solution by applying some time, energy and money do not seem to interest them. The English mathematician and economist Stanley Jevons (1835–1882)

dreamed of the day when we would be able to *quantify* at least some of the laws and regularities of economics. Today, since the breakthrough of econometrics, this is not a dream anymore but a reality. Econometricians of 60s to 80s had strikingly supreme intelligence to solve seemingly unsolved problems of covering man and money so that we can have the present state of the art.

The list of variables and the equations and/or bounds that are introduced, constitute the core of the model. It may be linear or non-linear.

While building models the questions are frequently asked:

Should we build a road between points A and B in the country? Should we promote investments that will give employment to many people, or should we, on the contrary, promote such investment which will save labour? Should we aim at a high rate of increase of the gross national product, or should we put more emphasis on a socially justified distribution of it? Should we aim, above all, at keeping the price level under control or should we sacrifice the stability of the price level and put more emphasis on the increase of the gross national product (in real terms)? Should we sacrifice a part of the increase of the total gross national product in order to be able to increase the living standards of one specific social group, say fishermen or industrial workers? Should we put more emphasis on things that have up to now not been included in the statistical concept of the gross national product? For instance, should we try to avoid air-pollution and all the kinds of intoxications that may be caused by refuse and waste (a problem that must be studied in its totality as a problem of circulation of matter in society, much in the same way as we study inter-industry relations in an input-output table)? Should we assess economic value to an undisturbed nature? etc.

If we should ask the experts to produce a list of feasible alternatives for the development path of the economy, a list that would be comprehensible enough to cover even very approximately all these various specific questions, the list of possible development path would have to contain a large number of alternatives.

Ever since Sir William Petty (1623–1687) began recording economic data in 17th century Britain, empirical work has always played an important role in economics for two reasons: namely, economists think that (1) economic insights can be gained by careful examination of the data (the 'inductive approach') and (2) existing economic theories can be validated or falsified by comparing their claims against empirical data (the 'theoretical approach'). The inductivist approach has a long history: from data Clement Juglar (1819–1905) saw in financial tables evidence for a credit-driven cycle. Similarly, H L Moore (1869–1958) used the inductive

approach to argue for a weather and astral-driven cycle. However, the theoretical approach was also used as far back as Charles D'Avenant (1656–1723) and Henry Charles Fleeming Jenkin (1833–1885). Economists had attempted to fit data to demand curves. This was the particular skill of H L Moore who attempted to fit data to Leon Walras's demand equations. In 1877, Walras published *Elements of Pure Economics*, a work that led him to be considered the father of the general equilibrium theory. The problem that Walras set out to solve was that even though it could be demonstrated how individual markets behaved, it was still unknown how goods interacted with each other to effect supplies and demands. Walras created a system of simultaneous equations in an attempt to solve problem. He recognized that while his system might be correct, the number of unknowns combined with the lack of information made it unsolvable. Henry Schultz (1893–1938) and Paul H Douglas (1892–1976) carried this work on into the 1930s. Similar work was carried out in Britain by Arthur C Pigou (1877–1959) and in Germany by Jacob Marschak (1898–1977).

Professor Simon Kuznets (1901–1985)[10] is credited with revolutionizing econometrics, and his work is credited with fuelling the Keynesian Revolution. His most important book is *National Income and its Composition (1919–1938)*. Published in 1941, it is one of the historically most significant works on Gross National Product. His work on the business cycle and disequilibrium aspects of economic growth helped launch development economics.

Naturally, the empirical recording and analysis of the business cycle spilt over into collecting and analyzing all sorts of empirical data—notably, the collection of national income accounts (output, investment, etc.), which became the primary activity of Simon Kuznets.

Naturally, theoretical treatises on the business cycle, such as those by J A Schumpeter, D H Robertson, A C Pigou and G Haberler had been accompanied the presentation of empirical data, but they could not have said to be adopting the second 'theoretical approach' entirely because they used no proper statistical inference methods to do so.

The inductive approach was severely criticized by George Yule, Eugene Slutsky, Ragnar Frisch and Tjalling C Koopmans. This resulted in a rebirth of the theoretical approach and thus econometrics as we know it. The theoretical approach had been first applied usefully to business cycles by Jan Tinbergen in the late 1930s after the appearance of the *General Theory* of Keynes. Tinbergen used statistical methods, such as linear regressions to estimate the parameters of the Keynesian relationships.

Galvanized into action, a great leap forward was

achieved with the 'probabilistic approach' to econometrics as proposed by Trygve Haavelmo.[11] Thus, formal textbook econometrics was born.

The econometric boom was on. The work of the Haavelmo, Tinbergen and Ragnar led to development of estimation techniques for systems of simultaneous equations, such as the Klein-Goldberger model of Keynesian macroeconomics.

The statistical models of the working of the economy of the nation or of corporate enterprises are not proposed as formulae of all the secrets of the complex real world of matter and money in a single equation. The models would attempt to provide as much information about future or about unknown phenomena as can be observed from the historical records of observable and measurable facts. They provide information about the quantitative properties of the economic variables in the future. Any information of a qualitative nature that is available should be used by the econometrician in drawing inferences about the real world from his models.

Professor Paul A Samuelson[12] is considered one of the founders of modern neoclassical economics. He has not only simply rewritten considerable parts of economic theory but has also shown the fundamental unity of both the problems and analytical techniques in economics, partly by a systematic application of the methodology of maximization for a broad set of problems. Professor Samuelson in his Nobel Lecture on December 11, 1970 euologized the mathematical models for using Pontriagin's Maximum Principle in analytical economics. He observed, 'Well, today, under the guise of operational research and managerial economics, the fanciest of our economic tools are being utilised in enterprises both public and private.' In a small essay, 'How I became an economist' on September 5, 2003 , Professor Samuelson said, 'So after all, as I look back in my ninth decade over my long career in economics, I realize that all those incidents of good luck have to be understood against the background of fundamental trends in economic history. Mine has been a grandstand seat from which to observe most of a century of basic economic history. Bliss it was to be in the forefront of the revolutions that have changed economics forever.'

The modelling processes wholly depend on real life data. For Professor Wassily Leontief,[13, 14] explanations of economic systems must be grounded on facts. Theory follows as an instrument that helps explain facts. Professor Leontief's dedicated preference for what can be observed rather than what can be imagined, coupled with an insistence on practical applications, led him to his greatest achievement, the invention and elaboration of input-output analysis (IOA). Professor Leontief used

a familiar metaphor to describe the special ability of IOA to bring together micro and macro-ecnomics: 'It has often been said that in economics one must make a choice between detailed description of individual trees or aggregative description of the entire forest. Input-output analysis is an application of the modern system approach that permits us to describe the forest in terms of individual trees. It provides the means for observing and analyzing simultaneously the quantitative relationships between hundreds and even thousands of variables while preserving throughout all the operations the identity, the name and address, of each of them.'.

Professor Friedrich August von Hayek[15] tried to penetrate more deeply into the business cycle mechanism. Perhaps, partly due to this more profound analysis, he was one of the few economists who gave warning of the possibility of a major economic crisis before the great crash came in the autumn of 1929. Professor von Hayek showed how monetary expansion, accompanied by lending which exceeded the rate of voluntary saving, could lead to a misallocation of resources, particularly affecting the structure of capital. Often economic science comes in close contact with social science. As is evident when Professor Gunnar Myrdal[16] said, 'The blunt truth is that without rather radical changes in the consumption patterns in the rich countries, any pious talk about a new world economic order is humbug.' Mainly by directing most of his research on economic problems in the broadest sense, particularly the negro problem in the USA and the poverty of the developing countries, Professor Myrdal has sought to relate economic analysis to social, demographic and institutional conditions. Professor Myrdal has attached great importance to the monumental work, *An American Dilemma: The Negro Problem and Modern Democracy* (1944). It is primarily in this massive work of scholarship that Myrdal has documented his ability to combine economic analysis in a broad sociological perspective.

Professor Leonid Kantorovich has done his most important scientific work in the field of normative economic theory, i.e., the theory of the optimum allocation of resources. As the starting point of his work in this field, he has studied the problem of how available productive resources can be used to the greatest advantage in the production of goods and services.

Professor Koopmans has in a series of works, primarily, *Analysis of Production as an Efficient Combination of Activities*, developed the activity analysis. Within this theory, new ways of interpreting the relationship between inputs and outputs of a production process are used to clarify the correspondence between efficiency in production and the existence of a system of calculation

of prices. This shed a new and interesting light on the connection between the normative allocation theory and the general equilibrium theory.

Professor Milton Friedman[17] is the twentieth century's most prominent economist advocate of free markets. Professor Friedman's name is chiefly associated with the renaissance of the role of money in inflation and the consequent renewed understanding of the instrument of monetary policy. The strong emphasis on the role of money should be seen in the light of how economists for a long time almost entirely ignored the significance of money and monetary policy when analyzing business cycles and inflation. Professor Friedman's findings on the comparatively great relevance of the quantity theory in explaining developments is, in fact, built on the premise that the demand for money is very stable.

From 1970s, international trade and international capital movements have become widely spread. Professor Bertil Ohlin's classic work, *Interregional and International Trade* has brought him recognition as founder of the modern theory of international trade. He has developed a theory that demonstrates which factors determine the pattern of foreign trade and the international division of labour on the one hand, and on the other, shows what effect foreign trade has on the allocation of resources, price relations and the distribution of income.

Professor James Meade[18] in his major work, *The Theory of International Economic Policy* has demonstrated the effects of economic policy on foreign trade and penetrated the problems of stabilization policies. His analysis has particularly concentrated on the conditions necessary for internal and external balance. He has also shown why and how a successful stabilization policy must take into account not only the level of total demand for goods and services but also relations between prices and costs. These achievements have made Professor Meade the leading pioneer in the field of international macro-theory and international economic policy.

Professor Herbert A Simon[19, 20, 21] has made pioneering research into the decision-making process within economic organizations. His name is associated, most of all, with publications on structure and decision-making within economic organizations, a relatively new area of economic research.

Influenced by the organizational research that was being conducted in other social sciences, economists have started to look at the structure of companies and at the decision-making process in an entirely new way. Professor Simon's work was of utmost importance for this new line of development. In his epoch-making book, *Administrative Behavior* (1947), and in a number of subsequent works, he described the company as an

adaptive system of physical, personal and social components that are held together by a network of intercommunications and by the willingness of its members to cooperate and to strive towards a common goal.

From the sixth decade of the last century problems of developing countries came in the international forefront. Professor Theodore W Schultz[22] and Professor Sir Arthur Lewis did pioneering research into economic development research with particular consideration of the problems of developing countries.

Professor Schultz was an agricultural economist to start with, and in the thirties and forties, presented a series of studies on the crises in American agriculture, and then later took up agricultural questions in various developing countries throughout the world. His best known works from this period are *Agriculture in an Unstable Economy* (1945) and *Production and Welfare of Agriculture* (1949). His most trail-blazing book was *Transforming Traditional Agriculture* (1964). The main characteristic of Schultz's studies in agricultural economics is that he does not treat agricultural economy in isolation, but as an integral part of the entire economy. Schultz's analytical interest has been focused on the imbalance between relative poverty and underdevelopment in agriculture compared to the higher productivity and the higher income levels in industry and other urban economic activities.

Professor Lewis was a leading figure and pioneer in developing country research. He has tackled issues which are basic to the causes of poverty among populations in the developing world and to the unsatisfactory rate of economic development.

Professor Schultz's work primarily concentrates on a number of strategic questions related to conditions for efficiency in the employment of production resources. Professor Schultz attaches crucial importance to vocational skills, schooling, research and its application. He is a pioneer in research on 'human capital', a field which has been expanding rapidly since the end of the fifties. The efficiency and development of agriculture, is also in Professor Lewis's opinion, of vital importance for the situation and growth of the developing countries. Professor Lewis has focused attention on the dual nature of developing country economies, the tension between a large, dominating and stationary agricultural sector and a dynamic industrial sector.

The creation of economic models and their applications to the analysis of economic fluctuations and economic policies are in the favourite domain of econometricans. The building of econometric models has attained a widespread universal use.

Professor James Tobin[23,24] has made substantial

contributions in such widely differing areas as econometric methods and strictly formalized risk theory, the theory of household and firm behaviour, general macro theory and applied analysis of economic policy. His most outstanding and significant research contribution belongs to the theory of financial markets and their relation to consumption and investment decision, production, employment and prices. Professor Tobin's studies constitute a major breakthrough in the integration of real and financial conditions in central economic theory.

Portfolio selection theory is used to study households' and firms' decisions to hold different real and financial assets, and, simultaneously, incur debts. Professor Tobin shows how these decisions are governed by weighing risk and expected rate of return. Unlike many other theorists in the field, Professor Tobin did not confine his analysis solely to money but considered the entire range of assets and debts.

With an excellent background of analytical methods, Cybernetics in Modelling in Financial Engineering has, become a strong contender of economic sciences. By definition, Cybernetics deals with the purposeful analysis of complex system with a view to ascertain control mechanism in accordance with optimally designed decision processes.

Financial engineering, the most computational intense subfield of finance, has only come to be recognized as a formal profession over the last four or five years. During that time, the International Association of Financial Engineers (IAFE) has been instrumental in helping to define the profession and in promoting the creation of financial engineering research programmes. Technological sciences recently reveal the revolution in financial services. For more than a half-century statistics and technical analysis have been the technologies of choice for financial analysts. However, it was not until the introduction of the Hamiltonian-Jacobi-Bellman and Black-Scholes[25] differential equation in the mid-70s that more advanced forms of mathematics were used in the field of finance. Since that time there has been a tremendous expansion in the application of mathematics and other engineering technologies to the field of finance. In 1973, Fischer Black and Myron Scholes published their groundbreaking paper, 'The Pricing of Options and Corporate Liabilities'. Not only did this specify the first successful option of pricing formula, but it also described as a general framework for pricing other derivative instruments. This paper launched the field of financial engineering. The use of mathematics has been spurred by the availability of low-cost computers and supercomputers. In addition there has been a luminous gathering of engineers, mathematicians, and physicists

into the finance and investments industry. Many of these professionals are excited about the opportunities to apply their quantitative and analytical skills in new ways. And finally there is the explosive growth in the financial markets in volume, numbers and types of securities offered, and their internationalization under GATT and WTO regimes which has required the intensive use of engineering technologies for development of highly skillful computerized software.

The future of the continuing convergence of the fields of finance and engineering into a new era of computational intelligence and its application in the financial services arena has been envisaged. There are neural nets that emulate the Black-Scholes equation with better out-of-sample performance than the original equation. Commercially available software using genetic algorithms provide superior results for portfolio asset allocation. Moreover today's computational intelligence methodologies can forecast the inflation rate to 95 per cent accuracy. The interest in application of the ingredients of computational intelligence to finance has been growing steadily.

Three factors are largely responsible for this mighty achievement. The first is the simple fact that the financial system is becoming more complex over time. This is an obvious consequence of general economic growth and development in which the number of market participants, the variety of financial transactions, and the sums involved also grow. As the financial system becomes more complex, the benefits of more highly developed financial technology become greater and greater and, ultimately indispensable. The second factor is the set of professional developments in the quantitative modelling of financial markets, e.g., financial technology, pioneered over the past three decades by the giants of financial professionals: Fischer Black[25], D A Cox[26], J Lintner[27], H Markowitz[28], R C Merton[29], and others. Their contributions laid the remarkably durable foundations on which all of modern quantitative financial analyses are built. The third factor is an almost parallel set of technological breakthroughs in computer technology, including hardware, software, and data collection and organization. Precisely, Professor Merton's work in the continuous time of mathematics of finance serves as one of the cornerstones on which the profession of financial engineering is built. Professor Merton redefined modern financial economics definitively, and helped to launch a multi-trillion-dollar industry that is still enjoying double-digit growth. While the methods and techniques range broadly, from optimal control and filtering to neural networks to nonparametric regression, the topics are all sharply focused on financial applications. In this way, financial engineering is following a path not unlike those

of the engineering disciplines in their formative stages: applications tend to drive the technology, yet research and development are characterized by an intellectual entrepreneurialism that cuts across many different methodologies.

Post graduate programmes are being offered by engineering schools and mathematics departments, though some are being offered by business schools. The understanding and mitigation of risk are increasingly important aspects of modern finance. Running on the speed and capacity of the Internet and other information technologies, the world's financial markets have grown dramatically in size, interconnectedness and complexity. With more opportunities available, investors are more willing to accept the risks associated with entrepreneurial ventures to create new financial products and services. But the combination of technological innovation and globalization that created the new economy also brings new sources of risk to financial markets.

Financial engineering is a multidisciplinary field that combines finance, mathematics and statistics, engineering and computer science. The related areas in these fields are financial markets, mathematical finance and econo-physics and computational finance. Quantitative and analytical principles and methods are critical in understanding financial instruments in financial markets today, so that the new discipline of financial engineering has evolved. Financial engineering requires a composite of skills. For example, the methodology of science and mathematics has been used in financial engineering areas such as derivative pricing and hedging, portfolio management and risk management. Stochastic calculus helps financial engineers to price exotic options and to hedge the risks. Advances in Monte Carlo simulation have been applied to risk management. For selecting optimal portfolios, optimization techniques have been applied to the asset and liability management problem. The neural networks and genetic algorithms used in engineering and physical science fields have been applied to forecasting future prices for trading and investment.

The domain of knowledge includes financial markets, financial products and processes, price and hedge modelling, investment technology, risk analysis, computational methods, and data support systems for trading. When institutions create desired pay-off patterns that manage risk for their clients or use options and futures to hedge the products they sell, they are engaging in financial engineering.

A distinct professional category called financial engineers is needed by financial institutions to develop new financial products, to customize and trade them, to monitor risk exposure to books of complex derivatives, to devise hedging schemes and to search for arbitrage opportunities in the markets.

A wide range of businesses offer career opportunities for financial engineers, including:

- commercial and investment banks
- brokerage and investment firms
- insurance companies
- accounting and consultancy firms
- treasury departments of non-financial corporations
- public institutions such as federal government agencies, state and local governments, municipalities and international organizations
- software and technology vendors that provide products and services to the financial industry.

The rapid assimilation of new methodology into practice is both a result of and reason for this interdisciplinarity. Financial engineering encompasses most realistic model-building. A model building procedure will now be outlined. The procedure follows in three stages: 1) Preliminary Structure Determination, 2) Parameter Estimation, and 3) Diagnostics. These stages are not disjoint, for in reality the results of any one may alter the results of another and thus require a repeated application of some or all of the previous stages. Experience has shown that the actual construction of a model involves repeated cycling through the stages.

The specification of a model almost exclusively involves purely economic considerations. The model may be used as an aid in economic analysis, policy simulation, or policy optimization, but each case imposes special demands on the specification. The result of such considerations generally determines the overall size of the model, the number of inputs and outputs, and the definition of these variables. In addition, the outputs of the model are usually decomposed into two types: the endogenous variables which are outputs of dynamic equations, called behavioural equations and variables which are outputs of non-stochastic equations, called definitional equations. A choice must be made as to the use of variables in current price (inflated) or constant price (deflated). The economic specification stage can be summarized as one in which the following information is determined:

1) The specific purpose of the model, thereby fixing the overall size; and hence, an enumeration of all the outputs and their type and an enumeration of all the inputs and their type.

2) The output definitions, whether it is explained by a behavioural equation together with all its explanations (inputs to the equation), or whether it is determined by a definitional identity.

The second stage is the most challenging of the two.

This stage combines the use of *a priori* economic information, hypothesis testing techniques, and cross-correlation analysis from the black box approach. In econometric terminology, the word 'structure' denotes a complete definition of the functional or stochastic relationships between all of the endogenous and exogenous variables. The specific meaning of structure can be ascertained by examining each equation of the structural form. Before accepting the results of any estimation, they must be tested for their adequacy. The auto- and cross-correlation functions for the model residuals constitute important diagnostic checks. The last diagnostic to be employed is perhaps the most important, namely, the model's forecasting performance. After having successfully met the other diagnostic checks a model is not accepted until it has demonstrated its ability to forecast. Forecasts are then made with each model from the end of its sample period up to the present, using the (historical) observed inputs over this period. Thus, forecasts are obtained outside of the sample period. Such simulations more closely approach reality and serve as a good guide in judging the model's adequacy in forecasting the unknown future. This gives additional insight into the time-invariance of the model structure. The modelling procedure described above was designed to incorporate three concepts. First, employment is made of all available *a priori* information provided by thus eliminating beforehand the possibility of expending effort on fruitless searches for non-existent relationships (interconnections). Second, the basic philosophy of the 'black box' approach is then applied allowing the data to decide the exact dynamic structure. Thus, complex (statistically unsubstantiated) structures are automatically eliminated. Third, diagnostics are continually employed which are designed to both reveal inadequacies and indicate how improvements can be made.

In conclusion let me quote from the 1982 Economics Nobel lecture of Professor George J Stiglar, 'The central task of an empirical science such as economics is to provide general understanding of events in the real world, and ultimately all of its theories and techniques must be instrumental to that task.'

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Meditation and Action: Problematic Polarities

A Piece of *Prthaga-Jana* Logic

PABITRA KUMAR ROY*

Meditation plays a great role in the Buddhist scheme of life. Not only is *dhyāna* a *pāramitā*, one is exhorted to practice it as a part of moral life. We have considered the importance of *smṛti* and *samprajanya* as prerequites of a virtuous life. The *bodhisattva* vow is said to be altruistic but a *bodhisattva's* altruism is no ordinary benevolence, it is defined by Śantideva as *bodhicittam jagaddhite*. (III. 23) At no stage of the ethical path, a *bodhisattva* is supposed to lose sight of the aim of attaining bodhi, or attaining the status of a *buddha* and a *buddha* is recollected in tranquility, the autological status of the mind in bodhi is so very unique that nothing appears to exist for it, a propos of *dharma nairatmya* or *śunyesu dharmesu*. (IX. 152) So does it seem at the first flush. But it may turn out to be mistaken a view on a later consideration.

Mahāyāna sources are quite clear that the path to full Buddhahood takes a longtime. The reason for following it is compassion. The two motivations for ethico-religious practice are outlined: the motivation of wishing to attain freedom from suffering for all, and from that motivation embracing the long path to Buddhahood. This is quite definitive of Mahāyāna. And it may be endorsed by *Bodhicaryāvatāra*, together with *Bhāvanākramas* of Kamalaśila and Atiśa's *Bodhipathapradīpa*. They are unanimous as regards the possibility of altruism, locating it as they do in the actual revolutionary event which occurs in a *bodhisattva's mind*, and even which is a fundamental switch in orientation from self-concern to concern for others, to compassion. It is called the arising of *bodhicitta*, and it is not without a reason that the crucial event is praised in glowing terms. Untideva devotes an entire chapter for the purpose.

All this may be in order. There could be no sense in doubting the universal salvation commitment so undeniably present in the Mahāyāna discourse. But one may feel somewhat philosophically uneasy concerning the cognitive mode called *prajñāpāramita*, the perfection of wisdom or the wisdom of the Sugatas, *sugatāna prajñā*.

How are we to understand *prajñā*? To give a general definition, *prajñā* is a subtle process which presupposes both an intuitive grasp of the reality and a high degree of awareness with no emotional support or attachment. But a *prthagjana* may raise the point about logical consistency, if, by *dhyāna* is meant a gradual decrease of emotional and cognitive activity, how is relationship or connection between *dhyāna* and *prajñā* to be explained. Enstatic meditation or *śamatha* and observational concentration, *vipaśyanā* have been present since early Buddhism, and Śantideva too speaks of the two. (VIII. 4) Are we to take *śamatha* and *vipadyanā* as being in a state of balance and harmony? The former is cognitive, while the latter is tinged with mysticism. Is the marriage of the two a happy one?

The poles of canonical Buddhist ethics or even spirituality, are detachment or *upcksā* on the hand, and caring for others, *karuṇā*, *dayā* or *anukampā* on the other. For Mahāyāna, the two are *śunyatā* and *karuṇā*. The actual relation— psychological and doctrinal—between them is not simple as it may appear. Early Buddhism regards sympathy *karuṇā* as an important virtue, but does it regard it's an inevitable outflow of any liberating experience? Is there not a certain tension between liberation as *detachment* and as *involved* in activity for the sake of others? Does Mahāyāna ideal of universal salvationary nuances bring the tension to an end? The *samādhi* of *śunyatā* is so transphenomenal that it is potent

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to lead directly to the attainment of Buddhahood. How does it compromise the salvific career of a *bodhisattva*? Doesn't he have to counterbalance the *samādhi* of *śunyatā* by cultivating benevolence or compassion with regard to all living beings? A *bodhisattva* may have the *samādhi* of *śunyatā* as a far-off regulative ideal, but does he experience it as a psychological reality? If it be argued that the meditative ecstatic state *includes* compassion and normal behaviour, then the inclusion cannot be analytic. Given Śāntideva's distinction between *gantukāma* and *gantuh* (I. 15-16), the underlying tension between the two poles remains unsolved. One might argue that *prajñā-pāramitā* includes all perfections; even then the question persists whether we see it as a psychological reality or a doctrinal ideal.

There is another dimension of the issue. How can one in *samādhi*, which definitionally excludes all types of entities, characteristics and mental orientation, *simultaneously* feel compassion and friendliness towards all living beings? How is it possible to fuse *dhyāna* with *prajñā*. I am aware of the immense difficulty of the question. Any attempt to answer question will land us in the field of the philosophy and psychology of religion. Even if an answer, let alone a certain one, may not be possible, the question will, nevertheless, satisfy a basic human need to discuss such propositions not only in terms of their occurrence, but also in relation to truth-values. After all, these propositions admittedly try to say something about the essence of reality and human mind. Do we have to deal with the task of accommodating two basically incompatible practices, i.e., enstatic states and active social involvement? Or do we have to deal with spiritual modes and states which cannot be known and assessed by means of our normal epistemic categories? The latter solution can be envisaged as forthcoming. But, after all, deluded *prthagjanas*, to which I undoubtedly belong, have no right to pass judgments on such lofty states which they cannot experience. The only alternative is to become *bodhisattvas* ourselves. As far as our normal understanding of psychological states as well as the basic requirements of logical consistency goes, it is hard to believe that one can experience *simultaneously* states of gradual decrease and eventual cessation of all discursive and emotional functions, on the one hand, and intense mental, verbal and bodily activities for the salvation of the sentient beings, on the other. It could be that the Mahāyāna move is meant to portray the exalted ideal of a *bodhisattva's* messianic mission rather than a psychological reality. Shall we say that a *bodhisattva* dwells in the concentrations of emptiness, singleness without realizing them? This may be the problematic of the *bodhisattva* ideal. Does the realization of the reality-

limit or *bhuta-koti*, as *paramārtha* is said to be, ensure or annual altruism or any social concern.

Two points appear to hold out a sort of promise on the horizon:

i) There should be no doubt about the fact that Buddhist ethics is soteriologically oriented, and it cannot also be denied that the fundamental inspiration for the Buddhist moral life is concern for others, and, it is no less true as well that morality is not a means to an end but an end in itself. It is not a means to enlightenment but a *part* of enlightenment. There is a possible hermeneutics favouring what may be called the transcendency thesis. It could be taken to say that in the state of final *nirvāṇa* ethical predication and evaluation become problematic, since there is the absence of an identifiable moral subject. There are even arguments supporting ontological discontinuity between ethical perfection and enlightenment. The Parable of the Raft in *Majjhima-Nikāya* is often interpreted to mean that the attainment of *nirvāṇa* involves the transcendence of both good and evil. The image of fording a stream by a raft or boat is common enough in the early Buddhist canonical discourse. But the question is: are *śila* along with *samādhi* and *prajñā* are part of the further shore, or are they to be left behind on the near side after enlightenment? It remains also to note if the Raft Parable is to be invoked to support epistemological or ontological positions rather than ethical ones. Transcendence of ethics does not seem to be thrust of the Parable. On the contrary the further shore is to be identified with moral perfection. One should take into serious account the context in which the Parable occurs, and be sensitive enough to the metaphor of the shores: *Auguttara-Nikāya* (V. 232 and 253) leaves no one in doubt that the further shore symbolizes the *practice* of the Eightfold Path and not its abandonment. The Buddha's remarks at the end of the Raft Parable should be understood not in the general sense that his ethical teachings are to be transcendent, but as a critique of a particular wrong attitude towards his teachings. As for the thematic issue, it sounds absurd as suggestion that Buddhahood could be an achievement which is morally neutral. It is analytically false to regard enlightenment as transcendent to ethics.

ii) What does it mean to follow the Eightfold Path? It is true that the Path involves a journey. But it is more true to say that it brings about a transformation rather than effecting a movement or relocation. The linearity of the Path could be understood in a metaphorical sense. The Path describes dimensions of human good, rather than listing stages meant to be passed through and left

behind. To follow the Path is to participate in those values or excellences which are constitutive of enlightenment, namely, *śila* and *prajñā*. The Path is to be followed in the sense of cultivating moral and intellectual virtues. *Nirvāṇa* then could be the perfection of those virtues and not an ontological shift or sorteriological quantum leap. The beginning and the end are to be in the same continuum, or else the process could never begin at all. The Buddha said (*Digha-Nikāya*, ii. 223), just as the Ganga and the Yamuna merge and flow along united, so too do *nirvana* and the path.

Buddhism speaks of two sets of values, moral and intellectual, actional and cognitive. There are no alternatives as between *jñāna* and *karma-yoga* in the present context. Any one-sidedness could be incomplete, unbalanced and could fall short of perfection. The ethics is to be sorteriological, and the sorteriology ethical. It is a bilateral strategy for perfection. Between a Buddha, a *bodhisattva* and a *prthagajana*, the difference, profound though it may appear, could be one of degree, *nirvāṇa* marks the fulfillment of human potential, not its transcendence. If it *were* in any sense transcendent, then the Buddha would have passed beyond the possibility of ethical predication and become a moral zero. On the contrary, he referred to himself as rooted in *adhiśila* (*Digha-Nikāya*, i. 174). Far from being incompatible, ethics and soteriology in Buddhism, there appears an integral and inalienable relationship between moral goodness and enlightenment.

There is then the question concerning the soteriological status of *brahma vihāras*. How much do they contribute to the soteriological goal? Are the intentions of *brahama vihāra* relevant of it? Are they not conducive to furthering one's progress on the path to enlightenment? Were they not originally thought of as one sufficient means for attaining enlightenment itself? One recent argument favours such a view and has much that is commendable about it. The *brahma-viharas* are states of meditation and have their importance within the Buddhist theoretical framework. It is through working with and one on the mind that Buddhism considers one can bring about the transformation in seeing required in order to bring to an end the forces generating suffering and rebirth. One uses the still, calm mind to investigate how things really are. Calming the mind is the first requirement, *śamatha*, and then one discovers with a calm mind how things are really, *vipaśyanā*. When calming and insight are linked the mind has the strength and orientation to break through to a deep transformative understanding of how things truly are. The point about the *brahma-vihras* is that they close the gap between the things as appear to be and the way they actually are, and one may now hope that the actional state of existence could thus be linked with the liberating gnosis. *Samyak Samādhi* is significantly enough a stage of the Eightfold Path. Or what may be said in other terms is that the actional and the meditational are not given diversely. To borrow and adapt Kant's phraseology, one should always be *acting from the conception of* the way things actually are, and also go on realizing it in experience in a graduated mode. This is a call to the *prthagajana*.

Note: The term *bhūta-koti* occurs in the *Astasāhsrika-prajñā-pāramitā-sūtra*, and it is used as the absolute truth or *paramārtha*. See Edgerton, *Buddhist Hybrid Sanskrit Dictionary*, p. 410. And Conze, *Materials for a Dictionary of the Prajñāpāramitā Literature*, p. 308.

THINKING ABOUT THE WORLD: An Essay in De Re Thoughts and the Externalist-Internalist Debate
by Manidipa Sen

Forthcoming from IIAS

This monograph explores the nature of *De Re* thoughts, and its impact on the debates centering on the externalist versus internalist accounts of the mind as discussed in analytic philosophy. Taking into account the fact that questions of language and questions of mind are intrinsically related to one another, the monograph, in the first place, tries to develop a notion of *de re* thoughts from the different accounts of reference. Through a close study of the writings of Russell, Frege, Evans, Burge, Putnam, McDowell, Recanati etc. on the notion of singular reference, a case is made for accepting *de re* thoughts as thoughts tied constitutively with their objects and as essentially individuated in terms of their objects. The picture of mind that evolves in and through this study of *de re* thoughts is that the mind is essentially intentional, embodied, interactive, and world-involving. So, an attempt is made to displace the internalist understanding of the mind in favour of an externalist notion of it—where the mind can be seen in continuation with the world and as having no context-free essence.

ISBN 81-7986-070-1   *Rs. 295*

Inside and Outside the Law: Bombay's Anti-Hero Cinema

AJANTA SIRCAR

> What does the unconscious . . . do to the idea of legacy (from father to son, for example)? [. . .] For psychoanalysis, to be a son is to feel guilty, even when there has been no crime. Lineage is a deadly affair.
>
> Jacqueline Rose, *On Not Being Able to Sleep: Psychoanalysis and the Modern World*, (2003)

Crime, passion, the most unbearably intense but unspeakable desire—all this is the stuff not only of Bombay cinema but, curiously enough, also of psychoanalysis. This paper emerges out of my continuing fascination with two icons from these seemingly very disparate worlds, Sigmund Freud and Mr. Amitabh Bachchan. And while the argument that I put forward here neither begins nor exhausts itself with Mr. Bachchan, he is nevertheless its most dramatic 'symptom'.[1] The point to keep in mind is that the 'symptom' (in the analytical sense), never has a one-on-one correspondence with the unconscious psychic scars from which it erupts.

The poles within which I place my argument here can be marked from roughly around the time that the 'angry young man' of Bombay dies, cinematically, till the time of Mr. Bachchan's renaissance on *television* through the mega-hit, *Kaun Banega Crorepati*. The intervening period saw radical changes both in the Bombay industry's production-base as well as its cinematic aesthetic. These changes then also found representation in distinct paradigm-shifts within Bombay's action/anti-hero genre. The imperceptible shifts in Mr. Bachchan's persona, from the primordial rage of Vijay in *Deewar* (1975) to the suave, acerbic, but (at heart) terribly romantic Buddhadev in *Cheeni Kum* (2007), are thus for us convenient markers within which to place the kaleidoscopic shifts within the Bombay industry that have been underway over the last three decades or so.[2]

Recent cultural theory has shown us that the differential formation of the Indian bourgeoisie from its Western European counterpart has meant that the 'realism' of Bombay cinema has been significantly different from both, the classical 'realist' text of nineteenth-century Western Europe as well its cinematic manifestation, the domestic melodrama of 1950s Hollywood. As the editors of the *Encyclopedia of Indian Cinema* point out, the ideological function of 'melodrama' here has in fact been to recast the aesthetic-social idiom of Anglo-America into indigenous frames:

> Defined in the Indian context mainly as a 'musical dramatic' narrative in accordance with its original generic meaning...Melodrama drew on the same sources as, e.g., the mythological but functioned as the aesthetic regime accompanying the socio-economic transition from feudal-artisanal to industrial ones, both formally and in content matter...[I]t recomposed traditional narrative idioms and themes, drawing on Western narrative forms and similarly negotiating modernization tensions. (1993: 137)

Historically, the first paradigmatic shift that the Bombay industry witnessed, from its inception in the 1910s to the post-Independence era in the 50s, was that the *swadeshi* concern over 'Indianness' of filmic representations which was gradually replaced by a new concern over their 'realism'. Generically, while the 'mythological' had emerged as the earliest genre in Indian cinema, the 40s/50s saw the birth of the Bombay 'social.' The reconstitution of the ruling bloc in post-Emergency India as well as the changed nature of 'regionalisms' of the 80s/90s have resulted in a further aesthetic and paradigm shifts in Bombay. In what follows, I lay out some of these, relating them to the anti-hero genre of Bombay cinema.

Bombay's 'Heterogeneous Mode of Production'

Independence marked the advent of a decisively new form of cinematic practice in Bombay. While the *swadeshi* movement had generated the impulse, the intervening War years had seen the indigenous bourgeoisie acquire an all-India character. Economically, this process was simultaneous with the collapse of the early studios such

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as Prabhat and Bombay Talkies and the entry into the film-industry of speculative finance.

In comparison, while studios such as MGM, Universal and Paramount in 1920s/30s Hollywood had been centres for the mass-production of films in ways analogous to automobiles, say, the nature of capitalism in India meant that as opposed to the 'vertically integrated mode of production' of the major American studios the Bombay industry adopted a 'heterogeneous mode of manufacture' where several pre-fabricated 'segments' are assembled under the directing influence of a financier.[3] The entry of speculative finance in 30s/40s Bombay then manifested itself in the phenomenon of free-lancing, eroding the authority of the producer-director of the early studios. There emerged instead a host of financiers who owned neither production-infrastructure nor personnel, but hired both. As a result, as opposed to the camera which had been its most visible symbol, the Star now emerged as the most visible symbol of Bombay cinema.

However beginning as a 'regional' centre, the emergence of Bombay into a pan-national phenomenon was moreover also crucially dependent on the transistor revolution.[4] Analyzing the politics of genre-formation Madhava Prasad has suggested that as opposed to Hollywood, the prevalence of music in the Bombay 'social' points to the continued reliance of the film-industry here on the resources of other popular-cultural forms such as the theatre; a feature contingent on the nature of capitalism in the country. (*SCH*: 251-260) The political upheavals of the Indira Gandhi era then saw a rupture of this 'classical' form of the Bombay film and the emergence of the art/ middle/ mass cinemas.

The moment I wish to focus on is that of 'liberalization' marked by what Prasad has called the 'disaggregation of the Nehruvian consensus' and the emergence into dominance of capital. As the liberalization process consolidates itself there has been, since the 1980s/90s, a congealing of the 70s 'middle' and 'mass' cinemas into a hybrid form of the 'commercial,' a new commercial cinema which stakes its credentials primarily on a renewed thrust on representationalism. Moreover, this new cinematic aesthetic has emerged as television takes over the 'cultural'/educational functions assigned to the Film Finance Corporation in the 60s/70s. My contention is that while continuing to function within conditions of 'backward' capitalism, the process of globalization has precipitated a re-alignment of dominance within the different 'segments' of the Bombay film as a mass-produced commodity. The earlier prominence of the Star has now been displaced by a new prominence of the music 'sector' of the Bombay industry.

Stars as *Signs: Of Floating Economies and 'Ordinariness'*

Prasad has most persuasively demonstrated that the ideological contradictions of the Nehruvian ruling bloc were inscribed not only in the narrative strategies of the classical Bombay film, but also structured its Star-system. Star-images of 1950s Bombay drew on feudal Hindu notions of iconicity. Not merely in terms of 'noble'/ aristocratic/upper-caste (physical) appearance, but an overarching feudal ideology was replicated in the 'glamour' of Star-images themselves, where this 'glamour' was indistinguishable from the 'innate' glamour of the feudal spectacle. (*SCH*:131-137; 247-251) In a different context he notes that due to the specific nature of state-formation in India, Hindi cinema compresses into a few decades the two hundred year-old-history of 'melodrama' in North America. The feudal melodrama of America was one where the actions of the 'noble' subject would be replicated by lesser characters such as servants/slaves who helped to encase the aristocratic subject's actions as exemplary/sublime, while providing an everyday point of reference themselves. (*SCH*; 130-137) While this feudal notion of Star as God is dramatically evident in the cinemas of the South (MGR, NTR, Raj Kumar), in Bombay too the cult identities of Stars such as Raj Kapoor and Nargis (their high-profile connections, their status as 'national ambassadors,' their sensational love affair), sought to invest Stars with a resplendence consciously distanced from the horizons of possibility of the everyday.[5]

Ideologically, however, such a notion of glamour is the opposite of that mobilised through the Star-system of Hollywood. As Richard Dyer has argued, the element of the exotic/glamorous in Hollywood Star-images functions instead as advertisements for the ostensible 'openness' of a democracy which militates against these very notions of feudal/ aristocratic privilege; as paradoxical reinforcements of the 'ordinariness' of Hollywood Stars. The paradox between extravagant lifestyles and 'ordinariness' is then reconciled through an ideology which suggests that 'human' qualities exist independent of material circumstances. Stars are constructed as 'typical' of the 'American people' who have simply had lucky breaks that can happen to anyone. Fundamentally, Dyer proposes that such a notion of glamour serves to reinforce the myth that the class-system does not operate in America. It is a system that recognises only talent and hard work. (1986: 38-51)

The decisive change that marked the Star-system of 80s/90s Bombay was that Star-images here too now began to play up a certain notion of the 'ordinary.' Underlying the changing nature of Bombay's Star-images were the

kaleidoscopic shifts marking the nation's new 'modernising' agenda. In fact my contention is that the new 'ordinariness' of Bombay's Star-images is symptomatic not only of structural changes in the industry's production-base but needs to be seen more broadly in terms of the film-industry's response to the new technologies of mass-culture that were gradually rendering both the space of the nation as well the economy of a 'national market' (the twin poles within which cinema, as technology and cultural form was institutionalised), obsolete.

Culturally, the corollary of the liberalization process was the television/video boom. By the mid-70s the 'developmentalist' role that Nehruvian policies had assigned to Bombay had already run into many contradictions. Beginning with the large-scale import of televisions and VCRs in the early 80s, the change to colour telecasting in 1982, the Special Extension Plan (1984) and a host of other initiatives indicated that there had been a decisive shift in governmental priorities. The changed agenda was, moreover, directly determined by the demands of transnational capital. As Ashish Rajadhyaksha has suggested, compatible with the economic re-definition of markets electronic/digital technologies such as television also do not require the political centralisation provided by the nation-state. What is happening now is that instead of economic centralisation, cultural production is being centralized, determined by the new kinds of consumerism made possible by TV. (1987: 1-5)

However as a cultural form, the rise to prominence of television has also affected the Bombay film-industry at the fundamental level of form. Independence had marked the advent of a form of cinematic practice premised on the Star. But the emergence of Bombay into a pan-national phenomenon had also been crucially dependent on the transistor revolution. In his classic analysis of the nature of television, as technology and cultural form, Raymond Williams notes that the distinctive characteristic of both radio and television is that as social technologies they were so developed that their networks of broadcasting/ transmission existed prior to the actual content/ information that these networks were then used to relay. This, Williams suggests, was because of the 'origins' of these technologies in the War years. Williams then goes on to analyse the direct and implicit connections of the broadcasting/telecommunications networks of the UK with military intelligence as well as the business conglomerates of the new industrial core. (1990: 7-44) The significant point noted by Williams as inherent in both technologies is the contradiction between the nation-state as a tightly defined geo-political unit and communication networks whose centrifugal tendencies run counter to such economic and spatial centralisation. This relates to a tendency noted by Marx himself, in the nature of movement of capital:

Capital drives beyond national barriers and prejudices as much as beyond...encrusted satisfactions of present needs, and reproductions of old ways of life....But from the fact that capital posits every such limit as its barrier and hence gets ideally beyond it, it does not by any means follow that it has really overcome it, and since every barrier contradicts its character, its production moves in contradictions which are constantly overcome just as constantly posited.[6]

The larger contradiction that the technologies of TV/ video enact is, therefore, the contradiction between the 'citizen,' the normative subject of nationalist discourse, and the new figure of the consumer, for whom the 'nation' is no longer the most meaningful category of self-description. As the economy, in the global context of transnational capital emerges as a floating signifier, this is also the primary 'objective' contradiction shaping present-day India. Yet, capital exists in history, and one of the contradictions of 'capital in history' is that we are citizens and consumers at the same time. In what follows, it is this collusive relationship between citizenship and consumerism that I will trace through the 'ordinariness' of the Star-images of 1980s Bombay.

Music, 'Televisual-realism' and the New Star-Images of 80s Bombay:

Economically, liberalisation made it more viable for local manufacturers to import components necessary for the indigenous manufacture of cassettes.[7] A thriving pirate-industry and, in general, an overall lowering of production costs subsequently saw the emergence of a host of companies such as *Venus*, *Tips*, and *T-Series*, which priced their cassettes at rates affordable to lower income groups. The more successful of these companies then not only diversified into the manufacture of video cassettes and various kinds of video-making equipment but also set up their own film-production units, reversing the earlier trend of production-companies marketing their music. Beginning as a music company, *Venus*, for instance, set up the '*United Seven*' banner which produced mega-hits such as *Khiladi* (1993) and *Baazigar* (1993). Similarly, *Time Audio* produced *Vijaypath* (1994) while *Weston* 'presented' *Yeh Dillagi* (1994). On the other hand leading industrial houses such as the R.P.Goenka group not only 'presented' Aditya Chopra's *Dilwaale Dulhaniya Le Jayenge* (1995), but also diversified into the manufacture

of music cassettes in conjunction with *HMV*. The new cultural prominence of television also gave a major boost to Bombay's music sector through the sheer number of film-music based programmes on TV beginning with the venerable *Chitrahaar* onto an unending series of music-based programmes such as *Superhit Muqabla, Close-up Antakshari and Meri Awaaz Suno, Indian Idol* and so on.

Further the explosion of the cassette-industry has meant that, increasingly, the pre-release publicity of films has come to rest on its music, through sales of audio-cassettes or television-based music programs. While the Bombay-industry had always produced the 'hit' song, the music segment has now gained near-total autonomy. Already in the 1960s demands by film-producers as well as playback singers that All India Radio give credit to films/singers in its broadcasts of film-music represented 'tendencies' of the music 'sector' of Bombay for 'relative autonomy' from a purely filmic encasing. The setting up in the mid-50s of a commercial broadcasting station by Sri Lanka, airing programmes such as *Binaca Geet Mala* which had completely blanketed the nation within two years of its inception, not only pressurised All India Radio to reverse its earlier policy banning the transmission of film-songs, but in fact to launch its own commercial channel, *Vividh Bharati*. The cassette/television boom precipitated by liberalisation of the 80s not only made music the 'dominant' segment of the Bombay film, but created a cultural space for the music 'sector' autonomous of any filmic encasing.

Thus there emerged, for the first time in India, of a whole extra-cinematic realm of indigenous pop-music mediating the MTV phenomenon for the non-English-speaking Indian audiences. Beginning with Nazia Hassan's *Disco Deewane*, Bombay saw the emergence of its first 'pop-Stars': Remo Fernandes, Alisha Chenoy etc.[8] This was simultaneous with the new cult status of music-directors such as A R Rehman as well as choreographers such as Saroj Khan and now Farah Khan. Consequently, as music now emerged as the dominant segment of the industry, the earlier prominence of the Star was displaced.[9] Star-value has now moved onto the new pop-Stars/VJs who cultivate images on the lines of earlier actors/actresses.

Therefore, the changed nature of Bombay's Star-images of the 80s/90s, emphasising the 'ordinariness' of its new Stars, has to be placed vis-à-vis the new technologies of mass-culture that were challenging the Bombay film's role as the pre-eminent host of the musical spectacle. The fragmentation in the industry's production-base as a result of the TV/cassette-boom and the consequent pressures for novelty this has generated also meant that the life-span of individual actors/actresses at the box-

office was now much shorter. Thus, the love-story genre in the 1980s introduced a new lead pair in each of its box-office hits from *Love Story* (1981) to *Qayamat Se Qayamat Tak* (1988). Similarly the anti-hero genre also introduced a string of new 'Stars' including Anil Kapoor, Sunny Deol, Sanjay Dutt and Nana Patekar, as opposed to the 70s which had been solely dominated by Amitabh Bachchan.

More significantly, the emergence of new technologies of mass-culture gave rise to a different image of the Star in 80s Bombay as compared with that of the 50s. As opposed to the feudal glamour of the Star-images of Raj Kapoor or Nargis, for example, if one looks at the media-images of 80s Stars such as Aamir Khan what is striking is the way in which the media consistently played up a certain (urban, upper-class/caste) 'ordinariness'. This emphasis on the 'ordinary' translated not only into the literal introduction of actors and actresses without prior screen-histories but also into an entirely cinematic aesthetic that foregrounded the 'everyday' as the site of significant action, an aesthetic that emerged in the context of the decisive cultural dominance of *television*.

There was on overall thrust on 'representationalism' in all the 'segments' of the Bombay-industry in the 70s. (*SCH*: 247-251) Reinforcing the general 70s emphasis on representationalism has, then, to be placed in the documentary-style truth-effect promised by television in the 1980s as well as the simultaneous move centrestage of 70s 'middle' cinema in India. The crossover of a number of directors from the 'art' to the 'commercial' industry in the 80s/90s reinforces the point. These 'art' directors have been credited with infusing a new sense of verisimilitude into the different 'commercial' industries into which they have moved. The new representationalism informs the 'hybrid' commercial cinemas of the 80s/90s at the level of editing, shot-composition, camera-work, acting-styles etc. The changed nature of Bombay's Star-images, highlighting the 'ordinariness' of its new Stars, thus points to the ways in which the Star-persona emerged as a crucial mediating category between the structural changes precipitated by liberalisation and the film-industry's bid for survival in the changed cultural space.

Bombay's Anti-Hero Cinema:

Historically, while women, as a group, have been left out of the fictive social contract on which the classical nation-state was based, so also have the lower classes, ('*the folk*') a category equally crucial to the ideological construction of nationhood. As has been extensively documented, the ideological creation of 'the folk' was based on a systematic disciplining and transformation of the peasantry into 'citizen-subjects' by the institutional apparatuses of the

new regime of power.[10] In Bombay too, as a representative popular-cultural form, there has been a genre in which the protagonist is typically outside the institutions and practices of citizenship—the 'anti-hero'. My attempt here is to read this genre as of elite documentation of subaltern politics.

Initiated in Ranajit Guha's path breaking *Elementary Aspects of Peasant Insurgency* and followed through in the work of the *Subaltern Studies* collective, there has recently emerged documentation of a whole realm of popular mobilisation in India whose modes of organisation, notions of community, ordering of·time etc. were quite independent of the political idiom of liberal democracy.[11] In the light of this new writing of history, my analysis of Bombay's anti-hero genre aims to map through it elite negotiations of these 'other' worlds — the world of the thief, the 'rowdy,' the 'outlaw'— worlds framed in counterpoint to the Law of the new state. As Michel Foucault has documented, the new techniques of 'discipline' were preconditionally linked to the very nature of state-power on which the new art of 'governmentality' was premised, one geared to maximise 'efficiency.'[12] The crucial difference however was that the institutional and conceptual transformations which in Europe performed the function of controlling the despotic powers of the prince and therefore seemed liberating, in India seemed *exactly the reverse.*

'Family Name': Inside and Outside the Law :

Thus the question of 'Law' in India has a complex genealogy. At an obvious level, the (Western) legal apparatus emerged as one of the most visible signifiers of the absolute powers of the colonial state. Consequently, nationalism as a mass-movement gained crucial momentum from popular mobilisation directed against the Law. Yet despite its ostensible anti-imperialist stance, elite nationalist discourse shared fundamentally in the worldview of colonial 'modernity'. Therefore on many instances the nationalist leadership would itself characterise popular mobilisations as 'lawless.'

The class-based contradictions around questions of law-making/law-breaking were further overlaid by the internal contradictions within the ruling coalition that assumed power at Independence. Given that it was a coalition of feudal, capitalist as well as professional groups, the legal system of bourgeois democracy could only be invoked in Bombay so long as it paid homage to feudal notions of justice/honour. It is these multiple contradictions in the Indian social formation that provided the structuring trope of Bombay's anti-hero cinema — the motif of the 'family name.' The exclusion of Bombay's anti-hero from codes of citizenship is therefore enacted through his exclusion from the feudal notion of status represented by 'family name.'

The Tramp, the City and the Critique of the Nation:

Ideologically, *swadeshi* charged categories such as 'the folk'/ 'the countryside' both as repositories of 'Indian tradition' as well as sites are opposed to Westernisation. Consequently, when set in an agrarian background, conscious disidentification with the Law in Bombay could only be located in 'outlaw' figures such as Birju (*Mother India*, 1951) or Ganga (*Ganga Jamuna*, 1961), figures who ran parallel legal systems and were literally outside the domain of the state within which the emblematic 'Indian village' was encased. Alternately, disidentification with the Law could be located within the *urban* experience of 'modernity.' While drawing on Hollywood's gangster and 'outlaw' films, it is the latter who develop into Bombay's vigilantes in the 70s/80s. Consequently in the trajectory that I propose to map it is the 'tramp,' the 'thief,' the 'rowdy,'— loners in an urban landscape — who emerge as 'others' of the normative middle-class householder.

Ravi Vasudevan has earlier analysed the 'crime film' of the 1940s/50s Bombay. (1991a:63-91; 1991b:171-185 & 1994:51-77). Placed within the overarching Oedipal triangle of the castrating father, the nurturing mother and the traumatised son, Vasudevan has read the criminality of the 40s/50s 'thief hero' as the symbolic enactment of the Oedipal fantasy of patricide. Vis-a-vis Vasudevan's analysis, I propose that these films can be read from another perspective. Going back to *Awara*, while it is true that the Law, (with the aid of romantic love), helps Raj regain his social legitimacy, we must nevertheless remember that at the end of the film it is Raj who has to serve a prison sentence while his father, the judge, stands at least 'formally' exonerated. Even while the law is invoked as a guarantor of social justice, it still punishes the victim rather than the aggressor.

The change that becomes evident when we move to the anti-hero films of the 1970s is that the father-figure has now lost this 'legitimacy' in the eyes of his son. In *Deewar*, for instance, till the end it is only the spectator who know the 'truth' about Ajay babu's 'compromise.' Disillusioned by his father-figure, the son tries to reinstate the mother in his place.[13] At this point the Law steps in reluctantly to punish the erring son.

The further shift in Bombay's anti-hero cinema of the 80s is that the father now reoccupies the space of social legitimacy. There is consequently no obvious conflict between father and son. Moreover the father-figure is also

ideologically aligned to the Law (the repression of the son is complete?), and the motif of 'family name' reinflected as the son's desire to regain the organic, upper-caste community of his father. The fundamental shift in Bomaby's anti-hero genre, from the 1950s to the 1980s, is therefore that while in the 50s the loss of 'family name' was on account of failed father-figures in the 80s it is due to the failure of sons to live up to the father's name.

Given moreover the genealogy of the 80s vigilante films in the 'mass' cinema of the 70, these films are set in urban, lower-middle-class milieus, invoking everyday problems such as lack of housing, education, employment. The father-figure here typically comes from a lower-middle-class, 'oridanary' background. Moreover the Repressive State Apparatuses are set up here as institutional manifestations of the 'idealism' of the nationalist movement. *Karma* (1986), perhaps represents the high-point of this process where a benevolent jail-warder (Dilip Kumar) transforms three convicts facing death-penalties into an anti-terrorist squad.

The 'others' of the nation are either 'corrupt' representatives of State-Apparatuses or inhuman megalomaniacs running parallel, dystopic empires. The important point about representations of villainy in the 80s anti-hero films is also that the villain is often not given a tangible motive at all. While monetary greed/political ambition is sometimes presented as ostensible reason for villainy, in several instances he is shorn of all 'human' moorings. A range of villains from Anna (*Parinda*, 1989) to Maharani (*Sadak*, 1991) can be cited as examples. As Rajiv Velicheti observes of the 'new' 80s films in *Telugu*, 'evil' appears as all-pervasive and senseless; creating an overwhelming atmosphere of danger which can randomly strike *any* person at *any* time.[14] Failing to comprehend the villain's sub-human nature, representatives of the 50s generation (the idealised fathers) of 80s Bombay, fall prey to this auto-generating violence as they uphold civic/ social/ human values in a hostile world.

But apart from reinforcing the logic of a police-state such an ethic also has disturbing implications for women. Drawing on Gandhism, women in the 50s were to be inducted into the task of nation-building as guarantors of the new nation's morality. As Rani in *Kismet* or Rita in *Awara*, they functioned as agents for the successful transfer of patriarchal authority ('family name') across generations. The idolisation of the father-figure by the 80s vigilante has not only reduced the mother-figure to relative insignificance, it has seen the heroine become the 'other' of the chaste, (potential) middle-class housewife — the night-club singer in *Shakti*, the widow in *Prahaar*, the 'pop-Star' in *Tezaab*. Forced into the public space of

the market/ the profane world of labour, these middle-class women are now 'deprived' of the 'protection' of 'family.' It is to re-instate *her* within the privacy of the bourgeois home as well as to live up to the name of the father that the 80s vigilante has to transgress the law.

We have already noted the changes in Bombay's Star-system precipitated by the new dominance of music in the 80s. While the 70s launched the iconic 'angry young man,' the pressures for novelty generated by erosion of the industry's economic-base meant that Mr. Bachchan, in the 80s, had to give way to a string of new Stars. Drawing on the cultural memory of the Bachchan persona however, Star-images of 80s anti-heroes such as Anil Kapoor and Nana Patekar used a discourse of 'endeavour' to re-work, in the 80s context, the *swadeshi*-generated ideological opposition between inherited and acquired wealth, playing up the idea that instead of decadent upper-class privilege, they had made it to the top only through determination and hard-work.[15]

But the growing dominance of music meant that 80s anti-heroes had to be 'musical' stars too. And this will take us back to the beginning of our paper: the transformation in the Bachchan persona itself. Mr. Bachchan's famous *Jumma Chumma* sequence in the action film, *Hum* (1990), was an early indication of this. But the growing prominence of the music 'sector' became dramatically evident in the 90s with Mr. Bachchan starting his own music company, *Big B*. The *Aby Baby* album, (released Oct. 1996), began with Mr. Bachchan's recitation of verses from the title song of *Kabhi Kabhi* as he now re-claimed the 'musical'/sensitive persona of his 'middle cinema' days. This was in conjunction with *ABCL* (Amitabh Bachchan Corp. Ltd), a failed venture that also hosted the Bangalore 'Miss World' contest. But in hindsight, the different strands elucidated in this paper — the dominance of television, music, transnational capital — all came together most forcefully in the renaissance of the very suave, *upper class* Bachchan persona in *Kaun Banega Crorepati*. The 'angry young man' has, since then, become the millionaire, 'progressive' father of the designer Karan Johar romances, the passionate photographer of Ram Gopal Verma and now, of course, also the *chef* in Cheeni Kum. At 64 Mr. Bachchan is also one of India's most famous fashion icons inspiring, it is said, a whole new definition of 'ageing.' This new screen-image has also taken on a further dimension with the marriage of his son and the endlessly played out 'friendship' that he shares with the young couple. Lineage is now truly a closed question.

In his infamous *Totem and Taboo* (1913), infamous because it has been seen as the high-point of Freud's racist arrogance, Freud is dealing with crucial questions such

as lineage, patrimony — 'our' notions of belonging, possessive filial continuity. Written in the years of the Great War and deeply sceptical of the underlying violence of the social structures of the West, Freud is in fact arguing here that we may have much to learn from the miserable 'Australian aborigine'/ the non-Western 'savage'. In an uncanny, but strange symmetry, Bombay cinema seems to equally (and unconsciously, of course) invoke Freud? In the 2007 IIFA ceremony, Mr. Kishore Lulla was awarded as a pioneer who had helped Bombay cinema go global. Mr. Lulla's company is called, *'Eros Productions.'*

NOTES

1. A different version of the paper, where I had tried to relate the changes in the production-base of the inudstry to Madhuri Dixit's Star-image, was presented at the Cultural Studies Workshop of the Centre for Studies in Social Sciences, Calcutta, and subsequently published in their *Enreca Occasional Paper Series*, no.4, 2000. My thanks to all the respondents for their comments which have helped me re-work my arguments since.

2. This is not to suggest that Mr. Bachchan's Star-image has a completely watertight division into two phases. On the contrary, in the earlier phase also Mr. Bachchan had a 'sensitive' side to his image in films such as *Anand, Abhimaan* and *Mili.* This continued with 'musicals' such as *Satte Pe Satta.* However his legendary status in this phase derived, of course, from his anti-hero persona. Similarly, in his post-*KBC* acting career he continues to have essayed negative roles as well in films such as *Sarkar* and Ram Gopal Varma's forthcoming remake of *Sholay,* although now the major roles are 'positive'/ romantic ones.

3. M. Madhava Prasad, "Economics of Ideology," *The State and Culture: Hindi Cinema in the Passive Revolution,* Phd diss., Univ. of Pittsburgh, 1994, henceforth abbreviated as *SCH,* pp 41-108. Prasad suggests that in the 'heterogeneous mode of manufacture' adopted by the Bombay industry is contingent on the nature of capitalism in the country. Here, the source of finance directs the structure of the narrative. While Prasad's is undoubtedly the most comprehensive analysis, introductory references include, Eric Barnouw and S.Krishnaswamy, eds. *Indian Cinema,* (NY: Columbia UP, 1963), pp.116-211; Ravi Vasudevan, *Errant Males and the Divided Woman: Melodrama and Sexual Difference in the Hindi Film of the 1950s,* Ph.D. diss. Univ. of East Anglia, 1991, Chs. 1 and the introductory chapters of Sumita S. Chakravarty, *National Identity in Indian Popular Cinema, 1947-1987,* (Austin: University of Texas Press, 1993.)

4. Ashish Rajadhyaksha, "Neo-traditionalism: Film as Popular Art in India," *Framework,* 32-33. (1986): 20-67.

5. While Behroze Gandhi and Rosie Thomas, "Three Indian Film Stars," in Christine Gledhill, ed. *Stardom: Industry of Desire,* (London: Routledge, 1991), pp.108-131, locate the images of three female Stars within the changing political climate, from the 50s to the 80s, caste, as an analytical category, does not inform their interpretative framework. This is not a minor

omission. Placed in context of the argument I have been making so far, it represents the inability of much of even left models of social analysis to conceptualise 'politics' in India in categories other than those derived from the classical democracies of Western Europe.

6. Marx, Karl, *Grundrisse,* Trans. Martin Nicolaus, (Harmondsworth: Penguin, 1973), p.410

7. See Peter Manual, *Cassette Culture: Popular Music and Technology in North India,* (Chicago: Univ. of Chicago Press, 1993); Anupama Chandra and Kavita Shetty, "Hitting the Right Notes," *India Today,* (30 Nov., 1993): 149-156 and Anupama Chandra, "Music Mania," *India Today,* (15 Nov., 1994): 100-107, for useful statistics.

8. See, among many others, the cover-feature by Brian Tellis and Milton Frank, "India Goes Pop," *Femina,* (Dec. 1996): 10-38.

9. As I have shown in my paper the major 80s Stars such as Madhuri Dixit would in fact make their claims to Star-status only through the space opened by the new dominance of music sector, Stars and Singers of Bombay,' *Enreca Occasional Series,* no.4, op. Cit.

10. See among many others Anderson, *Imagined Communities,* (London: Verso, 1983) and Peter Burke, "The Discovery of Popular Culture," in Raphael Samuel, ed. *People's History and Socialist Theory,* (London: Routledge and Kegan Paul, 1981): 261-226.

11. Ranajit Guha, *Elementary Aspects of Peasant Insurgency,* (Delhi:OUP, 1983), and *Subaltern Studies,* vols. 1-8, (Delhi:OUP, 1983-94.)

12. Michel Foucault, "Govermentality," in Graham Burchell, Colin Gordon and Peter Miller, eds., *The Foucault Effect,* pp. 87-105. See also the chapter, "Docile Bodies," in his *Discipline and Punish:The Birth of the Prison,* (London:Penguin, 1976), pp.135-170, for a brilliant analysis of the new techniques of 'discipline' and the form of state-power.

13. See also *SCH,* 278-282.

14. Rajiv Velicheti, "Women, Violence and Telanagana: Changing Constructions in Telugu Popular Cinema," paper presented at the Anveshi/Subaltern Studies Conference, Hyderabad, Jan, 1993.

15. I have analysed this in detail in my PhD diss, *Framing the Nation,* Univ. of East Anglia, 1997.Being Star-sons, the media-images of Sunny Deol and Sanjay Dutt had, however, obviously had to use different points of entry. But as Rosie Thomas' analysis of Sanjay Dutt's Star-image points out, there was a similar reworking of masculinity in Dutt's media-image also; one which highlighted a masculinity that was wrecking avenge on a corrupt world.

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Conjuring up the Contours of Śukra's Science of Politics:
The Problem of Method and Substance

T.R. SHARMA

Ever since the publication of Lallanji Gopal's article on *Śukranīti* in *Bulletin of the School of Oriental and African Studies* in 1962 declaring it a nineteenth century text;[1] scholarly interest in its textual analysis has considerably declined. This is so because besides contributing to the on-going debate about the date of its composition, which was set in motion by Gustav Oppert while publishing the English version of *Śukranīti* in 1882; Gopal has by his 'nineteenth century' thesis questioned the very authenticity of the available text. Although Oppert assigned it to the period of *Smritis*, most of the Indologists considered it to be a work of post-*Smrti* period ranging between fourth century AD and sixteenth century AD[2]; K A N Sastri and V Raghavan preceded Gopal in putting forth the view that the available text of *Śukranīti* was a work of nineteenth century.[3] However, their argument was not as forceful, rigorous and wide-ranging as that of

Gopal who has accumulated massive evidence from diverse sources in order to 'prove' his point.

For one thing, Gopal's suspicion about the authenticity of the available text[4] emanates from the fact that there is not much in it which could qualify to be called *nīti* (policy) or *rājnīti* (science of politics) for which Śukra has been profusely and most reverentially quoted in several ancient Indian literary sources either by this popular name (which in fact, was given to him by Lord Siva after he adopted him as his own son) or by other names like Usana, Kāvya, Bhārgava or Bhrgu. Apart from this general argument, Gopal's doubts rest on very convincing and well articulated internal evidence culled from the available text itself. It is not intended to reproduce Gopal's whole argument here. Therefore only some aspects of it are being mentioned.

Gopal finds, what may be called, some degree of

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anachronism in the text, for, it describes guns and cannons which imply the knowledge of gun-powder. Gopal's argument is that Indians did not have any such knowledge before the sixteenth century. He further argues that guns were introduced in India, for the first time by the Portuguese in 1510 AD. He clarifies that any reference in ancient Indian literary works to *fire-weapons* should not be taken to refer to *fire-arms* because these weapons did not contain anything like gun-powder. Moreover, in the extant *Śukranīti* text there is a mention of large and small *nalikas* (barrels) and *agni curna* with *sunarci* salt (nitre) and balls made of iron, lead and other metals which makes it obvious that the text does not belong to the remote antiquity because the Indians at that time had no knowledge of some of these things and they were not familiar with fire-arms.[5]

Secondly, in the extant *Śukranīti* text there is a reference to *yavanas* and *Mlecchas*, terms which are used to refer to Greeks and Muslims respectively. The *Mlecchas* are described in detail as a people living in the north-west, (*paścimottara*) who do not accept the authority of the *Vedas*, who are different from the four Hindu castes and whose religious philosophy considers God as the invisible creator. They are projected in very contemptuous terms as envious and foolish people which seem to be the views of some fanatic Brahmin. Killing of a cow or a woman or a Brahmin is mentioned in *Śukranīti* as a legitimate ground to go to war against those who resort to such killings. According to Gopal any such injunction would make no sense in an exclusively Hindu India. All this has prompted him to infer that the *Śukranīti* text belongs to a period when the Muslims had spread over most parts of India.[6]

Thirdly, and most significantly, Gopal has shown that the available text of *Śukranīti* contains numerous provisions which seem to have been lifted almost verbatim from the policies and regulations of the East India Company, particularly from the *Ordinances/ Regulations* and *Rules* of Bombay, Madras and Bengal Presidencies.[7] Gopal has also quoted several stipulations regarding state administration and conduct of war in the *Śukranīti* which are exactly similar to the administration of the Peshwa rulers, particularly that of Shivaji. In Gopal's view it is reasonable to infer that the author of *Śukranīti* has borrowed these provisions from there. The organizational structure of army mentioned in *Śukranīti* seems to have been borrowed from organization of armies in Europe, especially from the army of Napoleon.[8] The society depicted in the *Śukranīti* has many features of modern capitalist societies and the rules of investment etc. are quite similar to the principles of present-day economics.[9]

On the basis of this whole evidence Gopal has concluded that the available text of *Śukranīti* cannot be the work of Śukracarya; rather it seems to have been authored by some clever person who lived during the nineteenth century, who had thorough knowledge of policies and Regulations of the East India Company, who was also well-informed about Maratha history and who had also good knowledge of all Sanskrit texts on the subject. Gopal has further surmised that probably this person had in his possession a copy of the original *Śukranīti* in some form though such a work seems to have receded from public study and attention long back. Taking advantages of this fact, this person transformed the original text beyond recognition. Thus, Gopal has not only asserted that the available text of *Śukranīti* is a nineteenth century composition, he has also indicated that it is not the work of Śukra at all.

II

Given this suspect character of the available text of *Śukranīti*, it does not seem worthwhile to try to identify Śukra's science of politics on the basis of textual analysis of this work. But merely on the plea that authentic work of Śukra is not available, one cannot, and indeed one should not, abdicate the very responsibility of studying the politics of Śukra. After all, there is a lot of supportive evidence in the *Vedas*, *Purāṇas*, *Smṛtis*, *Nītis* and epics to show that Śukra was the earliest and the most brilliant political thinker of India for whom there was one and only one *Vidya* (branch of knowledge) which needed to be studied and taught and it was *Dandanīti* (the science of politics or the science about the use of coercive power of the state). This view of Śukra, about the centrality of politics was quite at variance with all other viewpoints including that of Manu, Brahaspati, Kautilya and Kamandaka etc. who variously held that in addition to *Dandanīti* there were two or three other *Vidyas* which needed to be studied. These were: *Anuvikshki* (Logic and Philosophy); *Trayi* (theology or the study of three *Vedas*- *Ṛg, Yajur* and *Sam*); and *Varatta* (Economics).[10] For Śukra, however, *Dandanīti* was a master science and all other branches of knowledge could exist and prosper only with the support and patronage of state power.

Not only this, there are numerous laudatory references to Śukra and his *nīti* in *Mahābhārata*, particularly in *Santiparva*, *Anuśāsna Parva*, *Ādi Parva*, *Salya Parva* and *Udyog Parva*. References to Śukra as the expounder of *Dandanīti* and *Rājanīti* are also found in several other literary sources including Hemadri's *Chaturvarga Chintamani*, Dandin's *Dasakumara Charita*, Kalidasa's *Kumarasambhava*, Ashvaghosa's *Buddh Charita*

Chandesvara's *Rājanīti-ratnakara*, Kautilya's *Arthasastra*, Kamandaka's *Kamandakiya-nītisāra* and Janamejaya's *Nīti-prakaśika*. In *Srimad Bhagavada Gita*, Lord Krishna reverentially addresses Śukra as a great thinker and seer (X,37). On the basis of careful analysis of these references one finds that Śukra was the *Purohit* (priest) of the non-Aryan aboriginal communities and a preceptor and advisor of various non-Aryan kings starting from Hiranyakasipu to Prahlāda to Andhaka to Virochana to Vali and to Vrishparva.[11] It was in his capacity as the preceptor of these non-Aryans that he expounded his profound *nīti*, which, however, is not available today in its authentic form. Probably it became extinct at an early date or became unpopular with the powers that be. The problem gets further complicated because despite numerous references to him as a profound political thinker there has been no comprehensive study of his political ideas. Consequently, his science of politics remains largely unexplored even to this day.

III

This poses a major problem for the researchers. Confronted with a situation where the available text of *Śukranīti* has been relegated almost to the level of a forgery how can Sukra's science of politics be conjured? Is there any valid and reliable way to study his politics in the absence of an authentic text? One way could be to rely on archaeological evidence but unfortunately no such evidence is available and it is quite unlikely that it would be available in the near future. In fact, this problem is part of a larger problem. Given the dismal and disappointing situation where neither any reliable textual nor any archeological evidence is available how can the history of pre-Aryan India be studied? Are there any other historiographic research models available? Probably there are none because there is hardly any proper documentations of events of the remote antiquity. There is only a vague folk tradition with very little documentation above the level of myth and legend, which is so nebulous that virtually no dates can be determined, sometimes a work survives but its author is not known, sometimes only this much is known that an author with a certain names existed and expounded a certain policy (*a la* Śukra) but no authentic text is available.

The question, therefore, is: there being no reliable text of Sukra's science of politics, there being no archaeological evidence about him, there being no historical records of that period but there being numerous references to him and his celebrated *nīti* is there any scientific way to study him? For instance, can one toy with the idea of creating a *non-textual* Śukra? To what extent can this be done by

.relying on some of the episodes, myths and legends about him which are found scattered all over the place in almost all the *Purāṇas* and other anecdotal literature?[12] To what extent can these episodes which are constitutive *of folk-culture of remote antiquity* provide a peep, howsoever limited, into Sukra's role as preceptor and advisor of pre-Aryan aboriginals during their intermittent encounters with the Aryans? To what extent can these Purānic accounts be helpful in drawing reasonably acceptable inferences about his political doctrines as a thinker and about his political acumen as a strategist in *war* and *peace*?

A careful analysis of encounters of various pre-Aryan tribal communities with the expansionist Aryans would show that the latter's onslaughts against the former had three broad objectives: (a) either to physically liquidate them; or (b) to convert them into *dāsas* (slaves) and (c) to deny them any cultural autonomy. In essence, the Aryan attempt was to establish their political and cultural hegemony over the non-Aryans. In this scenario Sukra's two-pronged strategy was as much to provide them physical security as to defend their political autonomy and cultural identity and thereby to ensure them a life of freedom, honour and dignity.

To appreciate this dimension of Sukra's politics one must realize that the attitude of the Aryans towards their adversaries was highly contemptuous. While for themselves they used the honorific title of '*Devas*' (gods) and addressed their allies with respectable titles like *Gandharvas* (royal musicians), *yakshas* (royal guards), and *Kinnars* (royal attendants), they addressed their adversaries by various derogatory names like *Dasas* (slaves), *Dasyus* (thieves), *Danavas*, *Daityas* and *Rakshasas* (demons) and those who supported them were likewise pejoratively called *Bhutas* (ghosts or evil spirits), *Pretas* (fiends) and *Pisachas* (goblins).

This would show that the Aryan attack on the non-Aryans was as much physical as it was cultural. They were projected as having been born at an evil hour under evil stars and inauspicious lunations. They were ridiculed for having clumsy bodies with beastly strength, for having hideously repulsive facial geometry, as being 'broad-jawed', 'goat-nosed', 'flat-nosed', 'noseless with sound in breath'. They were not only ridiculed for being dark complexioned but were also depicted as 'powers of darkness' and 'ignorance'. On the other hand, the Aryans took a lot of pride in being 'fair complexioned' and used the colour of their skin to project themselves as the 'powers of light' and 'knowledge'. How difficult and humiliating it must have been for the non-Aryans to live with all these derogatory epithets is any body's guess. And it was this humiliation of the non-Aryans at the hands of Aryans which Sukra tried to resist.

However, more than their repulsive physical traits, the non-Aryans were ridiculed for their values, beliefs and cultural practices which were termed as simply 'savage'. While the Aryans projected themselves as followers of *Dharma* (righteous social and moral code); the non-Aryans were not only projected as violators of *Dharma* but were also associated with all possible negative cultural and attitudinal traits; of being cunning and crooked, of being diabolical in nature, always seeking to harm others. They were despised for having no sacred fires, for performing no *yajanas* and for offering no sacrifices. Aryans, on the other hand did not only regularly do so but even ascribed their victories over the non-Aryans to these practices.

Further, the Aryans took a lot of pride in being the worshippers of various nature-gods—*Indra* (the god of rain), *Varuṇa* (the god of Oceans) and *Sūrya* and *Agni* (the gods of light and warmth respectively); the non-Aryans were criticized for worshiping mad gods and for being phallus worshippers. While the Aryans claimed that they were wedded to spiritual and 'other-worldly' pursuits, philosophic speculation, flair for finer arts like music and poetry; the non-Aryans were projected as superstitious, with faith in charms, incantations, exorcism and ceremonies to raise spirits through magic formulas. In short, the non-Aryan cultural practices were projected as not only peculiar but even devilish. All pejorative traits like deceit, falsehood, wildness and bruteness were associated with them. They were accused of being thieves, guilty of cattle stealing and women lifting. They were branded as intellectually bankrupt, morally degraded and culturally backward who needed to be not only disciplined and punished but also to be subjugated and enslaved. They were repeatedly described as cannibals, man-eaters, devouring human flesh, brutal in nature, hardened criminals, savages living in caves and jungle. It is no surprise, therefore, that *Ṛgveda*, the major Aryan store-house of knowledge, described them as demons, sorcerers and fiends.

The Aryans also held their adversaries guilty of arrogance, self-conceit, anger, rudeness and ignorance. On the other hand, they projected themselves as the embodiment of all conceivable noble traits like serenity, self-control, austerity, purity, forbearance, unright-eousness, fountains of knowledge and justice, symbols of heroism, bravery, valour, firmness, dexterity and generosity. In short, while the Aryans projected themselves as paragons of all virtues; they painted their adversaries as bundles of all possible vices. Thus, the Aryans and non-Aryans were not only different physically and racially but even culturally and temperamently. The conflict between the two was projected as conflict between *Dharma* and *Adharma*, truth and falsehood, light and darkness, good and evil, noble and ignoble, reason and superstition, priesthood and witchcraft. Thus the clash between the two was a clash between two sets of values and between two cultures: 'native' and 'non-native'; 'traditional' and 'modern'; 'savage' and 'civil'; 'irrational' and 'rational'; and 'temporal' and 'spiritual'. In doing so the whole attempt of the Aryans was, to use Frantz Fanon's term, to confine the non-Aryans within a 'circle of guilt'. It is amazing that except Śukra all the other preceptors—Brahaspati, Vasishtha, Gautama, Parāśara, Angirās, Atri and Agasteya etc. were instrumental in pushing the non-Aryans into this, 'circle of guilt' rather than rescuing them. It was left to Śukra, as the sole preceptor of the non-Aryans, to try to release them from this 'circle of guilt' and ensure them a life of honour and dignity.

IV

It is not difficult to see that the way history of Vedic epoch unfolded itself Śukra succeeded to a considerable degree in not only defending the non-Aryans' culture, values and beliefs but also in making the Aryans to, willy-nilly, adopt some of them. This can be demonstrated with any amount of evidence. However, in any such demonstration there can be no one-to-one correspondence, rather this correspondence will have to be inferred but in that sense virtually all knowledge is inference.

Let us consider some instances. The Aryans criticized the non-Aryans for their faith in charms and incantations. However, when they learnt that Śukra was engaged in severe penance to obtain from Mahādeva a boon of invincibility for the non-Aryans in their wars with them they got terribly worried at the very prospect of success of his mission and set about evolving counter-strategies in order to distract Śukra from his mission. So much so that Indra, the chief warrior of the Aryans, despatched his daughter, Jayanti, to lure him and thereby scuttle his whole plan. The obvious implication of Aryan response is that tacitly they did recognize the power of esoteric knowledge—*Sanjīvani Vidya* (the art of reviving those who fell on the battleground) which Śukra was trying to obtain through penance.

Further, when the Aryans learnt that despite Jayanti's best efforts to the contrary, Śukra had obtained the required esoteric knowledge that virtually made the non-Aryans invincible on a battleground they were quick to realize that with this master stroke Śukra had decidedly tilted the balance of power in favour of their adversaries. They desperately tried to hit upon a plan to neutralize this advantage. After hurried consultations among themselves they decided to appeal to their preceptor,

Brahaspati, to send his son, Kacha, to the hermitage of Śukra in the guise of a pupil. His sole mission was to obtain, by fair means or foul, this unique knowledge.[13] The Aryan response clearly illustrates that even though they ridiculed the non-Aryans for their faith in the art of harlequins, they were themselves quite keen to obtain it, if they could.

Likewise the Aryans criticized their adversaries for being phallus worshippers but with the passage of time *linga* worship became a popular mode of worship in the whole of *Aryavarta* (a racial name given to the Indian subcontinent by the Aryans). On a closer scrutiny one will realize that, in essence, *linga* is nothing but phallus and hence the practice of linga worship is nothing short of phallus worship.[14] There is another related aspect of this phenomenon. One finds that initially the Aryans were worshipers of Viṣṇu; while the non-Aryans like Hiranyakasipu and Andhaka were the worshippers of Śiva, whom the Aryans pejoratively called *paśupati* (the lord of beasts). In fact in the *Trayi* the principal deity is Viṣṇu and the reference to Śiva is more as *Rudra* (god the destroyer); but in the post-Vedic period Śiva began to be worshipped as the principal deity. Initially, it was only Śukra, the preceptor of the non-Aryans, who was an unparalleled devotee of Śiva even during the *Vedic era* and it was indeed in recognition of this devotion that Śiva adopted him as his own son. So also, the non-Aryan king Andhaka who, after initial hostility, became a follower of Śiva and was accepted by him as his son and was appointed *Ganapati* (lord of his *ganas*). Later, the Aryans also came round to the non-Aryan view and started worshipping Śiva alongwith Visnu. This would show that Śukra through his subtle ways did bring about some sort of cultural reconciliation between the Aryans and the non-Aryans.

To top it all, one must recognize that there are two different *Vedic Samhitas* (collections): the first consisting of *trayi* (the study of three *Vedas*—Ŗg, Sām, Yajur); and the second consisting of *Atharva Veda*. In essence, they represent two alternative *epistemological* and *cultural paradigms*. Culturally, the three *Vedas* constituting the *Trayi* form a compact organic whole in so far as the Ŗg *Veda* is a compendium of hymns meant to be recited, in *Sam Veda* these are meant to be chanted and the *Yajur Veda* contains formulas and procedures relating to hymns and chants of the sacrifice to be followed by the priests. Thus, these three *Vedas* together represent one and the same socio-cultural *gestalt* or form-complex.[15] But they do not exhaust the whole range of beliefs of all the groups. The *vis* people (race, tribe, folk-groups) definitely cherished other cultural traits and created other compendiums of hymns through other *risis* (sages). The

Atharva Veda emanated in this process. The name *Atharava Veda* is explained variously. The *Gopatha Brahmana* and *Aitareya Brahmana* state that Vata advised sage Bhrigu (sometimes Śukra is also called by this name being the son or grandson of Bhrigu) to look (*Atha arvan*) into the waters to seek for *Brahman* (the absolute). For doing so he (Bhrigu) is also called Atharvan which would indicate that Śukra may probably be the author of the *Atharva veda*.[16] Initially, the Aryans recognized only *Trayi* as the source of all theological knowledge. They did not accept the authority of *Atharva Veda* nor did they accord legitimacy to any of the institutions represented in the *Atharva Veda* nor did they practice any of its rituals; rather they criticized the non-Aryans for believing in charms, incantations, exorcism, imprecations, amulets, witchcraft, and sorcery all of which constitute the *core* of *Atharva Veda*. While the Ŗg *veda* hymns are in the nature of invocation to various Aryan war heroes (Agni, Indra and Varuṇa etc.) to destroy their non-Aryan enemies, the whole thurst of *Atharva Veda* is different. It is closely associated with *tantra* (rites and formula connected with adoration of *Prakṛti* (nature) or *Sakti* (the goddess). In fact, *tantra* is the *up-veda* (sub *Veda*) of *Atharava Veda* which describes six uses of the various *mantras* (incantations) to the adored beings as well as the various means of negating/combating the effects of the *mantras* through counter *mantras*. Thus, the *Atharva Veda mantras* are aimed at removing some evils from oneself and throwing it on the enemy. These were the practices which were not only negated but even condemned by the Aryans for quite sometime.

Looking at it from another perspective one finds that the core of *trayi* consisting of sacred fires, *yajanas*, sacrifices and hymns represent the canonical core of culture; while the *Atharava Veda* which is a specialized collection of certain popular items and incidents represent the *folklore* of age. Among other things, it consists of art of hypnotizing and mesmerizing (associated particularly with the *Nāgas*), the art of harlequins and magical tricks (a speciality of the *Raksasas*) and witchcraft and unfair war methods (which were the traits of *Pisachas*). Thus the *canonical core* has hardly anything in common with the *folklore*.

In fact these two represent two different cultural streams—*mass* and *elite*. The *Atharva Veda* represents, by and large, the values, beliefs, manners and customs of the marginalized groups who constituted the mass but did not find any place, except contempt, in the three *Vedas*. In this sense *Atharva Veda* represents the lifeworlds of the non-Aryan aboriginals who could be likened to the present-day *dalits* (oppressed). Although the folk culture that *Atharva Veda* represents is as old as *Trayi*, if

not older, yet it got co-opted into the dominant paradigm consisting of the Vedic world view much later. While Brahaspati, Vasistha, Gautama and other preceptors of the Aryans patronized the three *Vedas* to the exclusion of *AtharvaVeda*; it was Śukra, who was the lone preceptor of the aboriginals and the sole defender and practioner of their folk culture.[17] His signal success in the cultural domain is reflected in finally getting the *folklore* of *Atharva Veda* incorporated into the corpus of the Aryan world view. Thereby the number of *Vedas* rose to four. Of course, this incorporation fell far short of amalgamation and the two cultural streams continue to exist side by side right upto this day. The climax of Śukra's success came when in addition to the *Atharva Veda* five other branches of knowledge were also accorded the status of *Vedas: Sarpa (Naga) Veda, Asura Veda, Pisacha Veda, Itihāsa Veda* and the *Purāṇa Veda* (old tales). Thus, many of the non-Aryan systems of knowledge also got elevated to the level of *Vedas* of *Trayi,*. Undoubtedly, it was resistance organized by Śukra against the physical and cultural assault of the Aryans that ultimately succeeded in raising the *Atharva Veda* to the level of Aryan source of knowledge, even if as a small tradition only.

This whole process of acculturation was by no means a one-way process only; rather it was two-way process in so far as the Aryans agreed to admit *Atharva Veda* to the level of *Trayi*; while the non-Aryans adopted and imbibed several Aryan cultural practices like offering sacrifices and organizing *yajanas* (*a la* Vali). Thus, there was some degree of give and take between the followers of two cultural streams and credit for this must go, more than any one else, to Śukra. Evidently it was Sukra's political acumen, steadfastness and sagacity which brought about some form of cultural reconciliation between the warring Aryans and non-Aryans.[18]

In this whole endeavour of Śukra there is a message, loud and clear, which is relevant in the present-day social context where ethnic conflicts and clash of cultures is threatening to tear asunder the social fabric by destroying peace and harmony any where and every where. In fact, in order to redeem India and several other similarly placed countries of the world from the quagmire of severe ethnic tensions and clash of cultures in which they are caught today Śukra's herculean effort to bring about some degree of *modus-Vivendi* and cultural synthesis between the Aryans and non-Aryans needs to be emulated and put to good use.

NOTES

1. Lallanji Gopal, "The *Śukranīti*—A Nineteenth Century Text", *Bulletin of the School of Oriental and African Studies*, vol XXV (part 3), 1962, pp. 524-556. All references to Gopal in this note refer to this article. A summary of the SOAS *Bulletin* article also appeared in *Modern Review*, May 1963 pp. 404-08 and June 1963, pp. 473-83 as also in Maha-Pandita Rahula Sankrtyayana Memorial Volume of the *Journal of the Bihar Research Society*, vol. XLVII, Parts I-IV (January-December, 1961), pp. 214-33. A slightly modified version of Gopal's article was later published in the form of a booklet. See, his *The Śukranīti: A Nineteenth century Text*, (Varanasi, Bharti Prakashan, 1978).

2. While V.S. Agrawala and Syamlal Pandya expressed the view that *Sukranitisara* was the work of Gupta period (fourth and fifth centuries A.D.), A.S. Altekar, U.N. Ghoshal, B.P. Mazumdar, Jogesh Chandra Ray, R.C. Majumdar and K.P. Jayaswal placed it variously between eighth and twelfth centuries; Keith opined that it was a work of post-Hindu Period; Beni Prasad expressed the view that it was composed probably about the thirteenth century; P.V. Kane and J.D.M. Derrett refered to it as work of fourteenth and fifteenth centuries; Rajender Lal Mitra placed it around sixteenth century. See, Beni Prasad, *The State in Ancient India*, (Allahabad, The Indian Press, 1928), p. 486; Benoy Kumar Sarkar, *The Positive Background of Hindu Sociology* (Délhi, Motilal Banarsidass, 1985); A.S. Altekar *State and Government in Ancient India*, (Delhi: Motilal Banarasidass, 1958), p. 196; U.N. Ghoshal, *A History of Hindu Political Theories* (Madras: Oxford University Press, 1959), p. 494; B.P. Mazumdar, *Socio-Economic History of Northern India*, (1030-1194 A.D.); R.C. Majumdar, *Corporate Life in Ancient India* (Calcutta, 1922); P.V. Kane, *History of Dharmasastra*, vol. I (Poona, Bhandarkar Oriental Research Institute, 1968); J.D.M. Derrett, *International and comparative Law Quarterly,*, vol. XI, No. 1 (1962), p. 267, n. 3.

3. See, K.A.N. Sastri's review of B.P. Mazumdar's *Socio-Economic History of India* in *Journal of Indian History*, vol. XXXIX, No. 1, (1961), p. 197; and V. Raghavan, *The Twenty-first All India Oriental Conference, , Srinagar, 1961, Address of the General President, Dr. Raghavan* (1961), pp. 15-16, quoted in Gopal, p. 524.

4. Gopal seems to have used the *Śukranīti* text translated by Benoy Kumar Sarkar, *The Śukranīti*, (New Delhi, Oriental Books, 1975). There are numerous texts of *Śukranīti* in Sanskrit alongwith Hindi commentary. See, Jagdiswarnande Saraswati, *Sukranitisara* (Sonipat, Ramlal Kapur Trust, 1967); Jagdish Chandra Misra, *Śukranīti* (Varanasi, Chowkhamba Surbharti Prakashan, 1998); and Rama Nand Saraswati, *Śukranīti*, (Delhi, Manoj Pocket Books, n.d.). All these versions are broadly identical even though there is a marginal difference in the total number of verses.

5. See, Gopal, pp. 524 ff.

6. *Ibid.*

7. *Ibid*, p. 527 ff.

8. *Ibid.*

9. *Ibid.*

10. According to the Manavas (followers of Manu) there are three *Vidyas—Trayi, Varatta,and Dandaniti* but according to Brehaspatyas (followers of Brehaspati) *varatta* and *Dandaniti* are the only two *vidyas. Trayi* according to them is a pious fraud. According to Kautilya there are four *Vidyas* (including Annvikshki—philosophy and logic), Kamandaka also endorses this view.

11. For a while he was also the *purohit* (priest) of at least two Aryan kings: Danda of the solar dynasty and Yayati of the lunar dynasty; the latter was also his son-in-law having married his daughter—Devayani.

12. In fact, among the eighteen *upa-puranas* (sub or miner *Puranas*) there is a mention of *Ausanasa Purana*, as one of them but not a single *smriti* or *non-smriti* source has drawn on it. It is difficult to explain this total black out except its unpopularity among the rulers.

13. This strategy of Aryans bears a close resemblance to the present-day attempts by some countries to send their scientists to steal nuclear secrets.

14. In fact, Siva-*linga* is always shown with Sakti (symbolized as yoni, female organ), which makes the *linga* worship the worship of *phallus* and *yoni*.

15. This point has been very convincingly made by B.K Sarkar. See his, *The Positive Background of Hindu Sociology*, (Delhi, Motilal Banarsidass, 1985), p. 120.

16. See, B.R. Modak, *The Ancillary Literature of the Atharva-Veda* (New Delhi: Rashtriya Vidya Pratishthan, 1993), p. 26.

17. Of course, *Rg, Veda* does have some elements of mass culture and *Atharva Veda* has some elements of elite culture.

18. There is a view that the aboriginals of yesterday constitute the depressed classes or dalits of today. See, for example, Sarkar, *The Positive Background of Hindu Sociology*, p. 113.

The Ageism Discourse: Reflections on Some Missing Aspects

SHERRY SABBARWAL

Introduction

Everyone ages, the process of ageing being accompanied by changes in the body and cognitive capacities. However, along with being a biological category, age is also a social and cultural category and its meaning and value vary historically and cross-culturally. In other words, despite the inevitability and universality of ageing, there are cultural variations in the diverse aspects of ageing. For instance, different societies have different life expectancies. While in advanced societies like Japan, Australia, the United States of America, and most of western Europe, an average person's life can go up to the age of almost 80 years, the average life expectancy in India is approximately 64 years, not very high but not entirely disgraceful since longevity has increased in the last several decades due to improvements in sanitation and health care. Contrarily, in most of the less developed societies, especially those falling in Africa the average life expectancy is quite low, ranging between 33 to 50 years (Dowling, 2006). Differences in disease profiles, dietary habits, amount of climatic and chemical pollution, and mental and physical stress, all tend to determine the inter-societal variations in life expectancy.

Similarly, since cultures possess different values, these tend to affect the way in which the elderly are perceived and treated in particular societies. Understandably, societies that attach importance to individualism, would usually give emphasis to independence among persons of all age groups. This orientation, however, can cause complications. For example, 'independent' older persons often find it difficult to ask for help for the fear of being considered weak and needy. On the other hand, cultures that value the collective aspect, e.g., India, Japan, or the Latin American nations, underline inter-reliance, a value that is manifested in the patterns of perception and behaviour towards the elderly. But more often than not, the view of the aged, as well as, the treatment meted out to them is undergoing a transformation even in the so-called traditional societies.

Ageism

Ageism may be defined as any attitude, action, or institutional structure, which subordinates a person or group because of age, or any assignment of roles in society purely on the basis of age. As an 'ism', ageism implies holding of irrational and prejudicial views about

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individuals and groups, based on their age. It involves stereotypical assumptions about a person or group's physical or mental capacities and is often associated with derogatory language (Marshall, 1994). In simple words, ageism reflects a prejudice in society against persons of a certain age (Träxler, 1980).

One major aspect of ageism is prejudice against older people. Contemporary society can be seen maintaining a stereotypic and often negative perception of older adults and practicing discriminatory behaviour against such persons (Busse, 1968; Lawson and Garrod, 2006). Although technically, ageism is a negative feeling towards a group because of their age, the term is almost always used to refer to such feelings or behavior towards older people (Lawson and Garrod, 2006). Under its impact many times it becomes difficult for people even in their forties to find employment. And people older than them are in any case stereotyped as having physical and mental disabilities despite the fact that they may be living very vigorous and productive lives.

The bias against older people is visible in literature too, since for a long time greater attention has been paid to the study of youth culture by scholars. Even when ageing was studied, either the medical model of ageing was focused on, or the demographic changes were highlighted. Moreover, most works on ageing consisted of ethnographic studies of ageing and the experience of the aged. Additionally, usually age, like sex and gender was seen as a natural division or as a problem reserved for social policy since the aged were categorized as non-productive (in their post-retirement time) and thus, a burden. Still, with the increase in the numbers of elderly persons in every society, the process of ageing is being focused on as well, and studies are concentrating on the construction of old age across cultures and through time.

Typically, ageing is a chronological process of growing physically older. However, there is a social and cultural dimension to it that is about the meanings attached to the process (Jary and Jary, 1991). While in some societies like China the elderly have been valued and respected as a group that has accumulated wisdom, which could benefit the society, studies by Shanas and Sussman (1977) and Shanas *et al.* (1968) present ageing as a process of deprivation, and structured dependency.

Ageism is pretty widespread in its various forms. Ageism implies that as soon as a person can be described as old, one is automatically considered of little value, a burden on society, unable to accept change, slow, deaf or stupid, generally having ill health, usually physically separated from children, interpersonally and economically dependent, politically conservative, non-sexual and alienated. This negative and/or stereotypic perception of ageing and the aged individuals is readily apparent in such areas as language, media, and humour (Nuessel, 1982). For example, such commonly used phrases as *'over the hill'* and *'don't be an old fuddy-duddy'*, and the Hindi phrase *sathiya gaya*, (or its Punjabi version *satraya/bahatraya gaya*) denote the reaching of the age of sixty or seventy plus as periods of helplessness and ineffectiveness.

The Themes in the Discourse on Ageism

With the rising numbers of population falling under the category of the 'aged', the discourse on ageism is also, to coin a pun, coming of age. One can identify four themes that permeate the study of social and cultural aspects of ageism. First, ageism discourse examines the differences between *ageism and other 'isms'*. Since many of us experience more than one prejudice, the interaction between these prejudices needs to be examined (Traxler, 1980). Second, ageism discourse examines or attempts to understand the *causes of ageism*. Third, the *cross-cultural differences* towards ageism have also been emphasized. And fourth, it has been highlighted how only the *negative bias* or stereotypic attitude toward ageing and the aged has been the centre of attention. This damaging approach has been maintained in the form of primarily negative stereotypes and myths concerning the older adult. Let us consider each of these issues.

Ageism and Other Isms

The first theme is that of contrasting and relating ageism with other isms. Ageism is described as being different from other 'isms' such as sexism and racism. According to Woolf (1998) the differences lie in two things. In the first place, unlike sexism and racism, age classification is not unchanging and is marked by constant transformation because an individual's age classification gets modified as one advances in the life cycle. On the other hand, the taxonomies relating to race and gender remain unvarying. Secondly, although many of us may escape the other isms, no one is exempt from ageism. At some point of our life, we all achieve the status of old, and therefore, unless one perishes at an early age, we all are subjected to ageism. A third point may be added here. Whereas sexism and racism may touch the individual at only one level, that of having a perception about others, ageism can affect the individual on two levels. First, the individual may be ageist with respect to others. That is, s/he may stereotype other people on the basis of age, which may also be the case with other isms. But with reference to ageism, the individual may additionally be

ageist with respect to self. In other words, one uses this stereotype to define oneself as well. Thus, ageist attitudes may affect one's self-concept (Traxler, 1980).

In this respect it is important to focus on ageism's interface with other 'isms', the most important being gender. It is true that ageism has an impact on both men and women. But it is equally true that even though women make up the majority of the older population, they have largely been ignored by students of ageing (Block, Davidson and Grambs, 1981). Moreover, despite the diversity among the older population, allusions to elderly women usually resort to generalizations, often taking the form of stereotypes with the older women depicted as being lonely, inactive, sickly, hypochondriacal, asexual, and incompetent (Palmore, 1971). Interestingly, as Riley and Foner (1968) point out, older men are perceived as being healthier than older women even though, on the average, women live longer than men. As a result, women often find it difficult to shake off this sexist representation. Thus, some studies show that as females, women continue to experience sexism during old age and are doubly disadvantaged (Block, Davidson and Grambs, 1981) while others like Clark and Anderson (1967) found that women's self image shows greater improvement with age as compared to men. Other studies (Silverman, 1977; Woolf, 1988) point out that as men get older, they are perceived as becoming more 'feminine' with age since they show signs of psychological dependency and timidity.

Factors Facilitating (Causes of) Ageism

The second theme on ageing relates to the causes of ageism. Traxler (1980) has discussed four factors that contribute to the negative image of ageing.

Fear of Death and Illness

The first factor that is put forth to explain ageism is the fear of death, particularly so, in Western societies (Butler and Lewis, 1977). In the eastern philosophy, life and death are considered part of the same cycle inextricably woven together. However, in the west, death is considered as a phenomenon that falls outside the human life cycle. It is not seen as an inevitable part of the life course but actually as an affront to life. Therefore, death is feared. And since death and old age are viewed as being closely associated, old age too, is despised as aversion to one results in aversion to and fear of the other (Kastenbaum, 1978).

Similarly, sickness is also feared and loathed. The famous sociologist Talcott Parsons (1951) discussed the 'sick role' as a socially sanctioned deviance. He held that society could work properly only if every member

fulfilled his or her social obligations to the rest of the society. The sick do not do so as in their 'sick role' they withdraw—even if temporarily—from at least some of the obligations. The simple point being that being sick is not treated as a normal state, but a pathological one. And since the older adult is viewed as representing ageing, ailing and death, the aged persons are perceived negatively. Ageism, thus, suggests a subconscious apprehension among the young and middle-aged—a personal revulsion to and distaste for growing old, disease, disability; and a fear of powerlessness, 'uselessness', and death' (Butler, 1969).

Prominence of Youth Culture

The second factor that contributes to ageism is the emphasis on the youth culture in modern society. Look at the media—whether it is films, television, magazines or novels—all highlight youth, physical beauty, and sexuality. Conversely, in all media texts, older adults are either ignored or portrayed negatively. This obsession with youth not only determines how the younger persons perceive the older people but also how the older individuals perceive themselves. If a society places too much importance on physical appearance and youth for one's identity, it is but natural that persons getting older would experience loss of self-esteem with age. This preoccupation with youth is clearly demonstrated when we hear more and more about the growing use of cosmetic surgery or Botox, where the intentions are very clear—stall ageing as long as you can.

Emphasis on Productivity

The third factor playing a major role in promoting ageism in contemporary cultures is the importance that modern culture gives to the material and utilitarian aspects of life, namely, productivity. More often than not, productivity is defined in terms of economic potential. Usually both children and the aged placed at the opposite ends of the life cycle are viewed as unproductive, while those falling in between are perceived as the productive members who have to bear the responsibility of looking after the other two groups. Children, however, are valued as future productive members and are seen as an economic investment. The elderly, on the other hand, whose productive days are past, are perceived as a financial liability. Of course, it is not correct that older adults are completely unproductive. Nevertheless, since they are usually retired, the older persons are viewed as being economically worthless and thus, held in low esteem.

Biased Research – Role of Social Scientists

The fourth and final factor described by Traxler that contributes to ageism is the manner in which ageing was originally researched in the western societies. In the initial stages of research on ageing, the investigators collected their information from long-term care institutions where the aged persons were easy to find. And this despite the fact that only 5 per cent of the older population is usually institutionalized. The end result was that since these early researches on the aged focused upon the not-so-well, institutionalized older individuals, a negative image of the older adult emerged and got reinforced by newer studies. Had research been undertaken on healthy and active older people, a very different picture might have emerged.

Cross Cultural View of Ageing and Ageism

The third theme of great salience in the discourse on ageism has been the use of cross-cultural perspectives in understanding ageism. Ageism is both a universal and a cross-cultural phenomenon, as different cultures perceive their elderly in various ways. There appears to be a great variation as to the treatment that older adults receive, ranging from extreme reverence and respect to abandonment and deprivation. Interestingly, it seems that the more "civilized" the society is, the more likely they are to be ageist and to harbour negative perceptions about the aged.

A study of Samoan people (Bradd Shore 1998a) indicated that the top five perceptions they have towards their elderly members are 'stays at home', 'sits', 'respected', 'runs the family', and 'dignity'. The results show a remarkable pattern. Even though the Samoan elders are perceived to be just sitting and staying at home, they are still perceived to have dignity and respect and be responsible for running the family. Contrarily, in more contemporary societies, people tend to have the mistaken belief that becoming elderly means the end of one's capacity to be intellectually and artistically creative and financially productive. In a similar vein, McTavish's (1971) review of the studies dealing with perceptions of old age shows that mostly attitudes toward the elderly are most favourable in primitive societies and decrease with increasing modernization to the point of generally negative view in industrialized Western nations.

Some other examples of cultural differences in this respect are those of the aged men in the Middle East who by and large view old age as life's summit (Slater, 1964). They believe that older men have attained high status and prestige. In fact, according to Slater, the word 'sheikh'

originally meant 'old man'. Slater, however makes no mention of women's status in old age in the Middle East. Nevertheless, other studies show that in many cultures even women's status and power increase following menopause. For instance, Okada (1962) states that the old widow has great power in the Japanese family. Similarly, Brown (1985) writes that women in many small-scale traditional societies also enjoy an increase in status. Older women in these societies usually experience greater sexual freedom, the right to participate in rituals, the right to participate in the political realm of the society, and a decrease in the amount of work required in the home.

The cross-cultural differences in attitudes towards the aged are based on different societal perspectives. For instance, the different ways in which societies view death. As mentioned earlier, death is not viewed in Western society as a natural part of the life cycle. Societies, which regard life and death as a continuous process, exhibit fewer ageist attitudes. Second, certain small-scale traditional societies may perceive their older members as being productive. In fact, in many traditional set-ups, the elderly are often the power brokers. This can be compared with Western society where older adults are thought of as unproductive and therefore, negatively. Last, not all societies are youth oriented. Therefore, a higher value is placed on the later stages of adulthood.

Negativist Approach to Age

The fourth theme holding sway in the discourse on ageism is that of the predominance of a critical and disparaging approach adopted while discussing the aged. It frequently escapes our attention that only the negative stereotypes of old age seem to be stressed. Although some studies (Austin, 1985) do point out that ageism has opened out and includes positive images of the elderly, nevertheless, these images even though positive, continue to be stereotypical. Moreover, these are rarely studied (Brubaker and Powers, 1976).

The Less Accentuated Aspects in Ageism Discourse

Thus, ageism discourse usually confines itself to the above-mentioned themes, namely, the interface of ageism with other isms, factors causing ageism, a cross cultural understanding of ageism and the prevalence of a negativist approach to old age. Although these aspects are important in their own right in the comprehension of the phenomenon of ageism, certain aspects are usually overlooked or not emphasized enough. In my view, two additional areas in ageism discourse need to be included.

The first of these is the issue of the manifestation of ageism in the form of the distorted presentation of the aged in media, the use of negative humour for the aged and the language of ageism. The second is the issue of the relationship of ageism to self-concept.

MANIFESTATIONS OF AGEISM

Presentation of the Aged in Media

Probably the most glaring manifestation of bias against the aged is their representation by and in the media. Studies that have explored the portrayal of older persons and ageing in prime-time and daytime serials and films etc. have shown that (a) the proportion of older individuals on television is under-represented and (b) when shown, their presentation is mostly negative and derogatory (Bell, 1992; Dail, 1988; Elliott, 1984; Peterson, 1973; Ramsdell, 1973). Prime-time television generally ignores the older adults since less than 5 per cent of television characters are portrayals of characters over the age of 60 (Northcott, 1975). Similarly, research investigating the amount of television viewing and its relationship to various attitudes about older adults has demonstrated that heavy television viewers were more likely to believe negative stereotypes about the aged (Gerbner, *et al.*, 1980). For example, heavy television viewers believed that older adults were more rigid and closed-minded.

Interestingly, in India, along with age stereotypes, even gender roles are kept intact by the media. In their representation, the elderly males are portrayed either as benign patriarchs or as inflexible heads of the family. Similarly, the elderly females are characterized either as the caring elderly women (the typical *Dadi ma*), the long-suffering, helpless *bhartiya nari* or as scheming harridans. Thus, the depiction of the older adults in television or films is not only negative, it is stereotypic, as well.

Use of Negative Humour

Another manifestation of ageism is the application of negative humour towards ageing and older adults, which is often found in popular culture. Davies (1977) and Palmore (1971) both have analyzed jokes concerning the elderly and found that often the jokes about the elderly deal with death, decline in cognition, sexual ability and interests. Take for instance the joke about a youngster saying to an older person 'You are 50?. . . but you look so natural and lifelike!', or the one about a young lady saying to her Grandpa, 'I noticed that when you sneeze, you put your hand in front of your mouth.' 'Of course,' explained Grandpa. 'How else can I catch my teeth???' or the question. 'Why don't women over 50 don't have babies? Answer. Because they would put them down and forget where they left them. Such jokes, besides being tasteless and offensive promote common myths and stereotypes about the older population. Palmore (1971) asserts that these attempts at humour both reflect real societal attitudes and reinforce them.

Language of Ageism

Much of society's negative attitudes towards ageing are reflected in its language and reinforced by it. If we examine the language of ageism, we find that ageism is readily apparent in language against both men and women (Nuessel, 1982). The terms with which older persons are described are representative of some of the more common stereotypes of older men and women. For example, the term 'little old lady' suggests incompetency and impotency based upon age and gender. On the contrary, 'old hag' or 'old witch' (also *budhiya* in Hindi) commonly refer to a woman who is physically unpleasant to look at and who has a disagreeable personality. Similarly. old men are commonly described by such terms as 'old coot' and 'old fogey', 'codger' (*budhau*). These terms suggest that old men are slightly odd or quaint. Another commonly used term, 'dirty old man', suggests some sort of unnatural sexual perversion in older men.

Relationship of Ageism to Self-Concept

The most salient feature in the discourse on ageism, often ignored, is the issue of the self-concept of older adults. This is especially relevant as it represents the group most affected by ageist attitudes. As people age, their concept of themselves becomes less positive (Kastenbaum and Durkee, 1964a). Ageing, according to Kuyper and Bengston (1984) tends to lead to a vicious circle of 'structurally induced dependence'. The cycle goes along the following lines: a) The negative societal perceptions of older people as non-valuable and non-productive lead to b) the loss of financial independence and consumer power due to loss of economic productivity, which leads to c) vulnerability and dependency among the aged, which leads to d) internalization of the 'dependent label', i.e., learned helplessness, which results in e) the aged behaving as a 'dependent' person, i.e., assuming a dependent role which leads to f) atrophy (decline due to non-use) of previous skills, competencies and self-confidence which reinforces g) negative societal perceptions (back to the 1st point).

What is being described above is that one potential

outcome of internalized ageist attitudes in the older adult is a syndrome described as the social breakdown syndrome in which the individual becomes susceptible to dependence due to external labeling by the societal view of the elderly as incompetent or obsolete. If the individual accepts this negative attitude, he/she falls into the affliction or disease of assuming a dependent role. This is followed by the degeneration of skills and finally the labeling of the self as inadequate, incompetent, and 'sick'. Therefore, what the social breakdown syndrome describes is the self-fulfilling nature of negative attitudes concerning age and ageing.

Most of us start developing stereotypes about the elderly during childhood, reinforce them throughout adulthood, and enter old age with attitudes toward their own age group as unfavourable as younger people's attitudes. It is difficult to overcome these stereotypes as they often operate without people's awareness.

Some Final Thoughts

From the above discussion, certain points emerge:

1. It is an undeniable fact that ageism exists in societies fascinated by youth culture and taut-skinned good looks.

2. As the number of the older persons multiply and millions approach their 60s, there will soon be many more potential targets of ageism.

3. Already, there is a debate as to whether ageism will ease or grow worse in the coming decades. There are some optimists who say that older people are getting smarter, richer and healthier as time goes on and that the elderly and their concerns will inevitably move higher on the societal agenda. But at present the ugly side of ageism is visible to us everywhere.

Thus, there are two kinds of ageing: one physical—involving wrinkling of skin, graying of hair, loss of hearing, weak eyesight and of course, systems failure or ill health. This type of ageing is inevitable but efforts have been there and will be there to deal with this aspect of ageing—whether it may be through health supple-ments, anti- ageing medicines, medical efforts etc. The second type of ageing is socio-genic ageing, which has no physical basis. It implies the role, which our folklore, prejudices and misconceptions about age impose on 'the old'. In this sense, it is an imaginary ageing or an imposed ageing. No scientific discovery can abolish this aspect of ageing—all it needs is change in the attitude.

Finally, one can make some suggestions regarding how individual ageist attitudes can be decreased:

a) Through continual exposure to and work with older adults

b) Through realization that older people are part of the cycle of life, and they should not be 'compartmentalized'.

c) Through strategies that maintain bonding between generations.

Conclusion

Ageing will continue. Family members, as they age will go through changes that are a natural part of the life cycle, but that may be difficult to understand and accept. One way of rooting ageism out is by making people more aware of it by talking about it and not sweeping the issue under the carpet. It is important for each of us to talk about these changes, including appearance, abilities, health, living arrangements, and ultimately death. We are now talking about sex education for the youth. Why not age education for them as well? Additionally, we must make the young understand that elders often have special gifts to offer to the family and community. We all need to recognize and act to dispel negative prejudices about ageing and treat elders with respect and thoughtfulness. But most importantly, it is the self-concept of the elderly themselves that must change if anything has to change. They must escape this negative spiral, which drives the older person into total dependence and despondency. That is the best way to beat, if not ageing, then at least ageism. As Robert E Wood, the director of the publications division of the American Association of Retired Persons and publishing director of *Modern Maturity* magazine puts it; *ageing is not necessarily about aches and pains, ageing is about living.* And nowhere is this spirit demonstrated better than by eighty plus years old Catherine Roberts who is associated with a group that motivates seniors to participate actively in legislative and community issues called the New York City's Joint Public Affairs Committee for Older Adults. "I don't have time to get old," says Roberts, "I'm too busy."

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