

DHRUV RAINA

Reciprocal Knowledge: Contextualising Science and Situating Practices<sup>1</sup>

The Transcultura programme is possibly more than six years and six workshops old. It is becoming then to reflect upon what has transpired as well as the future directions envisaged for the programme. What can and could be done to initiate a programme within Transcultura in the South Asian region? It appears to me that first and foremost that the project of reciprocal knowledge is a metatheoretical one; and even when the subject matter is not evidently metatheoretical, such awareness cannot be ignored. In which case, the problematic is inherently one of acute reflexivity.

Interestingly, an elementary google search would reveal that the first forty odd references to the term “transcultural” appear in the context of nursing, medical and psychiatric care. The first reference to “transcultural” as a concept or frame within the social sciences surfaced deep down in the pages of google scholar after much searching. This is quite in contrast to that other buzz word that preoccupies sociologists of knowledge today namely “transdisciplinarity”. In which case the participants in the transcultura network are creating something about which there seems to be some tacit an agreement, by which I mean they all appear to know what the others are speaking about, and there is some shared agreement which has not been formalized. We have then a family of nested research programmes and frequent conferences where each one of us comes to a “transcultural issue”, but never explicitly state what we mean by the same. I for one am often tempted to attempt to sociologically evince this sense from the participants.

But having said that the several dictionaries I have searched for the meaning of the term more or less suggest that term connotes “extending through all human cultures”, or “an ideal embracing all peoples of the world”. In which case, there appears to be a natural tendency to examine, elaborate upon and engage with cultural universals in some version of normativity. It could be argued that each of the transcultura workshops are themselves important laboratories for examining and studying transcultural activity. In this context, I would like to mention the open session organized at my university last year with the participants at the workshop on “cultures of knowledge”. Some of the faculty of the university differed with Professor Eco about the politics that underpins the formation of disciplines. The former were disappointed, as my conversations with them later revealed, that the central concern of ‘the ethnography of academic disciplines’ did not appear to echo in the concerns of the group. I see this and similar episodes as signifying the different preoccupations with transculturality that mark different disciplinary academic communities across the world. As far as the world of the production of scientific knowledge is concerned a convulsive upheaval has been on the cards for about three decades now, as the crystal palace crumbles. This opportunity has arisen from developments in the sociology of scientific knowledge, feminist philosophy of science and postcolonial theory of science. For the moment I shall say nothing of the first two trends, since they were discussed in at least three papers presented at the Pondicherry meeting.

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The postcolonial theory of science has opened up a number of avenues for investigating the way in which the sciences of the colonizing culture marginalized the existing practices and knowledge systems of the colonized, and inscribed their immanent inferiority. Research programmes initiated within this frame have departed in a major way from existing paradigms along three principal axes of investigation that I have elsewhere called the theory of science, the theory of transmission and the theory of history. And while post-colonial theory is unlikely to furnish a viable philosophy of science, it does open up the question of knowledge to the contexts of its generation, assimilation, and more importantly marginalization. It is necessary to distinguish postcolonial theory of science from postcolonialism as a literary movement which as Terry Eagleton has pointed out is the most rapidly growing sector of literary criticism signalling “the entry onto the Western cultural stage, for the first time in its history, of those the West has most injured and abused”. Thus while there could well be shared starting points the entity is far more diverse than normally envisaged.

The important question over here is that the standard accounts of the history of science and the sociology of science crystallize around a theory of modernity. While historical sociology has over the last several decades overturned the standard historiography of modern science in the West, theories of modernization have themselves become the subject of revision. The newer theories of multiple modernities are beginning to echo in the studies of science and revise the big picture we have of the “expansion of European sciences” in a very fundamental way. The big picture has then been changing from the Vienna circle’s unity of the sciences to the social constructivist one of the disunity of the sciences. And yet microbiologists trained in Bangalore fit in beautifully into research teams at Stanford. On the other hand, the study of the ethno-sciences, a politically correct neologism, have provided scholars an opening into other cosmologies, not to mention the interest of companies into bioprospecting or biopiracy, whichever way one may choose to look at it. As Sandra Harding has pointed out in her work, we need robust reflexivity in order to engage with these concerns of the world of science and technology, having reckoned over the past half century with the culturally embodied nature of science. In other words, a step towards transculturality, forgive me for popping up another neologism, would require then a social epistemological awareness. There are several versions of social epistemology, but the version being suggested here is one that engages with the reciprocities between the production of knowledge and its context of production. Without such an awareness the epistemological project lends itself open to the charge that epistemological approaches are purely internalist and Eurocentric.

Furthermore, such awareness has provided social scientists with the opportunity for thinking through the foundations of social science theory. This thinking through the foundations of social science theory means different things in different parts of the world. Thus Jeet Uberoi’ The European Modernity: Science, Truth and Method, engaged with the interrogation of European modernity and its conjugate modern science as solely paradigmatic of modernity and science. This was accomplished from two vantage points among others. The common understanding shared by both was that the dualism of fact and value logically culminated in a vivisectionist science that confronted its limits and its possible culmination in the concentration camps of Auschwitz and the nuclear destruction

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of Hiroshima. This modernity took its toll in genocidal development that the third world had been witness too.

The first of the responses drew inspiration from Gandhi and generated a different vision of politics and of providing the template of an alternate modernity. In the realm of the sciences, this inspired the search for alternate sciences and the possible episteme that underpins them within the scientific culture of modern India. The other response that certainly viewed the Gandhian corpus in the same light turned its gaze upon Europe, and explored other European imaginations and non-dualist modernities. This did not exhaust the responses to the crisis in modernity, but is descriptive of the shared ground of the neo-Gandhian project.

The origins of European modernity in Uberoi's semiological theory were traced back to the second major schism in the Christian church over the question of Christian liturgy relating to the doctrine of transubstantiation. It is suggested that this second major break in the Christian church encapsulated in the council of Trent was triggered off by a debate over the relations between Jesus Christ, man and nature. At this juncture, Uberoi argues it was Zwingli, and not so much Luther as is commonly believed, who reformulated the relationship between God, man and nature, giving rise to the distinct sciences of man and nature. The conceptual apparatus and the forms of life associated with modernity, before all else manifested themselves in the religious sphere during the Reformation at Marburg and the Counter Reformation at Trent. The dualist logic associated with modernity that first manifested itself in the religious sphere subsequently hegemonised all spheres of European life.

In short "transculturality" may mean different things in different parts of the world. In Europe, it is ventured, that it may well be a way of seeing oneself through the eyes of the other. In other parts of the world: India, China, the nations of Africa it provides a way of engaging with the inadequacy of social theory to grasp non-Western societies and cultures, not to mention to engage with Europe's repressed historical memories, its "radical underground" and "other modernities". In other words if transcultura is about the politics of knowledge it is equally about the geography of knowledge- as highlighted by the Chinese anthropologist Yiu Daiyun in one of the early meetings of Transcultura. This does not necessarily entail lapsing into some variety of multiculturalism. The comparative method may well be at the heart of the programme, but surely this entails going beyond particularism in order to explore the consequences of these interpretive practices for the global community. The point was lucidly illustrated in Umberto Eco's presentation in India last year, where he illustrated how Western scholars had misunderstood the works of the Sanskrit aesthetician Abhinavagupta through a concrete exemplification of the concept of "rasa". This was an interpretation of interpretations that worked towards a sociology or history of error or falsity, the running theme of his novel Baudolino and his collection of essays Serendipities.

The themes for transcultural investigation are many, and this is reflected in the growing keywords project. Outside the transcultura project I myself have been involved in a collaborative piece of work dealing with fundamental mathematical constructs and

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practices across several mathematical traditions: Indian, Chinese, ancient Greek and modern. The study includes the history of mathematical texts and the compilation of collections down to the variety of notions of proofs and demonstrations. This deconstruction of the idea of proof reveals the existence of an enormous variety of subcultures of proving in contrast to our standard axiomatic-deduction notion of what constitutes proof.

In other words “transcultural” could be more than the deconstruction of the notion of “the Enlightenment”, “modernity” or “Orientalism” but could as well relate to not just practices of social scientists, but contemporary issues relating to for example public cultures of science or the place of science and science education in contemporary culture. To take a case in point, there is much that India in its march towards forming a “knowledge society” could learn from France and Germany, especially when it comes to its educational and research institutes and universities. On the other hand, for the last decade or so, more than anywhere else France and Germany have been working out arrangements with Indian technical universities wherein their students can do their research in India and vice versa. The formation of knowledge societies then is premised on the notion of global learning communities. Transcultural’s outreach I gather is directed towards intervening in changing ways of thinking about society and culture. But this is founded on an unceasing interrogation of our own premises and understanding where our own interpretive practices come from.

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### **Educational Qualifications**

- Ph. D. (Philosophy of Science) –Institutionen för idéhistoria och vetenskapsteori, University of Göteborg.
- Master of Science (Physics) - Indian Institute of Technology, Bombay.
- Bachelor of Science - St. Joseph's College of Arts and Science, Bangalore.

### **Awards and Professional Associations:**

European Association for Studies in Science and Technology (EASST) Council Award: April 1993.

Member, Advisory Board and Research Council (Modern Period), National Commission for History of Science, Indian National Science Academy – Two Terms (2002-2004, 2004-2006).

Council Member, Indian Council for Philosophical Research (2006-2008).

Currently Member of the Advisory Board, National Book Trust.

Nominated Fellow, Wissenschaftskolleg, Berlin, (2007-2008).

### **Books**

Dhruv Raina, Bernal: the Last Great Amateur of Science, in Kannada; translated by C.Yethiraju; Tumkur, 1990.

Dhruv Raina, Nationalism, Institutional Science and the Politics of Knowledge: Ancient Indian Astronomy and Mathematics in the Landscape of French Enlightenment Historiography, Göteborgs Universitet, Rapport Nr. 201, 1999.

Dhruv Raina, Images and Contexts: Studies in the Historiography of Science in India, Oxford University Press, 2003.

Dhruv Raina and S.Irfan Habib, Domesticating Modern Science: A Social History of Science and Culture in Colonial India, Tulika Books, 2004.

S.Irfan Habib and Dhruv Raina (Eds.), Situating the History of Sciences: Dialogues with Joseph Needham, Oxford University Press, 1999.

S.Irfan Habib and Dhruv Raina (Eds.), Readings in the Social History of Science in India, Oxford University Press, forthcoming November 2006.

### **Journals and Publication Houses**

Former Member of Editorial Board, Science Technology & Society.

Editorial Board, Indian Journal for the History of Science.

Member of the Editorial Board of VEST:Tidskrift for Vetenskapsstudier, Sweden.

Reader of manuscripts for Oxford University Press, New Delhi and Taylor Francis, USA.