

Virtuality & Knowledge in Society

Dialogue on Knowledge in society II



ORGANISERS

**Vidya Ashram, Varanasi
Indigen Research Foundation, Pune**

World Social Forum, Karachi, Pakistan

March, 2006

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Virtuality and Knowledge in Society **The New Command and the Knowledge Question**

Virtual Domain

Questions related to knowledge have assumed radically new dimensions with the emergence of the virtual world. We shall not attempt to define what is a virtual domain or a virtual world. Is it the network society? Is it the world of Internet? Is it the world of those who have access to the Internet? Is it the world of just those who have started spending a lot of time and doing a host of activities on the Internet? Is it the new world of knowledge activity, power play and finance? We have heard of virtual community, virtual society, virtual forest, virtual experiment and what not. The idea and reality of the 'virtual' is in the making. The Internet (www) came into existence in 1990. So we shall not attempt a definition of the virtual. However it is already perhaps an acknowledged fact that it is now the commanding domain. The activity, development, interaction, formulation, transaction, creation, invention, discovery, collaboration, criticism etc. in the virtual world have taken lead and tend to give direction to human activity everywhere, ...finance, science, art, entertainment, name any.

Hierarchy and Emaciation

Virtuality seems to legitimise all traditions and locations of knowledge while elevating itself to a higher position from where all knowledge is sorted and organised. In the process it creates a new hierarchy in the sphere of knowledge. It is not merely a structural rearrangement of locations but entails a certain emaciation or atrophy of knowledge in society. They are now seen as places of genuine human activity only to the extent and in the manner they relate to virtuality. Can we propose a radical equality of all knowledge locations as the basis of a future democratic society which is also at peace with virtuality?

Knowledge Dialogue

Is virtuality the new location of the unity of the ruling classes of the world? Has virtuality broken the concept of a community as a face-to-face society? Is virtuality a new reality or is the virtual world only a world of representations? How do we start addressing these questions? One way perhaps is to construct a universe of knowledge dialogue that is simultaneously a political, economic, and philosophical dialogue. This requires that no strict paradigm of knowledge be allowed to govern the initial premises or the boundary conditions. The knowledge dialogue that we are suggesting therefore can take place in a universe of knowledge traditions and locations where none is superior or inferior to another, virtuality included, and by a method which recognises theoretical constructs only in a mode of transcendence, that is, the method involves transcending one's own theoretical constructs. It is in some such knowledge space that this dialogue is being proposed.

Participation / Contributions

Contributions can take various points of departure and attempt to address the question of virtuality or knowledge in society, or the relationship between them. Writings that do not take explicitly the context of virtuality are also welcome. Most welcome will be contributions written in a non-technical language. Short stories or narratives or even other forms of artistic creations may help in creating fresh spaces of epistemic activity, not held down by the given knowledge paradigms. Topics can range from the question of property and knowledge, violence and virtuality, art and science to knowledge and information, innovation and freedom, law and virtuality to money and finance, cities and media, and so on.

In what follows, we have formulated an illustrative list of questions:

1. In what sense is virtuality altering our concepts of property? Present debates on intellectual property rights seem to be largely governed by considerations of economics, law and politics. Are fresh questions being thrown up in regard to the relationship between private property and alienation? Is property now related to some new form of alienation and human activity? Will addressing such questions be relevant to reconstructing the debate on politics of emancipation?
2. Is virtuality just a new location for organisation or a radically new mode of organisation? Is there a relation between this question and images of new architecture of human settlements? Is the concept of network essential to it or just a contingent expression?
3. How is virtuality reshaping scientific research and institutions? Is the organisation of science changing in a far-reaching manner? What implications does it have for scientific practice?
4. Is network society the virtual society? Is weakening of the boundaries of the nation-state because the ruling classes are reconstituting themselves through a new unity in the virtual space? What is the consequence of such understanding for both the politics that there is and the politics of emancipation?
5. In what sense is virtual real? Are human sensibilities, physical, aesthetic and ethical simulated in the virtual space? Does it add only a new dimension to human existence or transform it altogether?
6. Would art now be as respectable as science in the world of knowledge? That is, does virtuality legitimise not only different locations of knowledge as suggested, but also create legitimate space for art in the epistemic world?
7. Knowledge in society is related to livelihood activity of the people without often being mediated by business. Does the virtual realm also provide such scope?
8. Software as knowledge, knowledge as software? What does the primacy of software imply for knowledge?

Workshop Content Organising Committee
Avinash Jha, K.K. Surendran, Sunil Sahasrabudhey

Workshop Coordinator—Vinish Gupta



All knowledge is virtual in the sense that it is always knowledge of something, that something being the real thing (or at least more real than the knowledge of it).

However, we need not see reality-virtuality as a binary distinction; why not see it as shades of virtuality? Referring again to the explanation of “pancha kosha”s in Taittiriyaopaniṣad, we can say:

- viewing human beings also as made up of atoms and molecules is least virtual (most real)
- viewing human beings as living beings that are essentially made of food is more virtual
- viewing them as animals with a brain (as distinct from plants) is even more virtual
- viewing them as people with a mind (as distinct from other animals) is even more virtual
- viewing them as having knowledge (“vignana.maya”) is even more virtual etc.

Similarly, some knowledge is more real than others. Knowledge of the physical world is more real than knowledge of the purpose of life... This perhaps is the distinction between “gnana” and “vignana” in Vedic Sanskrit.

This may also imply that lokavidya is more real than the “gnana” of “divya ganani”s. It is also perhaps what was referred to as “vignana”.

—*Kavi Mahesh*, Bangalore, on “I DISCUSS” at www.indigen.org.in

Knowledge Dialogue Vs. Knowledge Management

Knowledge dialogue where modern education and traditional wisdom join hands on equal terms constitute the chief path to the New Imagination. People of the non-Western world have suffered long enough because the leadership in these parts has consistently disregarded traditional wisdom of the people here. Those who have talked in the name of tradition have done so only to serve the Western imagination by an alternate path. Traditional wisdom does not refer to what there might have been a thousand or five thousand years ago. It refers to knowledge, skills, values, ways of thinking, methods of organization etc. of ordinary people, peasants and artisans, and women of their households. It refers to wisdom here and now not obtained, generally speaking, from the modern school system. This is not to say that it is some kind of pure thing not adulterated by modern education. However, it is definitely to suggest that methods of enquiry, standards of judgment, criteria for preferences, principles of ordering and prioritization, in one word the logic and expanse (spread) of the epistemic act crystallized by traditional wisdom is totally different. It is the incorporation of traditional wisdom in the knowledge dialogue that makes it totally different from what is being popularized in the name of knowledge management.

The era of the Internet is creating new types of epistemic activities with a new hierarchy in the world of knowledge. Knowledge Management, an activity exclusively in the virtual domain, occupies the apex position now. It is a new entity in the sphere of knowledge which is both the cause and the effect of the new ontological position that representation itself is reality. Serious consequences follow as justifications (apologies) of the new global organization of economics and politics to suit the network society.

Knowledge management is the chief instrument of the American imagination. Over 300 years ago science became the chief instrument of British imagination. We followed suit 150 years ago and half the population is still uneducated and therefore unable to partake in that imagination. Now, the new American imagination has again come with a promise, the possibility for all. Should we labour to construct a world where not even one quarter of the populous South and East shall be equal members. Leave alone the membership, they will not have the intellectual and the financial wherewithal to even enter this world. The new American imagination intends to devise new ways and new means for 'others' to serve the Net-world without being part of it. Knowledge management is the chief instrument shaping this service and the servitude that it entails.

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Lokavidya goes virtual? Indigenous knowledge in the Gatesian Age¹

Lokavidya and Indigenous Knowledge Systems: Introduction

“Virtuality seems to legitimize all traditions and locations of knowledge while elevating itself to a higher position from where all knowledge is sorted and organized. In the process it creates a new hierarchy in the sphere of knowledge. [Locations of knowledge] are now seen as places of genuine human activity only to the extent and in the manner they relate to virtuality. Can we propose a radical equality of all knowledge locations as the basis of a future democratic society which is also at peace with virtuality?” (from http://www.indigen.org.in/wsf2006_poser.html)

Lokavidya is what it is because it is not organizable through a paradigm acceptable to organized knowledge systems, both traditional and modern.

- Sunil Sahasrabudhey on the Indigen discussion board

(<http://www.indigen.org.in/eforum/show.php?f= 0&topic=20051211124655&u=10>)

The above two quotations, one from the description of this workshop and the other from the online discussion board, introduce the main preoccupation of this short essay, viz. how does the virtual domain relate to, appropriate or accommodate knowledge generated within the lokavidya paradigm? In the last few years we have seen a substantial interest in “indigenous knowledge systems”² (IK systems) as evidenced by the increasing number of international NGOs and other agencies that have sprung to defend such knowledge from western/transnational corporation exploitation and to classify and systematize it with the intention of “integrating it with modern science” and using it for “sustainable and participatory development”. Is this efflorescence of interest in IK systems something to be celebrated by the proponents of Lokavidya? Or is it yet another way in which people’s knowledge is being systematized for maximum exploitation by the elites of the new Knowledge-based/virtual Economy? Are the knowledge formations or systems that have been labeled variously as indigenous, traditional, non-formal, tacit, people’s knowledge etc, the virtual domain manifestations of lokavidya? If so, does the “virtualization” transform them from vidya into avidya?³ Can lokavidya exist *on its own terms* even as it is subsumed into the virtual domain? Or is it by its very nature non-organizable and therefore non-virtualizable? Such questions are of great interest and relevance to the lokavidya perspective.

I will not attempt to answer the questions posed above in any great detail here. Indeed I am not competent to do so. I will merely outline some current developments that relate to this issue and attempt a partial answer. At the outset let me say that I am not going to offer case studies from development projects that seek to apply indigenous knowledge to some social or environmental issue. There are many specific attempts that, for e.g., apply Native American ecological knowledge to forest conservation in Canada⁴ or catalogue Indian indigenous knowledge of medicine in online databases etc. I will not go into the details of such attempts but merely mention them as examples to make certain points. The notes at the end of the essay provide a list of web-sites and other references for those who are interested in further details.

But before I begin, a word about definitions. I am using the word lokavidya in the sense that has been developed in the last few years by Sahasrabudhey and others⁵. Briefly, lokavidya is the vidya (value-laden knowledge or wisdom) possessed by the farmers, artisans, women and tribal societies the world over (in

both, the so-called first and third worlds). Lokavidya is inseparable from their world-view and value system and is a dynamic entity that grows and is continually tested and modified on the anvil of everyday experience. Lokavidya is contrasted with modern science and university-based organized knowledge and the later is seen to be in conflict with lokavidya in particular with the rise of colonialism/ imperialism and growth of the modern state, capitalist class society etc. Lokavidya has also been conceptualized as inherently (or by definition) an unorganized form of knowledge in society. If this is taken to be true, then of course, no virtual (and therefore necessarily organized) representation of lokavidya can exist. However, here I am interested in examining the ways in which the virtual domain, in its increasingly all-encompassing reach, has approached and appropriated the domain of lokavidya.

In much of the literature available on the Internet a general distinction is usually made between indigenous knowledge (which is supposed to be location and/or culture specific, generated within communities and which forms the basis for survival and day-to-day activity, is predominantly rural, oral and not systematically documented), and formal knowledge (which is university or research laboratory based, dependent on modern science, systematized, urban etc). This distinction is quite similar to the one we have already set out in the previous paragraph, from the Lokavidya perspective. I will not attempt to make this anymore concrete at this point.

That there has been in recent years an ample acknowledgement of the existence of IK systems everywhere in the world is evident from even a cursory search on the World Wide Web. For example a search on www.google.com using the term “indigenous and knowledge” retrieves approximately 16 million results (admittedly not all of direct relevance). Skimming even the first 100 or so of these, reveals websites dealing with issues of how IK systems relate to economic development, conservation of biodiversity, biopiracy and intellectual property rights, weather forecasting, forest management, globalization, health etc... Moreover there are many attempts to link IK systems and modern science at the philosophical as well as the “application” level.

Does all this attention signify a celebration of lokavidya? We will attempt to answer this question in the next few pages. How the virtual domain relates to lokavidya can perhaps be broken further into two questions, viz. how is this relationship manifesting itself today and how in principle, they can be reconciled together. As for the first part, the main issues being debated today in the virtual domain (and those issues considered here), relate to economic development, ecology/ biodiversity and intellectual property rights. The second part of the question is briefly taken up at the end.

Sustainable development or sustainable imperialism?

A “Best Practices on Indigenous Knowledge”⁶ report, issued in 1999 emphasizes the growing interest in IK systems and the role they can play in “truly participatory approaches to sustainable development”. The authors of the report comment that it is not a coincidence that governments in the developing world are adopting more IK-friendly attitudes just as the more orthodox development models have run their course and failed to deliver the promised goods. Can we expect this increased attention being given to IK, to play a positive role in the current struggle of the marginalized peoples (artisans, farmers, tribal minorities, women) against capitalist (post)modernity/ imperialism?⁷ My answer is a qualified “no”. It is possible to argue that the marriage of lokavidya with information and communication technologies, resulting in what is being called indigenous knowledge in this essay may protect some types of knowledge from being stolen in the form of international patents to pharmaceutical companies etc. However it is also very likely that the

systematization of such knowledge will make exploitation and theft much easier in these “newly discovered”⁸ domains of lokavidya. But I do not think that discussing the “gains and losses” from virtualization is the right terrain over which the debate should range.

To the extent that the larger sustainable development discourse (for e.g. see the “Johannesburg Declaration on Sustainable Development”⁹) is itself unable to break free from the paradigm of “developmentalism”, IK systems risk being appropriated in the service of Imperialism. Development ideology of the post-World War Two, “Fordist” regime of capitalist accumulation has been extensively critiqued since the 1970s (the decade which also saw the Fordist regime encounter its first serious crises) for being Eurocentric, imperialist, neo-colonial, stagist, non-participatory and elitist, top-down etc. Concomitantly, the rise of environmentalism in the “advanced” industrial economies has made prominent the notion of *unsustainable development*. Thus the Johannesburg Declaration on Sustainable Development aims to confront the “indignity and indecency occasioned by poverty, environmental degradation and patterns of unsustainable development”. It recognizes “that poverty eradication, changing consumption and production patterns and protecting and managing the natural resource base for economic and social development are overarching objectives of and essential requirements for sustainable development” and it reaffirms “the vital role of the indigenous peoples in sustainable development”. Thus sustainable development is the new avatar of developmentalism for the 21st century or the “Gatesian” age and in addition to the more “appropriate” application of modern science, a greater reliance on traditional wisdom or indigenous knowledge is being claimed at the “right way to develop”. Thus John Madeley, a well-known science journalist, wrote in a 1993 editorial in the journal *International Agricultural Development* that “...indigenous knowledge is the largest single knowledge resource not yet mobilized in the development enterprise”¹⁰. If one reads the “development enterprise” to mean imperialism (“globalization” in the rhetoric of today), then one can begin to understand the true imperative that is driving the current need to systematize and virtualize IK systems from everywhere on Earth. If one subscribes to the view that modern science advances everywhere by destruction of lokavidya, then the appropriation of lokavidya into the virtual domain under the pretext of economic development is the next battle in this ongoing war. Suffocation by embrace would perhaps be the relevant analogy.

Of course, the proponents of IK systems are well-aware of such critiques and there exists plenty of rhetoric on the World Wide Web, which proclaims the urgent need to make sure that IK is used in a participatory manner, giving due credit to the peoples that produce the knowledge. Participatory development (PD) is (next perhaps only to sustainable development) the current buzz-word in the economic development discourse. One writer defines “participation” in this context as “...involvement by a local population and, at times, additional stakeholders in the creation, content and conduct of a program or policy designed to change their lives. Built on a belief that citizens can be trusted to shape their own future, participatory development uses local decision making and capacities to steer and define the nature of an intervention.”¹¹ The United States Agency for International Development (USAID) has extensive documentation on its website relating to participatory development initiatives all over the world¹². A prominent feature of many such initiatives is the emphasis on practices based on local knowledge.

Words such as “participatory” and “sustainable” like the words “freedom” and “democracy” are chosen careful for who could be against things like fuller participation and more democracy? However, as always, of more interest than the rhetoric is the larger structural and socio-economic context in which this participation occurs. Participation from local communities “affected” by development projects, even if the demands that the project meets have been made by members of the community themselves, stops short of a

radical change to the order being pushed, in this case by the international NGOs, USAID etc. The consequences of a community actually asserting its right to self-determination are still serious and examples from many parts of the world can be multiplied to make this case.

IKS and IPRs: Protecting and Systematizing Indigenous Knowledge

A large body of literature on the Internet deals with the issue of how indigenous knowledge systems should be reconciled with the currently prevailing intellectual property rights regimes (IPRs), e.g. TRIPS. The World Intellectual Property Organization (WIPO) has taken much interest in indigenous and traditional knowledge systems. The WIPO uses the term traditional knowledge “to refer to tradition-based literary, artistic or scientific works; performances, inventions, scientific discoveries, designs, marks, names and symbols, undisclosed information and all other tradition-based innovations and creations resulting from intellectual activity in the industrial, scientific, literary or artistic fields.”¹³

Concomitantly “bio-piracy” has become a concern with those who seek to protect IK from exploitation by (mostly Western, but not necessarily so) transnational corporations. In this context, the cases of neem, turmeric and basmati rice are too well-known to bear repetition here. One solution to bio-piracy which has been enthusiastically received by the virtual community is the construction of “Traditional Knowledge Digital Libraries” that “may be used as evidence of prior art to defeat a claim to a patent”¹⁴. The WIPO terms this, “defensive protection of traditional knowledge”¹⁵. Not surprisingly, the information and communication revolution has made the systematization of such knowledge much simpler and there are large-scale efforts underway, such as India-based Gene Campaign’s project for the protection of indigenous knowledge of biodiversity. Another example is India’s Ayurveda “digital library” which contains information on 35000 formulations, all “in a format accessible by international patent offices to prevent the granting of inappropriate patents”¹⁶. This and other similar libraries seek to catalogue, organize and virtualize IK systems in order to protect them. And of course, the very same virtualization and systematization process is being heralded as an efficient way to globalize local knowledge. Thus we read that,

“electronic communication will make information on indigenous knowledge more accessible and easier to disseminate. As the existing global network of indigenous knowledge resource centers becomes linked by a common electronic communications system, indigenous knowledge and technologies found to be effective in dealing with small-farm circumstances in an agro-ecozone in one part of the globe can be transferred for consideration to a centre in another part of the world where a similar agro-ecozone exists. Examples of this transfer of technology already exist. The use of vetiver grass for soil and water management and the use of neem tree seeds as a biopesticide are both technologies discovered by farmers in South Asia many generations ago. These technologies have now been adopted by small-scale farmers in many other parts of the world through networking mechanisms provided by the World Bank and other development agencies.”¹⁷

However, systematizing IK into “virtual libraries” serves to divorce this knowledge from its site of production and from its own dynamics, which by definition is amongst the people, not amongst the “virtual elite”. If the solution to this divorce or alienation is to bring the producers of lokavidya into the virtual fold (i.e. to bridge the so-called “digital divide”), the solution itself recalls to mind the age-old paternalist rhetoric (Marxist as well as imperialist) to “help the masses modernize or progress”, simply updated for the Gatesian age. Not to mention the fact that extending the virtual elites’ “consumption and production

patterns” to the people at large may threaten the very basis of “sustainable development” that IK systems are supposed to promote.

The sheer gulf that yawns between the lokavidya perspective and the western property rights regimes is (unknowingly) revealed by the way that the US government has justified the problems posed by these patents (such as those awarded to turmeric for its “newly discovered” healing properties):

“informal systems of knowledge often depend upon face-to-face communication, thereby limiting access to the information to persons in direct contact with one another. The public at large does not benefit from the knowledge nor can the knowledge be built upon. In addition, if information is not written down, that information is completely inaccessible to patent examiners everywhere as prior art when they are examining patent applications. It is possible, therefore, for a patent to be issued claiming as an invention technology that is known to a particular indigenous community. The fault lies not with the patent system, however, but with the inaccessibility of the knowledge involved beyond the indigenous community.”¹⁸

Virtualization of Lokavidya and the commodification of knowledge

Thus most of the development debate remains trapped in the “gains and losses from virtualization” paradigm and the participants seem largely unwilling or unable to recognize a fundamental contradiction that exists between indigenous and modern systems in the way knowledge (in the most abstract sense) is viewed. This is the contradiction of commodification. The issue of systematization or organization, which appears as a very prominent aspect of the difference between modern science and lokavidya, I think, arises from this contradiction. The modern need to organize every aspect of human knowledge is to be distinguished from the prevalence, since ancient times, of organized knowledge to do with, say the occurrence of eclipses or the schools of epistemology or medicine etc. The main distinguishing feature is that with the capitalist drive for converting knowledge into a commodity, comes a strong impetus to systematize and organize. The organization of knowledge is no longer one activity amongst many in the knowledge sphere but it becomes the sole touchstone for estimating the validity of knowledge itself. Lack of formal organization is then equated with inefficiency (as was implied in the statement from the US patent office, quoted above) or even worse, unorganized (in the modern sense) forms of knowledge are simply rendered invisible, ripe for “rediscovery” at the opportune moment. An analogy can be made to the way in which a large part of the economy of the “developing world” called the “informal sector” is rendered invisible to or un-analyzable by modern economics (neoclassical or Marxist). This point relates to Sahasrabudhey’s contention in the quote from the beginning of this essay, that “lokavidya is what it is because it is not organizable through a paradigm acceptable to organized knowledge systems, both traditional and modern.” I read this remark, in the light of my arguments above, not as a blanket statement against the systematization of lokavidya as such, but as a contention that any such systematization occurring in the current neo-liberal imperialist and, more fundamentally, the (post)modernist order is bound to alienate the vidya from its producers. But of course this interpretation is open to debate.

Through a wider theoretical lens, one can see that imperialism in the age of the Capitalist world-economy is another name for the expansion of social relations of production and exchange that are conducive to expansion of value.¹⁹ It has been increasingly clear during the course of the twentieth century that imperial domination need not take the form of a hegemonic relation between nation states. If we confine ourselves to the level of the nation state most countries are in fact nominally capitalist. But can it

be said that the whole world is capitalist? Clearly this is not the case. Significant domains of human activity remain that have not yet been subsumed under capitalist social relations. The commodification of housework and caring labor (e.g. child care) is an example of capitalist expansion into newer domains. Particularly in societies where capitalism came via colonialism and imperial domination, the capitalist transformation of society is far from complete and such transformation forms an important part of the drive for accumulation today.

The ICT revolution makes much easier the next logical step in the process of capital accumulation, viz. the expansion of capitalist social relations into the domain of knowledge. After land, labor, and money, knowledge constitutes the fourth fictitious commodity²⁰. Indeed all the more fictitious since, unlike the first three it is not rival in nature. That is to say, the scarcity of knowledge must be created, where none need exist. The reorganization of society along the logic of the knowledge revolution makes possible such scarcity conditions, under the guise of *greater access* to knowledge and information. The greater access does exist, although only for those already privileged by their position in the modern economy. Those who were on the periphery earlier lose even what little they had before²¹. The exclusive possession of knowledge has long been a method of exploitation alongside ownership of capital (financial, industrial or agricultural). Just as capital needed to be brought into a domain where the abstract and inhuman “laws of the market” could be seen (falsely) to control it, so also the reorganization of society to bring knowledge into the purview of the market has become important for the expansion and continued domination of imperialism in the 21st century.

Lokavidya and Indigenous Knowledge Systems: Conclusion

All knowledge is real (material) and virtual at the same time. By this I mean that all knowledge collectively possessed by a society is instantiated in one of another kind of material base. The material base of the virtual society is still that age-old adversary: industrial capitalism. It is true that capitalism is nothing if not dynamic and today displays itself in evermore rapidly changing forms. However, the old logic, discussed by Marx, using such concepts as capital accumulation, value expansion and alienated labor still assumes great relevance today. As does the Gandhian critique of the machine as destroyer of civilization since, in the Gatesian age, knowledge itself is being defined in terms of organizability by machines.

I have tried to show here the ways in which knowledge that has been generated for centuries within the lokavidya paradigm is being virtualized under the name of indigenous knowledge and *in* the name of participatory and sustainable development, biodiversity conservation and protection of indigenous intellectual property rights. To put it bluntly and to provoke debate, this is the language of the new imperialism for the Gatesian Age. Thus IK is the “web-friendly” and appropriated (i.e. a domesticated) version of lokavidya. Some proponents of this virtualization process openly admit that “by vesting legally recognized ownership of knowledge in communities through IPRs it will raise the profile of that knowledge and encourage respect for it both inside and outside the knowledge holding communities”²². With regard to this “taming of Lokavidya” it is worth quoting Shields,

“The propositions of the knowledge-based economy (KBE) involve simplified notions of knowledge as information. Although this builds on the modernist bias against embodied skill, tacit knowledge and experience in favour of abstracted supervisory knowledge, it also adds a new degree of formalization. Knowledge that cannot be captured in the databases of Information Technology (IT) systems and information management or knowledge management software is screened out - often

being explicitly referred to in the literature as ‘tacit’, begging the question of how these forms and knowledge processes are maintained.”²³

That said if one recognizes the existence and the importance of loci of knowledge that cannot be virtualized, what should be the attitude towards the juggernaut of virtualization?

The virtual domain is the creation of modern science. But it is also true that the virtual domain has displayed a logic/mode of operation and a reputation quite distinct from modern science. In particular this is evidenced by the mass exodus of youth from science/engineering fields to information technology and by the need shown by the World Summit on Information Society, in its proclamation of principles, to state that science has a central role in the development of the Information Society²⁴. But ultimately the material roots of the virtual society lie too deeply in the soil of modern science for it to be uprooted without a great deal of force. In other words, for all the talk of the postmodern, postindustrial, virtual society of the 21st century, in many ways the political economy of production, distribution and exchange is still that of the 20th. This includes a firm foundation in the science, technology, the very epistemology of modernity²⁵. It is true that the organization of production for instance has undergone rapid change and many small or family units now produce commodities where large industrial units might have done so before.²⁶ But this very decentralization of production (so-called post Fordist mode), which manifests itself in sweatshops and other small-producer arrangements, is associated with the increased emphasis on managing/governing the distributed world economy. This is one imperative behind the coming of the “Information Society”.

Lokavidya is often characterized by inbuilt wisdom regarding the uncertainty and unpredictability of ecosystems. It also tends to possess the quality of non-violence (ahimsa), to be exercised in the lokahita (in the interest of all) and to be more genuinely democratic (i.e. in favor of lokniti)²⁷. Hence lokavidya (meaning now, not just knowledge, but a particular epistemology and ontology, a worldview) can stand as a challenge to the virtual society and remains one of the only genuine hopes for a different future.

I thank Sunil Sahasrabudhey for general discussion around the concept of Lokavidya. Responsibility for errors is, of course, mine.

Notes and references

1. A world of explanation about the terms in the title. The concept of Lokavidya (a Hindi word which can be loosely translated as people’s knowledge or indigenous knowledge) is elaborated further in the text. As for the term “Gatesian Age”, it occasionally crops up in the popular media to describe the Information Age/Knowledge Society etc. I am not sure where I first heard it, but the analogy seems to be to the “Fordist Age” which was the period immediately after World War Two typified by its emphasis, as far as the economy was concerned, on large-scale, centralized factory production. Of course the term “Fordist” has been used to refer to a whole “regime of accumulation”, by which is meant the entire apparatus of state, industry, legislation etc. which prevailed in the United States and Western Europe until the advent of the Information Age. Thus if Henry Ford was the icon of the “Golden Age of Capitalism” Bill Gates is similarly the icon of the virtual society.
2. According to the Indigenous Knowledge pages, <http://www.ik-pages.net/about-ik.html>, the characteristics of indigenous knowledge are:
 - IK is generated within communities
 - IK is location and culture specific
 - IK is the basis for decision making and survival strategies
 - IK is not systematically documented
 - IK covers critical issues: primary production, human and animal life, natural resources management
 - IK is dynamic and based on innovation, adaptation, and experimentation

· IK is oral and rural in nature

- 3 I am using the terms vidya and avidya in the sense developed by Sunil Sahasrabudhey in his book “Gandhi’s Challenge to Modern Science” (published by the Other India Press, Goa and available at the Multiversity online book library for free download, <http://multiversitylibrary.com/rules.jsp?action=accept&continent=Asia>). Briefly, vidya which is constituted by technology, science and the arts, gives direction of truth to man’s struggle and unity with nature, while avidya is the source of disruption and violence with nature.
- 4 Linking Indigenous Peoples’ Knowledge in Natural Resource Management: Conference Proceedings <http://www.forrex.org/publications/forrexseries/ss4.pdf>
- 5 For example see essays in the book Lokavidya Vichar (Lokavidya Pratishtha Abhiyan, Varanasi) and also issues of the periodical Lokavidya Samvad (Vidya Ashram, Sarnath, Varanasi).
- 6 A “Best Practices on Indigenous Knowledge” report was issued in 1999 by the Netherlands Organization for International Cooperation in Higher Education / Indigenous Knowledge (NUFFIC/IK-Unit) in co-operation with UNESCO’s Management of Social Transformations Programme (MOST) and can be found here: <http://www.unesco.org/most/bpikpub.htm>. A periodical called “Indigenous Knowledge and Development Monitor” was also published by NUFFIC and has recently been taken over by a consortium of organization including the International Institute of Rural Reconstruction (IIRR) of the Philippines.
- 7 For lack of a better term I have used capitalist modernity/Imperialism to cover a wide-variety of social phenomena, such as what is commonly called globalization, but also related issues such as intra-national struggles of tribals and other minorities against “developmental projects”. Later on I deal with Imperialism in what may be termed a more technically Marxist sense.
- 8 Sometimes the new discovery or rediscovery is very literally asserted as for example in a paper titled “Rediscovery of traditional ecological knowledge as adaptive management”, Berkes et al, Ecological Applications, 10:1251-1262. This is a discovery in much the same vein as the “discovery” of the American continent by Christopher Columbus.
- 9 http://www.un.org/esa/sustdev/documents/WSSD_POI_PD/English/POI_PD.htm
- 10 quoted in <http://www.ik-pages.net/ik-network.html>
- 11 Jennings, Ray: Participatory Development as New Paradigm: The Transition of Development Professionalism, October 2000. Conference on “Community based reintegration and rehabilitation in post-conflict settings.
- 12 http://www.usaid.gov/about/part_devel/
- 13 Traditional Knowledge and Intellectual Property, A Discussion Paper by Carlos M Correa, p.4.
- 14 <http://www.scidev.net/News/index.cfm?fuseaction=readNews&itemid=1840&language=1>. The website www.scidev.net has a comprehensive dossier on “Indigenous Knowledge” available at: <http://www.scidev.net/dossiers/index.cfm?fuseaction=dossierItem&Dossier=7>
- 15 <http://www.wipo.int/tk/en/tk/>
- 16 <http://www.scidev.net/News/index.cfm?fuseaction=readNews&itemid=1840&language=1>
- 17 <http://www.ik-pages.net/ik-network.html>
- 18 US General Declaration to the First Meeting of the WIPO Committee, May 1, 2001
- 19 In this part of the discussion I am of course following in the footsteps of Lenin, Rosa Luxemburg and many other Marxist critics of Imperialism.
- 20 The concept of the “fictitious commodity” is from Karl Polanyi’s The Great Transformation: The political and economics origins of our time (Beacon Press, Boston).
- 21 I would like to clarify that my intention is not to deny what little improvement there has been in material life of the middle and lower-middle classes all over the world due to the transformations created by the Information Revolution. However, in this as in all previous such social transformations one must insistently ask, “at what cost?” and “who benefits, who pays?”

- 22 quote from The Crucible Group Report cited in Traditional Knowledge and Intellectual Property, A Discussion Paper by Carlos M Correa, p.7
- 23 R, Shields: The role of the virtual in knowledge-based economies, organizations and localities. *SEED* (4), p. 25-44, Available at <http://www.library.utoronto.ca/see/SEED/Vol2-4/shields.html>
- 24 As noted to me by Sunil Sahasrabudhey, the very need to announce what seems to be a truism indicates that in perception, if not in reality, the Information Society has an existence apart from modern science.
- 25 I am aware of the challenge to modernist epistemology that postmodern thought has brought with it. However, it seems to me that this intellectual revolution has not substantially altered the *material* political economy of our times. At least not yet.
- 26 Of course this is a very uneven process and varies greatly from sector to sector. Decentralization is, not surprisingly, particularly prominent in industries such as textiles. For a good analysis see Chitra Sahasrabudhey (2001) Karigar Samaj- The liberator of enslaved societies (Hindi) in Lokavidya Vichar, Lokavidya Pratishtha Abhiyan, Varanasi.
- 27 The terms lokahita, lokniti and their relation to lokavidya are elaborated further by Sunil Sahasrabudhey in “Gandhi’s Challenge to Modern Science” (see note #3 for publication details).

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Invention, Innovation and Freedom

‘Necessity is the mother of invention’

Yearning for freedom in a situation, which seems closed we come up with inventions. When we are up against a problem or a dilemma and all available solutions are either unacceptable or unworkable, the necessity of finding a new solution often inspires an invention. Freedom is not a condition of invention. Freedom is rather a consequence of invention.

Is this the reason that a large number of technological developments of the post Second World War era are rooted in the inventions made during that war in the industrial world? Maybe it is because of this intrinsic quality of inventions, that they embody an yearning for freedom, that any invention however evil ends they might have been invented for, there is a possibility of their being used for other ends. Even the desire of an elite of a country to conceive of a possible nuclear war and work for a communication system that would survive such war, their desire for that relative degree of freedom in the case of a nuclear showdown between two superpowers and their allies, equipped with vast arsenals of what are now selectively called weapons of mass destruction, desire of this elite for such freedom can lead to the invention of the Internet. We can use Internet technology for a variety of ends. But such a thing may not be possible for all inventions. I doubt whether the invention of nuclear bomb can be used for any end other than war, unless in an unlikely situation when an asteroid is hurtling towards the earth and we send a missile with a nuclear warhead to explode and scatter it. But if nuclear bombs were to be used for this purpose, they would be administered by astronomers, engineers through a transparent mechanism.

Necessity in human affairs materializes in a situation where options begin to close one by one. It is not only the force of circumstances and nature, but also desires and aspirations, and norms and values, which lead to necessity. Most of the time we manage with the acquired knowledge and learning to perform tasks that we need to do. Not all of it is a mechanical process since applying knowledge in new situations is itself a cognitive activity.

An invention may have limited applicability, or it may turn out to be broadly applicable. Sometimes, its applicability may be discovered after a time, or in a different place. A school or a sect may grow around an invention, which may spawn a new body of knowledge, or a new body of non-knowledge (avidya). The necessity which occasions an invention may be mundane or not so mundane, risky or not so risky. Fixing a running tap is also a necessity, and so could be escaping from prison for someone.

Does it mean that we do not invent in joy? Is it only under the yoke of dark necessity and in order to escape from it that we invent? When we hear ‘the yoke of dark necessity’, it is a particular tradition, or complex of traditions, that is speaking to us. There is a particular charge, a particular definition, or a particular comprehension of life that speaks through these words. It is a comprehension which views nature and society as constituting a menacing world in which the human essence can only be saved by a miracle or a by a knowledge which takes apart the world and reconstitutes it in the human image.

The necessity that we speak of results from the fact that we are born into a structure of commitments, into a web of relationships, that we have not chosen. Freedom in the context of natural and moral necessities does not result from escaping these but by discovering and constructing these relations through work in the world and work upon ourselves. Knowledge, luck, help from others and great inventions

(social, technological, others) are aid to us in this task. Most of us experience moments of invention in our lives and these are driven by the desire of freedom in particular situations.

Innovations as the Sphere of Applications of Invention

Innovation is based on established inventions. We innovate when we produce variations in the process of applying an invention in different contexts for different purposes. We play around with invention, we try changing it in different ways, reverse-engineer it, and so on.

Take electronic mailing lists as a neat innovation to carry out dialogue among many. Of course, it could also be used merely as a reporting mechanism. It is based on other inventions. Invention of the letter-form (I mean the letters that we write and post and reply to) that was translated into email communication upon invention of the Internet. Mailing list combines this with the idea of a public meeting, consultation or debate.

We need not absolutise the distinction between invention and innovation. Because innovations are, in ultimate analysis, little inventions. But these little inventions are made when the background is already ripe for such inventions. Sooner or later, someone or the other, is going to stumble upon it. These inventions have virtually arrived before they are actually made.

Discoveries (or inventions) of science also result from a necessity that is generated conceptually or experimentally during scientific practice. What is the role of rigor that is demanded in scientific work? The path of scientific research is so narrow that only those solutions that meet the most rigorous criteria are allowed play. Narrower the path, more possibilities of new discoveries and inventions. Once a major breakthrough is made, it occasions a flurry of efforts to apply it in a multiplicity of contexts. This results in various innovations.

In the industrial economy, scientific discoveries led to inventions, which were then made into innovative products by the business.

Innovations and the dynamic of global knowledge economy

We have moved to a post-industrial economy in the Internet age. The Internet referred to here is not the Internet infrastructure but that realm of virtuality- the connected world. War, finance, knowledge, media are all reconstituted in this world and they are meshed together.

In the global knowledge economy of the Internet age, inventions are drawn from a wider pool. Inventions are gathered from various institutions, life situations, culture at large. Then the process of innovation begins—of converting them into products, and then into brands. The global economy seems to be based on appropriation of inventions combined with the dynamic of innovations. Inventions of the public sphere are taken and the power of capital and organization are put into it to produce innovations. There is a competition in innovations. By public sphere is simply meant the sphere outside the control of big capital. We can also call it the independent sector.

When this process is reversed, when innovations of the virtual sector are taken by the independent sector and further innovations are produced – like the thriving gray market of media products in India and several other countries, the so-called copy culture—it is called ‘piracy’. Intellectual property regime is to

protect the innovations by the big capital and to contain and kill the innovative culture of the independent sector.

This is obvious from the fact that the same big capital is not keen to apply intellectual property ownership to the inventions of natural knowledge traditions in many parts of the world. The appropriation of this knowledge has been termed 'biopiracy' in a counter move. This is often termed the question of traditional knowledge, or TK, in the intellectual property debates. The main obstruction in providing intellectual ownership rights for this kind of knowledge and inventions is supposed to be the fact that this knowledge does not belong to individuals, but to communities. Corporations are treated as legal personalities, i.e., as individuals in some sense, in the matters of property, but it has proved difficult to treat communities as individuals.

Knowledge systems of the people

We have noted above the two different directions inventions flow towards innovations in the current global society and the role IPR regime plays in facilitating the one and criminalizing the other.

Even earlier, with each new wave of technology coming, for whatever geopolitical and national compulsions, a kind of knowledge and variety of skills developed to assimilate it, to adapt it and to innovate upon it.

Farmers in India did not use the tools of modern agriculture in the way prescribed by the accredited experts. They developed their own ways in conditions where odds were against them and the degree of freedom was quite restricted. The use of pepsicola as pesticide has been cited as a recent example of farmers' innovation. But I am sure this is only the most dramatic one. Unlike the gray market of media products these innovations in agriculture were not in the form of products with their markets. They were producing food in a system where both market forces and state were not favorable to them, because they were producing food for the national population and not just for themselves.

Despite the onset of modern agriculture, a great deal of indigenous seed economy, seed science, and seed sociality continued to thrive and modern seeds were part of this complex. This knowledge of modern seeds and their use could be very different from the conclusions of agricultural experts. Intellectual property regime intervenes here to stop the exchange and production of seeds as is taking place and restructure the seed sector.

Similarly many other knowledge traditions of non-modern origins are surviving. We are all familiar with medical knowledge traditions, much beyond the few well-known systems like Ayurveda, Siddha and Yunani. In fact, there are a myriad of knowledge traditions of different kinds undergoing change, development, transformations and producing hybrid traditions. These myriad of knowledge systems that have survived in different forms did not do so because of any advocacy to save traditional knowledge, or because of the recognition they were accorded. As a matter of fact, the normative framework of modern science, which was the dominant knowledge system of last two centuries, had little place for these knowledge systems, if any.

These knowledge systems survived because the people, whose knowledge systems these were, survived. With the slow crumbling of the authority of science to institute knowledge organization in the society, there is a greater recognition now for these knowledge systems. But what framework of knowledge

is being constituted now in the age of the Internet? Have we escaped the devil only to find a precipice on the other side? Maybe the answer lies in exploring how the regime of knowledge is being reconstituted in the virtual world. What would be a regime of knowledge where people's knowledge can have full play in shaping life in society?

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Infinity of web, Reality of Lokvidya and Coming of Global Gods

Passages in Rgveda suggest that the gods were first witnessed by the human beings who realised the expanding vastness of the human mind. That is also perhaps the beginning of the crystallization of *lokvidya*, the encoding of the dialogue of man with nature including his own self. Are we witnessing the beginning of *lokavidya* discovering new gods, global in scope but strange and unfamiliar? For, to dream, to see the gods in the newborn is the creed of *lokavidya*. In this essay we are trying to picture a dialogue among those witnessing the rise of the new star of deliverance. And we attempt to listen to the following analogies:

1. Knowledge Dialogue and human mental reflection.
2. Logico-mathematical universe and Knowledge on the Web.
3. The human Neo-cortex and the Networked WWW
4. *Lokavidya* and the Emotional brain

1. Knowledge Dialogue in society and Internal dialogue of a being.

We are attempting to the similarity of what we understand by knowledge dialogue in society (KD) and the internal dialogue of the human mind, mental reflection. What one would like to insist is that this dialogue fundamentally characterises the reality of society and the human being. That is to say, we attempt to draw a parallel between the internal dialogue of the human being and the knowledge dialogue in society and assert that as the only path open to society to discover true goal and achieve it. We find that the key roles in this royal path have a time element associated with it. Roughly, science <-> society's dialogue with nature (future), politics <-> society's dialogue with itself (present) and philosophy<->society's dialogue with its spirits (past).

They are in some sense related to their way of being aware of the time element in some fundamental way. They do not refer to the mass of things in the classification of activities, but aspects of its being which seems to be reflection of the awareness of time. In this way we would like to elevate the activities of human society to a level from where we may be able to comprehend KD at least to the level required to effect that difficult conceptual leap. For there is a sense in which at the end of it we are likely to prescribe KD as the remedy for all ills of society, just as the yoga practitioner, who has taken the difficult conceptual leap regarding the internal dialogue, seems to prescribe yoga as the cure of all ills of the individual. (We will not dwell on the importance of 'yoga' terminology for practising internal dialogue, but it may prove to be an important analogy in discovering the 'now' aspect of KD, politics.)

Politics is characterized by a conception of history, an active interpretation of it and in so far as *lokavidya* standpoint is statement of the history in the context of the seemingly unstoppable growth of science and technology in the modern era, its understanding is crucial to any human steering of the destiny of mankind. And for the same reason, it appears that an enlightened understanding of time is a primary prerequisite. For, just as the reductionist science and technology seems necessarily inherently violent, in that it lives by supplying the instruments of war in the hands of the clever manipulators, not unlike the royal blacksmith's science and technology supplying the sharpest swords.

So, then, the characterization of *lokavidya* as beyond organization and algorithmic description, qualities so amenable to virtualization and synthesis, captures this transcendent nature of human societies. But, that is also its weakness! For, there is already in anyone's comprehension of *lokavidya*, an organization of that knowledge, however rudimentary, which if followed and pursued carefully (experimentation! e.g. as in Prayog Parivar) seems to lead to organized knowledge. And perhaps it is this fact which is exploited in the virtualization process faced by *lokavidya*. Here it appears that much of the activity taking place in the virtual domain is akin to the unstoppable internal dialog of this mind. Also, much of the organized and seemingly directed representation of reality there (by governments, corporates, research centers and conferences etc.)- the stuff of everyday life of networked society - is akin to the bodily functions driven by the senses.

At the risk of gross oversimplification, we state the goal as elaboration of the dictum: Aim of KD is to develop the intuition of society regarding the reality of the forces apparently at work in guiding its fate. In discovering the intuition we are inquiring into the possibility of drawing a parallel between the seemingly infinite virtual universe of knowledge opened up by ICTs and the seemingly endless universe thrown open by the mathematical modeling of physical reality.

We have the following ascending chain:

1) Thought itself is fundamentally synthetic and is presented analytic only in so far as it is organized to carry on life.

2) There is already some organization and rudimentary virtualization of any category at the level of thought itself.

3) Human language is the reflection of this process. It is synthetic in origin, words are organized wholes held by inductive logic, as opposed to grammar constructed by deductive logic to conform to some requirement of consistency and relationships.

4) *Lokavidya* is the organized reduction of the transcendent human life and is the only form of knowledge which embeds time.

5) This bestows the quality of Divinity (absolutely outside the domain of human manipulation and control) to ancestral life, to dialogues of ancestors.

6) Knowledge dialogue is that process by which *lokavidya* expands, as if by engaging time in conversation.

7) Thus *lokavidya* is the accumulated output of Dialogue of Knowledge-in-Society.

So, there is an embedding of history in *lokavidya*.

2. Logico-mathematical universe and Knowledge on the Web.

While reflecting on the mathematical modeling of physical reality we see a different kind of embedding in science which seems to believe that understanding of 'things' can be reduced to 'other things' in a single ended manner. Briefly it is Society -> Living Organisms -> Molecules -> Atoms -> Elementary Particles - Energy?.

It is generally understood that this reduction has been 'achieved' by the success of the description in terms of the primitives, but in reality it is the possibility of a technology to reverse the reduction that is its basis. In other words, science has been preoccupied with the ways to effect the the reduction up and down the scale – that is technology. ? -> Energy Realm -> Coherent State (CS) of Elementary Particles -> CS of

stable atoms and molecules -> Coherent state of Biomolecules and genetic code -> CS of evolved organisms and species -> ?

From this view point, scientific understanding is the understanding of history. History falls into correspondence with knowledge - public objective knowledge. Thus the understanding of the structure of matter is the description of the history of matter, how solids crystallized, liquids cooled to form crystals, liquids cooled off from gas, gas from molecules, molecules from atoms and atoms from particles. The description of the physical properties in terms of fundamental laws is the tracing of the history of the formation of matter - the evolution of it. Scientific explanation amounts to historical explanation, not in the sense of objective universal history of objects, but in terms of the embedding of the coherent states in the next higher coherent state and that evolution is historical. So also scientific explanation of living organisms in terms of cells, cells in terms of nucleic acids and proteins is the tracing of the evolution of life. Scientific understanding of life is but the history of life.

It may thus be argued that the limitless expansion of the logical-mathematical thought/ literature compared to the limited and often meager examples of physical reality fueling it. This is borne out by the state of every flourishing branch of mathematics (and mathematical sciences) today. Their history is the story of this limitless expansion and its virtuality is self-evident. They have at their base one or two (may be a few) elements of physical reality (with simple, easy to model logical connections !) - a flow, a motion, a behavior, For example, we may look at genesis of non-Euclidean geometry and the endless possibilities of constructing imaginary numbers or infinitesimals and infinities to appreciate the expansion of this virtual edifice and which elements of physical reality have managed to connect to it and when.

Everything else that takes place in science is the construction of machines, technology to reverse the embedding by construction. The 'understanding' of the structure of matter, living and non-living coupled with an incomplete understanding of time, bestows in the western society an apparent invincibility to create (machines) and destroy (life and societies) an infinite variety. And it is this power which is at the base of the Knowledge Management-subjugation of other knowledge systems. That is, here power directly enters as a characteristic of knowledge - awesome power!

The exponential expansion of the virtual universe of the web apparently provides limitless possibilities for any individual, community, any entity whatsoever, which is connected to it. However this freedom appears to be similar to the limitless possibilities for knowledge on any object of physical reality provided that it is 'connected to the mind'. And, this similarity though qualitative may also turn out to be quantitative in some appropriate sense of measure. However, the mind is not 'open' to acquiring the knowledge from the infinite resources, busy as it is with its immediate functions, defined by an axis of relevance as it were, seemingly fixed by the big forces at work, often struggling against them. And most of all, except a measure-zero set of objective reality, fall by the wayside, unable to make the connection.

Thus it appears that it may be useful to describe the condition of *lokavidya* by saying : Knowledge-in-Society has lost power, in terms of a characteristic 'power'. This quantity, if we agree that it is a quantifiable entity, may help us to understand the process of virtualization better.... Is it something like temperature of physical systems? That power of knowledge in some suitable sense runs engines of change in society? That brings us to the analogy of networking aspect of WWW with the structure of the rational edifice of human brain, the neocortex.

3. The human Neo-cortex and the World Wide Web

Thus we are led to the next analogy : similarity of the knowledge technology of web to the neo-cortex (the so-called seat of rational logico-mathematical thought). Apparently the most striking feature of the neocortex is that its very existence is a delayed rationalization of anything ‘connecting’ to it to be consistent with the action ‘which apparently follows’ giving it the sense of ‘causality’ and hence power of ‘creation’. Something similar happens in the virtual universe of the web masquerading as the ‘source’, putting out a ‘causal’ chain for action and apparently displays awesome creative power, while everything originated in *lokavidya* long before. The similarity in hardware connectivity is qualitative, but may be even quantitative.

One of the important characteristics of the virtual universe is that one may ‘connect’ to it from anywhere and it appears to be the ‘same’. This feature is almost identical to that of conscious (neo-cortex) thought starting with the connection of any ‘piece of physical reality’ as it were. That is, given some axis of relevance or focus, the domain of convergence of knowledge is in a sense independent of the starting point. In the virtual universe this is enabled by the logico-mathematical modeling and the generic entities residing there.

Thus we are led to the next analogy by our understanding of the emotional brain and autonomous systems as the source of action.

4. Lokavidya and the Emotional brain

So, while there is a parallel between the the virtual knowledge universe of web supported by infinite possibility of logico-mathematical models and neocortex, the knowledge technologies preceding it may be compared to the emotional brain. The brain stem or the old brain, often considered (in a limited sense may be) the seat of the emotional being, has to struggle to connect to the rational edifice of the neo-cortex. The problem of information overloading, discussed widely in the context of WWW, is analogous to the rational brain getting lost with the problem of completeness, while the emotional brain is struggling to ‘connect’ to it regarding its ‘feelings’. The struggle of *lokavidya* to ‘connect’ to the web is similar. In the struggles of *lokavidya* we see the image of struggles of the ‘emotional human mind’ engaging in ‘creative’, ‘meaningful’ and ‘harmonious’ actions. And yet, nothing seems to be above this connection! If there is a realm escaping this connection, it is the mind of a different being, yet to arrive.

From this perspective, it is inconceivable how we may argue in favor of an exclusive category / status for *lokavidya* in relation to either its connectivity to the web or consequences of that connectivity. Instead, it appears that *lokavidya* with its immortal encoding of time and history and connections of the human interface to nature, become the true experimental basis for the evolution of the language and culture of the new mind in the making. The new struggles may well be in establishing the right connection to this mind. *Lokavidya* is experienced in precisely doing this, in shaping the mind of communities of living men and women, only that now the community is global!

5. Summing up

The Knowledge Dialogue we are involved in is analogous to the process of conscious reflection of the human mind, beyond the ‘real’ ‘virtual’ duality and inherently goes beyond the hitherto materialist interpretation of (knowledge) society. It is to be the visible face of the inner voice of the mind in the

making, and not merely some part of the incessant internal dialogue of the Internet. Should not the guiding principle be one of building the higher mind of society in the image of the higher mind of human being? If it is true that what we see is indeed the beginning of a primitive mind of global humanity, then may be, by our own understanding of our history, there must come into being primitive (tribal, pagan, ...) deities, the beginnings of real-god for the whole humanity!

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The Signifying Quilt: Troubling Knowledge Production in Hypertextual Space

Quilts have been described as “the hieroglyphics of women’s lives” (Aptheker 68). Quilt makers, through solitary work and through communal quilting bees, pieced together a space for representation and expanded their domestic rhetoric into a public realm. The digital story quilt project, a progeny of this heritage, is a technology in development that uses the patchwork quilt as a metaphor for a hypertext interface. Writers/readers create a three-dimensional patch of narrative, images, sound and video of their situated knowledge. These stories are then “composed” as part of a larger dynamic mosaic. The writer/reader may “piece” the quilt top by rotating and moving the patch objects so that one of six thematic dimensions are visible. The interface creates a narrative mapping system that is “read” by the writer/reader who constructs meaning and knowledge for personal or community action.

The digital story quilt project is situated at the intersection of postfeminist research and hypertext theory. On the one hand, I will demonstrate how the digital story quilt technology provides a practical metaphor for performing social science research that fulfills the demands of a postfeminist research agenda. On the other, I will describe how the digital story quilt project addresses the politics of hypertext theory with tactics for agency in a postmodern, technologized environment.

Both the actions and the characteristics of the fabric quilt and its quilters are used as tactics for what I call an “interstitial methodology” in the digital story quilt technology. I seek to define the agency within the quilting practice and its translation as a liberatory practice within the hypertextual environment. At the intersection of hypertext, writing, and the body, the digital story quilt project creates a liminal space for situated knowledges to challenge positivist discourses by defining a “hyperrhetorical practice.”

The Hypertextual Space

Alan Kay poses the question:

What kind of thinker would you become if you grew up with an active simulator connected, not to just one point of view, but to all the points of view of the ages represented so that they could be dynamically tried out and compared? (193)

Kay hints at the possibilities of hypertextual space as defining a different way of thinking and knowing. This place of knowing denies the either/or of positivist, social science thought and instead turns to the and/and/and of conductive, associative thinking.

Theorists that define hypertext have conflicting views of its qualities, functions and its implications. George Landow defines hypertext as text composed of blocks of text and the electronic links that join them (Hypertext 2.0, 3). Rand Spiro and Jihn-Chang Jehng define hypertext as nonlinearity based on an isolated reader-learner (qtd. In *Hyper/Text/Theory* 227). Bolter provides a broader concept of hypertext, calling this “writing space” one in which a continuum of representations exist (37). He likens this space to a “topography” with paths through a virtual space where a reader is a traveler in that space (29). Electronic texts, he argues, are characterized by “multiplicity, heterogeneity, and immediate, if temporary, connections” (204).

Michael Joyce has identified three types of hypertext structures: exploratory, constructive, and deconstructive. Each has specific functions and each further defines what is meant by hypertext and its operations (qtd. in Moulthrop 295):

- *Exploratory*—Represent closed systems in which users can follow various pathways through the network but cannot modify or expand the existing structure. Bolter conceives of the hypertext space as constructed by a single author, connecting texts, and images to external authors to be sure, but nevertheless suggesting and constraining the possibilities of the hypertextual readings.
- *Constructive*—Represents systems which are user-defined, freely revisable, protean and indefinite and requires “a capability to act: to create, to change, and to recover particular encounters within the developing body of knowledge”; more complementary to print.
- *Deconstructive*—Represents systems that create dissonance with existing print functions. Often characterized as nihilistic, deconstruction is a critical practice that emphasizes the contingency or “iterability” of any discourse. Process is dynamic and self-modifying. Objects are “texts” which may exist in multiple media and whose meaning emerge from their relationship to other texts. This deconstructive practice opens the prior text to further reassemblies or acts of linkage.

Joyce suggests that the distinction between nodes and links is not always represented in hypertext programs as the interface metaphor or the way the program visually depicts its information will determine how they function (19).

These definitions seem to conflate what Lawrence Lessig describes as the “physical” layers across which communication travels, with the “code” layer that makes the hardware run, and the “content” layer or actual stuff that gets transmitted (23).

Landow discusses how shifts in information technology are shifting writing from books to wide-band networks (the “physical” layer), how support for this environment will shift writing from books to digital media and “hyperlinks” (the “code” layer), and how one uses the digital word to reveal a different way of knowing (the “content” layer) (*Hyper/Text/Theory* 36). All three layers must be addressed to reveal the complexity of politics in a hypertextual space.

Many of the definitions of hypertext deal with the instrumentality of the technology, focusing on the physical and code layers. Diane Greco asks a different question by examining all three layers of the hypertextual space. She sees technology as the site for either domination or for transformation and resistance. She seeks to answer how these systems and their users reciprocally constitute each other and questions what it means to be human and embodied, “questions that are both political and technical, and have been so from the beginning of hypertext development” (87).

According to Greco, hypertext theory must move toward a four-fold agenda:

1. *Participatory Action*: Hypertext theory should move toward a participatory action, one that “should help everyone who uses it to speak for themselves and thereby constitute their own subject position”. (Physical Layer)
2. *Dismantling Genres*: Hypertext theory should dismantle genres and distinctions between “received categories” so they may be questioned and redefined. (Code Layer)
3. *Communal Authorship*: A politics of hypertext should be polyvocal, a “communal authorship” that overturns the dominant mythology of the solitary author. (Content Layer)
4. *Recombinant Materials*: Hypertext theorists should encourage the use of recombinant materials by “creatively appropriating” the symbology of culture as a stand against the sanctity of the author through copyright. (Content Layer)

Postmodern feminists describe the dual function of multivocal texts as in service to the writer to express silenced positions and as cultural interventions into the power relations embedded in knowledge technologies. Foregrounding the multiple contexts from which one speaks and writes becomes a form of

intervention that reminds us of the situated and partial nature of our knowledge. Hypertexts such as these can act to disrupt naturalized viewpoints, and provide agency for the reader to discover new knowledge.

Patti Lather suggests destabilizing, deconstructive practices that don't just exchange one hierarchy for another—feminism or androcentric, male-centered knowledge – but that provide for a relational, non-reductionist way of making sense of the world. In this praxis-oriented approach to inquiry, focus shifts from knowledge as found truth to constructed knowledge as contested and partial.

That is the territory that poststructuralism attempts to map with its thesis that the map precedes the territory, its foregrounding of the constitutive effects of our uses of language, its efforts to enable another logic in which structure and agency are not either-or but both-and and, simultaneously, neither-nor (*Smart* 154).

Wendy Morgan offers “a future poetics of a poststructuralist feminist research hypertextuality.” She suggests that associative linking, intertextual and intratextual juxtapositions, the unfixing of textual hierarchies in a “rhizomatic” text, non-sequential polylogic, multigeneric collage and the reader as textual agent become the characteristics of a hypertextual space (211). This very space, Morgan argues, works against such “standing orders” of normative social science research and “whose openness permits crossings that would elsewhere be impermissible, whose directions in motion transform the striated texts it absorbs” (211). Morgan’s reader is endowed with an agency – to argue her own meaning from and within the lexias she chooses. She re-assembles and constructs logic from available evidence within the lexias. This practice of agency is a performance of active intervention. From this hypertextual practice, the reader becomes an author – a “cyborgian hybrid” who is decentered, disunified, always in process (214). This hypertext, Morgan says, is overflowing with significance, not empty of it, and resembles conversation that is associative, additive, interruptive (212). Thus the hypertextual agency of this space provides a way of troubling knowledge production.

Lather suggests that empowerment comes from the politics of knowing and being known. She defines empowerment to mean “analyzing ideas about the causes of powerlessness, recognizing systemic oppressive forces, and acting both individually and collectively to change the conditions of our lives (*Smart* 4). Mike Fox suggests that “the heart of the idea of empowerment involves people coming into a sense of their own power, a new relationship with their own contexts” (qtd. in *Smart* 4). It seems that hypertext provides a space that also troubles notions of author and reader and foregrounds the contingent nature of knowledge.

At the end of *Writing Space*, Bolter defines the space and time of this postmodern moment.

Our late age of print is characterized by such struggles, as economically dominant groups and forces attempt to define the new technology to their advantage, usually by extending definitions appropriate to earlier technologies that they already dominate. ... On the other hand, other constructions of new media are working subtly against the extension of older models of economic and cultural control. Our culture continues to find in these new forms, particularly in the Internet and on the World Wide Web, qualities of decentralization, local autonomy and flexibility (211).

These theorists point to the urgency of creating such hypertextual theories and spaces to speak against existing technologies as they attempt to dominate within the hypertextual space. Moulthrop speaks of the value of the third type of hypertext in particular—deconstructive hypertext—as possibly the best tool for formulating a true post-print rhetoric. “Deconstructive hypertext might remind us that any system, even (or especially) one that advertises its own contingency, can have its authority called into question,” says Moulthrop, allowing us to retain a capacity for independent judgement (296).

Within this dialogic, self-reflexive context, Lather’s question becomes “What would a sociological project look like that was not a technology of regulation and surveillance?” (*Smart* ix). I believe that the

“interstitial methodology” of the digital story quilt technology creates the deconstructive hypertext space imagined by these theorists.

The Quilter’s Space

Quilting as a practice moves toward this more reflexive, interpretive post-feminist practice that creates the poetic “becoming space” of Martin Heidegger that both marks and loosens boundaries (102). Ozzie Mayers suggests that we can view sewing itself as a kind of rootedness, as a symbolic act of survival, which suggests “an urge not to flee but to pin oneself down in order to discover the unconscious, unarticulated and private modes of expression buried within.” (qtd. in Elsley 49). The quilting aesthetic does not solve all existential woes, as Margot Anne Kelley insists. But she suggests that the correspondence between postmodern practices and these quilting aesthetics are significant for their shared interest in rethinking the subject, in grappling with the subject’s relation to space and time, and in finding socially appropriate and viable forms of representation (66).

Through the tactile acts of sorting, stitching, piecing and piercing, women digitally “worked the scenes of fragmentation to reinvest history out of the debris” as Walter Benjamin suggests (qtd. in Tierney and Lincoln 237). The traditional patchwork quilt operates as a technology with a structure similar to a hypertextual space. I suggest that these quilters’ efforts provide a model for deconstructive hypertextual practices.

A quilt is a textile sandwich composed of three layers analogous to the layers of the hypertextual space:

Layers	Hypertextual Space	Quilt Space
Physical	Computer networks, computer wires, hardware of the internet	Fabric, thread, batting, quilting, process, frame, quilting bees
Code	Software programs, digital manipulations, programming codes, browsers, hyperlinks	Colors, shapes, patterns, stitching techniques, aesthetic design of quilt tops.
Content	Text, images, sounds, video embedded in code	What the patches, shapes actually mean, stories embedded in clothing/fabric fragments.

Text—the common name for written compositions—derives from “textile,” and includes in its etymologies the craft of weaving. The quilt is text, says Judy Elsley, that “speaks its maker’s desires and beliefs, hopes and fears, sometimes in a language any reader can understand, but often in an obscure language available only to the initiated.” (Elsley 1). Through the three layers of the quilt, women’s quilt texts communicate in an intimate fashion across generations. Memory-laden textiles are digitized and linked by the touch and the witness of the quilter, recovering nearly lost narratives in an intertextual, nonlinear, polyvocal tradition.

The quilt becomes the textual practice that maps that which has been traditionally erased or hidden. The distinctive features of the quilt are due to the economy enforced on it by the constraints on its creators. Through quilt texts, women used their constraints – of fragmentation, condensation, and juxtaposition – to create a space that expanded their domestic rhetoric into a public realm. These three tactics define what I call an interstitial methodology:

- *Fragmentation* calls for tearing apart that which is or is seemingly whole into pieces to create a liminal space both mentally and physically. Quilters use fragmentation in tearing apart whole cloth and in the fragmentation of time to achieve the time-consuming quilting act.
- *Condensation* calls for the reduction of time and ideas to appropriated iconography or the synecdoche of patterns and stories embedded in each intimate scrap of clothing.
- *Juxtaposition* calls for tactics, fragments and condensation to work together to effect oppositional social movements. Juxtaposition also produces a destabilizing force upon aggregated representations.

The process of making fragments creates a necessary space, suggests Elsley, one that is disruptive and destabilizing, from which a woman can begin her task of selfcreation. “Tearing fabric apart has the effect of creating space between the pieces,” says Elsley. This place of liminality, this undefined space, becomes a place of creative freedom (10). In such a place, says Lather, “a methodology of the imaginary fosters writing that overflows the linguistic order, proceeding via figuration where the dialectical image is a fragment, a rune, a multiplicity of meaning” (“Multilayered Text” 239).

It is in this multiplicity of meaning, flowing from Bolter’s continuum of representations, that the digital story quilt dwells.

The Interstitial Space

The digital story quilt project honors the quilt heritage by creating a technology that realizes the deconstructive hypertext envisioned by Moulthrop. This space, as described by Derrida, is one in which “assemblage” suggests a bringing-together of “a structure of an interlacing, a weaving, or a web, which would allow the different threads and different lines of sense or force to separate again, as well as being ready to bind others together” (qtd. in Landow, *Hypertext 2.0*, 35).

The digital story quilt project uses a condensed version of Gregory Ulmer’s *mystory* as a writer/reader’s patch on the digital story quilt. The *mystory* is the whole cloth from which the patch is created, providing access to a decentered space that places history within individual’s stories or “distributed” memories. The writer/reader first tears apart the whole cloth of their lives, seeking the experiences that provide an “emotional sting.” The *mystory* text begins with those moments that define the crisis in question, a turning point in the person’s life (qtd. in Denzin 2002). Ulmer suggests that the *mystory* is a pedagogical genre he introduced in *Teletheory: Grammatology in the Age of Video* (Routledge, 1989). He explains the form is his response to a suggestion “that if history had been invented in the twentieth century rather than the nineteenth, it would be quite different, reflecting a different science and a different aesthetic: not positivism but quantum relativity; not realism but surrealism” (Ulmer, *Internet Invention* 5). He suggests the following starting point:

The sting of memory locates the moment, the beginning. Once located, this moment is dramatically described, fashioned into a text to be performed. This moment is then surrounded by those cultural representations and voices that define the experience in question (qtd. In Denzin, 2009).

These fragments of stories, images, quotes, sound bites, and video become the deconstructed substance of the writer/reader’s patch in the digital story quilt (Figure 1).

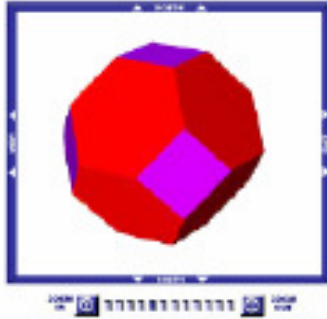


Figure 1: The writer/reader patch on the digital story quilt.

The patch, a three-dimensional gem, is a polygon of six sides. Each of six themes of family, entertainment, nature, community, ancestors, and discipline is represented on one of the six faces of the gem. Each face of the gem may be “clicked through” to reveal additional layers of the quilt that yield additional artifacts that illustrate the story.

After creating their personal patch, writers/readers may then construct a quilt top, comprised of the patches of other individuals (Figure 2). Using a peer-to-peer network structure, the digital story quilt interface “on the fly” pulls together individual patches from across a geographically dispersed network. The resulting composite may be dynamically manipulated by the writer/reader to create multiple arrangements of the quilt “faces.”



Figure 2. The digital story quilt “top” shows just one side of the patch polygon within a community of other patches.

The writer/reader then uses “threads”—digital links created by the writer/reader—to stitch a path across the faces and into the depths of individual patches. The resulting composition and reader’s path is interpreted by the reader, thus changing the placement of the next stitch of the thread. Each writer/reader that uses the digital story quilt interface creates a unique stitched narrative as they travel the topography at their fingertips.

The digital story quilt project uses narrative mapping as described by Stephen Mamber as a technology for poetic dwelling. Mamber speaks of narrative mapping as an attempt to represent visually events that unfold over time. A visual information space is constructed that provides a formulation of complex activities. The four purposes to narrative mapping are:

1. *Representation*—Maps can become that which they represent. They can stand in for and replace that which they seek to model. Maps have the ability to unpack, deconstruct, and resequence.
2. *Analysis*—Mapping clearly is interpretation, textual analysis. Maps must accommodate ambiguities and contradictions regarding temporal and spatial questions.
3. *Information Space*—To map narrative is to model an information space, or in part to construct an underlying database that is then visually represented.
4. *Interface*—Narrative can shift into its own interface. Fragments of narrative can provide new means of accessing the work (146).

Thus at the three layers of deconstructive hypertext space—the physical, the code, and the content layers—the digital story quilt fulfills Greco’s postfeminist research agenda.

Layers Within the Digital Story Quilt

Physical At the physical layer, the digital story quilt is a peer-to-peer network that denies the centrality of an authority as in a database. Patches are composed from across the network as they are available, thus the universe of available patches is always expanding, but constrained by those which are made available at the time the writer/reader composes the digital story quilt top. In its participatory action, the digital story quilt allows anyone to create a patch, helping everyone to speak for themselves.

Code At the code layer, the writer/reader is given the tools to create their own patch, compose the quilt top and inscribe meaning through the “threads” or constructed links. Additional tools in the digital story quilt interface provide unique ways of manipulating the patches to “frame” the pieced quilt using different types of views. The digital story quilt top is writer/reader defined, freely revisable and dialogic, continually questioning with an and/and/and logic that opens the way for possibilities and dismantles received categories.

Content At the content layer, the digital story quilt is polyvocal, allowing a “communal authorship.” Through the use of personal “artifacts” or the symbology of his or her culture, the writer/reader appropriates the tools of knowledge production for individual and community use. The writer/reader participates in a solitary or communal fashion in deconstructing and constructing multiple narratives within the interface.

The digital story quilt foregrounds the multilayered nature of our experience. It appropriates the methodologies of the quilt— fragmentation, condensation, and juxtaposition— to endow quotidian, pedestrian narratives with the power to virally infect discourses of power. It uses the politics of displacement—shifting the disciplining gaze—to allow us to interrogate questions of self, identity, history and memory.

Designed to be nonlinear, insertive, layered, disconnected, nonorganized or categorized, defamiliarizing, disruptive, scalable and complex, the rhetorical style of the quilt is refashioned as a hyperrhetoric for a deconstructive hypertextual space.

The Betweenus Space

Joyce describes the problem we face as learning to write in the interstices, where the writer/reader is given access to the code layer— to write and rewrite the structure of the hypertext document.

Whether we see a poetic of contours or a deconstructive rhetoric, we must actively locate them at the interstices along the continuously replaced contour. Locating here must be understood in the double sense of interaction and enaction, i.e., we locate by inscription, forcing (or enforcing) the coextensivity of the text (242).

Using the interstitial methodology, the digital story quilt voices reinvest history with the lost narratives of a culture.

For Lather, deconstructive strategies are not instruments for self-mastery and/or others, but an exploratory tool for how we might move beyond our present positions (*Smart* 155). “A text that might help enable movement beyond received habits of thought and practice is a form of political intervention, even given the (largely unknowable) limits of discursive challenges” (*Smart* 154). Addressing the dominating forces of technology from the interstices or in between denies the unified, cohesive surface technology and discourses project.

The digital story quilt fulfills the qualities and functions of a deconstructive hypertext. It also, as required of postfeminist theorists, provides a space for multiple voices to rise up to challenge polarizing, codifying discourses with a chorus of situated and/and/ands. Through marginalized voices bubbling up through the cracks of history, the deconstructive hypertextual space of the digital story quilt displaces authority and foregrounds the construction of new meanings.

“This is the language of sisters, of the betweenus at the end of time, of hypertext pedagogy and/as poetics in the process of re(de)fining each, of minds that dare to hope to penetrate the dark edge of existence comforted by knowing we are not lost to one another.” (Joyce 15).

Joyce reminds us of the rich folklore tradition of quilting from which the deconstructive hypertext is born. The digital story quilt, by means of a methodology that challenges representations and signs, and by the fragments and bits of everyday life, provides a sort of general recipe for a new exercise of tactical power with narrative as its tool; the resurrection of situated knowledges and the juxtaposition of representations as a new body of knowledge.

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KNOWLEDGE AND POLITICS: The Dialectics of Change

The knowledge terminology now with inroads into almost every sphere has come to stay. It is underlining the beginnings of the emergence of a radically new reality. There are people and I am among them, who think that the changes being witnessed are going to be more sweeping than our imagination permits us to think. Should we take the help of our leaders of the 20th century to break some fresh ground? The line of thinking suggested below is one such attempt.

1. A polity has a knowledge basis

Science is a historical event which is neither there for all time to come and not also a result of some underlying logic of progress in human knowledge through history. A neutral scientist and a Western hawk both should agree to this now, generally since the development of computer and communication sciences and technologies (called the new sciences) and in particular since the development of the internet, virtual domains, virtual society etc. Others did not need an argument even before. With the breakdown of 'absoluteness' of science in the realm of knowledge and society freer and more varied relationships are conceivable between knowledge and society. Starting with the social basis of real politics one can show that there is always a knowledge basis of the structure and evolution of a polity.

The structures of polity we are all familiar with are those that have come into existence in the last 200 years i.e. Post-Industrial Revolution. These are capitalist structures with their imperial variants and later socialist structures in some places. This is also the period of institutionalisation of science with the claim that it is the only legitimate body of knowledge, the scientific method acclaimed as the only legitimate and reliable method of seeking and producing knowledge. So every real structure, that of society that is social formations, of polity i.e. the State, of religion i.e. their organisation, of education i.e. the school, of knowledge i.e. the university, of industry and others and of small or big institutions, had to have its essential structure conform to the structure of science in some strong sense, perhaps be isomorphic with it to be 'legitimate' in the modern world and therefore viable at all. Everything that did not so conform was desecrated. Even philosophies were not spared. Buddhism, Hinduism or Islam in their abstract forms had to be 'scientific' to be acceptable in the public domain.

Under such widespread domination local and remote politics based on knowledge other than science, values other than capitalist or socialist values and having structures other than the modern hierarchical structures, turned inward, became inactive or even obsolete so far as the public realm was concerned. In the public realm they were seen as defeated polities, the Moghuls, the Marathas, regional polities and tribal confederacies etc. These polities had their own knowledge bases. These were the streams of knowledge

that governed peoples relation with nature, among themselves and with oneself. These knowledge streams governed people's economic and religious activities, they governed their political activity, in fact provided the ultimate conceptual bases of governance and self-governance. The polities were defeated but not these streams of knowledge which developed their own defences by turning inward and private, in the process incurring huge losses but not death, thus moving from a path of progress through invention and discovery to a path of artisanal innovation circumscribed by the stringent survival needs. But nothing lasts for ever, so with the domination of science and the polity of the 20th century. May be it is time now for people to reassert for politics based on their own streams of knowledge.

2. Traditions of Knowledge

Let this not be confused with traditional knowledge. 'Traditional knowledge' has been interpreted in a variety of ways including or excluding all or part of scriptural knowledge and skills and practices of the people acquired outside the formal educational system. It mainly refers to a body of knowledge whereas 'traditions of knowledge' see knowledge as a process, activity, values, organisation, its relationship with the society including a host of other dynamic elements. Traditions of knowledge are like a double helix interconnected through active exchanges of traditions of organised knowledge and *lokavidya* traditions. We shall call it the double tradition, for there is a tendency to see one or the other as the sole repository depending upon the view point one possesses.

Traditions of organised knowledge of a great many places are no more living. For example, Sankhya or Mimansa traditions are not living traditions. Scriptures are often the places from where such organised knowledge needs to be dug out. Aspects of such traditions can be said to have survived through absorption in what may be called religious thought and practices of monastic orders. Another place where these traditions find a transformed and modern expression are the departments of ancient learnings and philosophies in the universities. There is of course a third place where perhaps the greater part of such traditions finds a living expression, this is the *lokavidya* tradition.

Modern science is the biggest tradition of organised knowledge today. Its ubiquitous presence through the modern state, technology and the educational system has led to its penetration of other traditions of knowledge. This penetration is some times through the use of technology, sometimes by direct presence of ideas and otherwise generally by a structural and paradigmatic adaptation.

Lokavidya traditions are traditions of knowledge in society, not in the university and not in the research institutions or laboratories. People who have not been to the university organise their lives on the basis of their own resources of knowledge. This is one resource which cannot be simply taken away from them by the fiat of an act passed by the parliament or by a government order. Human beings are epistemic beings, *lokavidya* being that fundamental characteriser which gives them an intrinsic human identity. *Lokavidya* is not traditional knowledge, it itself constitutes composite traditions of

knowledge. it is by nature a living tradition. Leave alone being stagnant, lokavidya is not static even for a day, even for a moment. Assimilation, incorporation , rejection, improvement, innovation and so on keeps occurring all the time, the criteria being the criteria of truth and acceptability in ordinary life. Ordinary people of most countries, peasants, artisans, workers, women, tribals, small shop-keepers and many others engaged in subsistence or little better economic activity are those who live by lokavidya and enrich it everyday. Lokavidya has a presence in various traditions of organised knowledge. Life in the monasteries is not without it. The university scorns at lokavidya but technological (industrial) practices keep deriving advantage from the fact that workers come from definite lokavidya backgrounds and are adept at using the lokavidya reasoning and criteria.

Traditions of knowledge can also be called streams of knowledge. This has an advantage of freeing us from the disputed and debatable use of 'tradition'. In substance it makes no difference and favours freshness and open destinies. Every stream of knowledge is understood or known by a body of knowledge and information, its values, the ethical world enmeshed with it and not separable from it, a concept of cosmos (rule, power, existence etc.) and its mode of abstraction, structure, sound argument type, mould of explanation etc. Now this is not to construct any definition of how to recognize or identify a stream of knowledge. It is only to capture some major ways of interacting with observing, understanding a stream of knowledge, for some such ways would be needed to see relationship between streams of knowledge and structures of polity.

3. Politics and *Lokavidya*

Knowledge therefore is not a command domain of any particular form of organisation. Knowledge in society expresses itself in many ways. It may also not be entirely correct to see it in terms of the double tradition, namely a double helical stream of organised knowledge and *lokavidya*. The epistemic reality is far too divergent in form, content, essences, styles, usefulness, aesthetics, ethics and so on to lend itself to some so-called 'correct' interpretation. The double tradition is that robust phenomenon which we encounter in the erstwhile colonies, by and large the Third World. *Lokavidya* traditions, unlike Europe, are live in this part of the world.

The greatest obstacle, in the field of ideas to the development of the state and political society in these areas are the ideas of public life and politics based on lokavidya. The repeated defeat of the indigenous forces involved their failure to understand the modern state and politics. Even today peasants, artisans, women and tribals in general do not understand the nature of modern politics which is based on a knowledge tradition alien to them. Politics based on lokavidya is generally the politics of self-governance. It is in as much opposition to modern politics as is lokavidya to modern science. In practice, the politics based on lokavidya takes the form of local dissent, mostly unsustainable in a world of extreme centralisation of all power. However, there have been occasions where very large movements which challenge the edifice of the modern world based on science

and capital took recourse to a knowledge basis which had equal respect, if not more, for lokavidya.

4. Emancipatory Dialectic in the Industrial Age

Radical mass leaders in Asia in the 20th century across the full ideological spectrum show a keen awareness of the double knowledge tradition. Their practice reveals this awareness and a new consciousness thereof. Theoretical propositions they put forward exhibit, as if, a new unity of and within the double tradition pointing towards new politics. The cases in sight are those of Gandhi, Mao-tse-tung and Khomeini. Mahatma Gandhi, Chairman Mao and Ayatollah Khomeini.

Like the popular leaders of very high stature down the human history these leaders too exhibit naive (and not so naive) dialectic between their positions based on some kind of direct and immediate perception of reality and their allegiance to an (their) organised knowledge tradition. To the extent this dialectic is naive these direct perceptions are more like sound saintly truths and in senses in which this naiveté breaks down or in the sense in which the dialectic is self conscious and strategic they tend to inaugurate a theoretical standpoint.

Gandhi's allegiance to orthodox philosophy in Indian tradition and its constant reference to and preference for people's ways of doing things as opposed to scriptural directions shows this play, dilemma or dialectic that is being suggested above. His pan-moral approach is seen by political societies as a moral approach. However, people perhaps do not have a strict analytical, 'moral' category. Gandhi himself does not have such a theoretical 'moral' category. To intervene so strongly in the public domain without strictly dichotomising fact and value requires an essential synthesis of the double tradition discussed above. His allegiance to Geeta (Vedanta) on the one hand and on the other his philosophy of Swadeshi and Swaraj amount to first an acknowledgement of the double tradition and then an attempt at a new synthesis. It is such synthesis on a grand scale that lays the basis of a totally different polity which is not by any reckoning a variant of the State and politics emanating from the West. Gandhi's vision has the sweep of a civilizational mission in which for everything that there is, there is another way of doing it. For this not to be utopian it needs to be understood as squarely placed on also what there is then. What exists as a basis in the double knowledge tradition and the complex web of human activity owing allegiance to one or the other or mostly in practice to both streams of the knowledge tradition. It is the synthesis of the two streams that lifts the base reality to the level of political promise.

In the case of Mao-tse-tung his successes and failures underline his awareness of this dialectic. Success in leading the Chinese Revolution to eventual victory in 1949 and failure embodied by the withdrawal of the Cultural Revolution in early seventies. It is interesting to note that through the 1920s, 30s and 40s Mao uses the Marxist terminology, but the international communist movement constantly sees him and the path of the Chinese Communist Party under his leadership as a deviant one. In early 1960s during

the Great Leap Forward he promotes a program characterized by ‘steel in the backyard’ and ‘let hundred flowers bloom’. This is a path divergent from the very strictly laid out western ‘scientific’ path. Then there is the attack on ‘capitalist roaders’ a term nowhere to be found in Marxist lexicon. While inaugurating and pursuing the Cultural Revolution he ceases to use the Marxist lexicon, for the activity unleashed just cannot be understood through the received Marxian concepts. Add to this the fact that right from, the beginning he uses examples from Chinese history as sources of wisdom for social and political action. The Chinese Revolution puts workers and peasants in power but when the Cultural Revolution tries to put workers and peasants in the university it fails.

The Chinese Revolution leads to a polity, which is a variant of the State in Europe. The leadership changes but the basis in science remains. So, for the one rooted in people’s tradition one more revolution is needed to develop a stable pro-people polity. This is the Cultural Revolution which is lost for words in the European knowledge tradition. So the leader of the Cultural Revolution ought to have a deep consciousness of the relation between traditions of knowledge and structures of polity, which gives us a lesson or two in our present context.

Ayatollah Khomeini was the leader of the Islamic Revolution in late 1970s and early 1980s in Iran which dethroned the Shah (king) and pushed out the American forces. He spoke against the West and put both the Soviet Union and United States of America in the same box as accused. He spoke against democratic polity because it was Western and insisted that following the West, the way we have, leads to completely incapacitating alienation, emasculation and emaciation. He spoke in the name of Islam. The revolution attempted to install such a polity and set of values in Iranian society which would not be just a variation of the State in Europe and which would be based on Islamic tradition, whose corner stone was justice.

There are Islamic states in other countries which are stooges of the American state, so calling oneself Islamic proves nothing in the present day world. The only way to be ‘genuine’ is through accepting the criteria of ordinary life and popular tradition. Iran stood out in the 1980s in its war with Iraq by virtue of the popular mobilisation. It is close to 30 years now that it has been in steady opposition to America, economics, diplomacy, media attack and threat of actual war notwithstanding. It is just to suggest here that the Iranian political dispensation needs to be seen or investigated as possibly eventually based on traditions of knowledge that weave a synthesis of the Book with popular traditions.

Traditions of knowledge other than modern science are difficult to understand through the ‘educated eye’. We need a political eye for an epistemic comprehension. Just as structures of polity have their knowledge bases, understanding radically different knowledge bases requires a political imagination which recognizes people and their lives as the only starting point and destiny at the same time.

5. The New Dialectic

Creation of the network society and the virtual domain have opened radically new spaces for defining the relationship within the double knowledge tradition, perhaps even for producing a new unity. How do we define our continuities and the way forward now in the new condition from where a Gandhi, Mao or Khomeini might be said to have left us? How do we transcend the political dichotomies of the bygone era namely left-right, communal-secular, democratic-dictatorial, subsistence-productive, East-West, South-North, third world-first world etc.?

Let us start with the turbulence in the knowledge domain. Science is giving way to knowledge management to occupy the place of command in the realm of knowledge. Scientific method is no more the inviolable, supreme and unique method of acquiring knowledge. It no more constitutes the legitimacy criterion for knowledge. The new world respects 'organisation' of knowledge more than anything else. Organisability by the Information & Communication Technologies (ICTs) now occupies the place of legitimacy criterion. Nothing that is not organisable by the ICTs can be legitimate knowledge. But then this tends to legitimise various traditions of knowledge which were not even legitimate candidates to be tested against the legitimacy criterion of the scientific-industrial era. But this legitimisation comes with an undoing price. *Lokavidya*, for the Information Age, is legitimate knowledge only in so far as and to the extent it serves the network society. So various traditions of knowledge expressed in a great variety of bodies of information, skills, techniques and practices etc. divested from the values and ways of thinking, modes of abstraction of the people involved become a new resource pressed into the service of the network society. High as it may appear this price has come with an equal boon. Let the legitimisation of other knowledge systems not be undervalued for it fulfills a necessary and robust condition for developing the politics of emancipation and recreation of a society which will not be based on capital, technology and management as we know them.

Legitimising traditions of knowledge not built on an internal hierarchy necessarily legitimises also the possibility of a new polity not based on hierarchy. Today the idea and reality of nation is ceasing to be the most suited instrument of the State and the network society is attempting to build trans-national instrumentalities. The other end, the people's end has been pushed into an amorphous state. That is organisations and representations of the oppressed are no more political. Breakdown of unionisation, sell out of national political processes and the spread of NGOs all underline this. The place of recreation of emancipatory politics therefore lies where local and popular knowledge traditions make sense to the people and where a Gandhi, a Mao or a Khomeini, depending upon where you are, make great sense. People's movements, local markets and education are the places where traditions of knowledge of the locality need to assert themselves to pave the way for a new synthesis of the double tradition which alone may provide the basis of radical politics in this new age.

—Sunil Sahasrabudhey



Knowledge Hierarchy and Imperialism!

The process of Knowledge formation

Information and ideas are constituted of facts, relations, conjecture and reflection, largely obtained as cognitive input-through observation, including sensory perception, deduction and analysis. This can be construed as virtual knowledge, which is *abinitio* true. It becomes 'real' knowledge when it is accepted and absorbed by society. The process of absorption and acceptance is 'accomplished' when virtual knowledge is projected into a conceptual space defined by premises, axioms and beliefs. When 'virtual' knowledge is projected and 'seen' in such space, society accepts and absorbs it and this assimilation into a 'body of knowledge' renders it into reality. We shall refer to this 'real' body of knowledge as the knowledge system.

The basis of the conceptual space is real, in that it is dependent and delimited by social context - geography, language, history etc. and will, presumably, vary from society to society and, within a society, from time to time. This variation, among the bases, leads to different knowledge systems. The change in the basis with time could also account for the growth or stagnation of knowledge systems. Each society inherits a contemporary body of knowledge which characterizes, in the main, the society's 'civilizational' aspects at that point in time. The process of expansion of the knowledge system is dynamic; in that, some new and/or modified ideas are projected in and some old ones are projected out continuously. Such dynamism is influenced by developments; which could sometimes be so radical to constitute revolutions in thought; and could be marked by concomitant social conflict.

The conceptual basis is influenced by beliefs. For example, a question such as- is it legitimate to seek and expect answers to all questions? - whose answer is affirmative may lead to an all-out pursuit of answers and discovery; as is clearly visible in modern science. When the answer is negative, either partially or fully, development and growth in knowledge is often stunted; as in societies and regions governed by the dictates of religious dogma and doctrinaire ideologies.

The process of knowledge creation is largely influenced by the method of transmission and storage of knowledge. The methodology reflects on the basis of the conceptual space, referred to above. For example, the Egyptians used hieroglyphs to store and transmit what they considered to be important knowledge. One may then say that the Egyptians apparently believed that knowledge, when represented through hieroglyphs, could be legitimized as valid, acceptable, 'real' knowledge. In pre-colonial India knowledge was largely transmitted through the medium of verse -with standards of meter and intonation- and through the medium of dance, art and sculpture; all constituting valid knowledge.

This aspect also reflects on the priorities of societies. For example, literacy becomes important when the 'legitimate' way of transmitting and receiving knowledge is through the written word. And all that is written and 'sanctified' becomes sacrosanct- the truth!. For example, the Holy books of different societies are to different extents considered the embodiments of all that is true and inviolable.

If we extend this premise, then a new process has begun with the advent of the Internet. The Internet represents a new basis for projection and transmission of knowledge, that is, electronically in a virtual cyber-space. However, it appears to have no bearing in social settings, in language or in geography. It is technology driven. Can it be taken to be society-neutral and value-free?

Hierarchy of knowledge systems

The bases of the conceptual space do not seem to have any inherent hierarchy. In fact, the virtual knowledge that is projected into these spaces is essentially true and largely similar. The hierarchy attributed or assigned to the bases arises out of the hierarchy at the societal level. That is, since the basis has a direct connection with the society ‘owning’ it, any hierarchy amongst societies reflects on their bases. This hierarchy is most often imposed. The knowledge systems thus ‘acquire’ a hierarchy. One may define imperialism as a manifestation of the attempt to establish and perpetrate such hierarchy. Science provided the basis of post-industrialization imperialism and currently occupies the top position because of its pre-eminence and the ‘accepted’ assumptions that it is based on verifiable premises, is technology driven, has overbearing spread and reach and claims social neutrality. The Internet, then, represents a new and emerging form of Imperialism.

One may argue that one observes hierarchy in diverse spheres of thought and action, in physical and emotional experience and in motivation. If so, why would it not be reasonable to expect a hierarchy, per se, in knowledge systems ? The basis that provides the best projection will result in the best knowledge system. By best we mean that which stands the test of time, that which has universal appeal i.e.that which spontaneously draws more and more following. In short, that which is continuously moving towards the truth.

In order to understand these heirarchies in knowledge one needs to examine the **connection** between knowledge and ordinary life, a concept that is embodied in what has been referred to as *lokvidya*. Because an understanding of this connection will provide a clue to the direction that needs to be chosen in the pursuit of knowledge and of the action to be taken thereof.

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Illicit Knowledge in Network Society

A call for cyber feminism to crown “Ms. Network” much like the Ms. World beauty contests. Ms. Network is not whom you would expect the world’s most irredeemable mouse-on-hand internet junkie nor is she the feminist ethical hacker who is out to rescue the web damsels from falling prey unwittingly to the seductions of men whose penises are no more than the size of a thumb. “Ms. Network” is the resilient one who has withstood for the longest time being under surveillance, shadowed and stalked on the web. In the process she moved from being worried to being paranoid and then being isolated. Virtual isolation envelops into isolation from the real society, as the real society’s communicative capabilities become more and more virtualized. In her isolation, she has propounded the new subject of “cyber philosophy” that reflects on why and how cyber right has become a human right and how foucauldian insights on modern power could be extended to cyber power and the constitution of the “cyber subject” through the panoptican possibilities of the virtual web.

She contends that violation of cyber privacy is more than someone seeing through the window pane while you are under shower and much worse than someone opening the door and walking into your bedroom when you are making love to your girl friend when your wife is visiting her parents. Why? You may ask her and she will tell you that a single observer can only derive seemingly simple erotic pleasures of seeing you under the shower. A foggy window pane can hardly take one on a voyeuristic journey, while your friend’s illicit knowledge of your betrayal to your wife can at best lead to a blackmail of sorts. But peeping Toms and Janes in the cyber world do more than a voyeuristic journey or black mail. With the press of the “forward” button, they instantaneously can build up a sodality whose interests in prying the privacy of another builds up into a passion of sorts that allows them the perverse satisfaction of having participated in a gang rape.

Illicit knowledge thus has the potential of creating an illicit networked society where the commonality of their interest in the intrusion over another’s right and privacy deepens their sodality with increasing levels of intrusion and penetration. The question that Network Society raises is what norms and behaviour rules would constitute “decency” in this society and how can such norms of real society mirror and measure behaviour in the Network Society. Most gang rapists in the virtual world would obviously and hopefully not commit a gang rape in the real world. But do we withhold our judgement of the decency of a person until the act is committed or do we judge a person on the mentality they possess that is gleaned through speech and utterances and games they play.

Seeking justice in gang rape is a perverse apologetic for an irredeemable damage if such justice is at all available. But where is the netizen to seek justice from with so many likely cross border observers. In fact email surveillance is a new dimension of “cyber ethnography” or more properly “cyber fieldwork” with many simultaneous observers and a single subject each interpreting what goes on in the mind of the observed, her thoughts, opinions and action plans and ideas. Such illicit knowledge stealthily garnered, occasions several illicit interpretations both individually and collectively and these are fed back to frame the behaviour and action of the observed, for where there was no motive or purpose there would be no such surveillance in the first place.

Such feedback loops creates yet another illicit sphere of information that is not limited merely to spamming with or without a virus, worm or Trojan horse as attachment. If the feedback purports to elicit a certain behaviour or action, spamming the message through non existent URL titles or subject messages like “uraloser” or “seekfckfriends” are less effective than conveying the desired message through a paragraph or a few sentences that is likely to make the maximum effect. A spam by revealing the anonymity of the messenger makes it less likely that it is from god and therefore does not appear as “predestination”. Feed back then has to necessarily overflow from the virtual world of email to the daily predictions of Bejan Daruwalla on Rediffmail Homepage and the stars forecast in the print media through the Sunday weekly columns of “What the stars foretell”. Ma Prem Usha the Tarot card reader who is presumably getting paid by the newspaper for her weekly predictions may be shuffling only a finite number of cards where messages invariably need to get repeated and recycled over the many weekly cycles of a year. But individual members of the sodality can influence reporters and editors to use such columns to flag messages. Even titles of editorials could be used to flash the message although its effectivity is not instantly guaranteed but gets established over a time as the interpretative capacity of the targeted reader is sharpened through a series of context sensitive and context oriented messages that gets her antennas properly attuned to receive the messages.

Keeping the targeted reader ever attuned requires continuous honing of her interpretative skills and so its considered best to not only pry into emails on a daily basis to keep abreast of the daily ongoing communication of the targeted person, perhaps late at night, and pass on an appropriate message to the newsroom to carry a daily prediction in the newspaper’s daily forecast of what the stars foretell. Predictions such as “Today you will receive good news from afar” or “Keep your blood pressure under control” or “Good day to seek new opportunities” can be linked and correlated to recent email messages received by the observed person.

A spam that reads “Hey Guys, Get your manhood enlarged by 3 inches” is a call given by a cheer leader of the sodality for a perceived act of “bravado” by the observed as stealthily read from one of her emails. This clearly suggests the gender differentiation within the sodality. Porn messages are generally for the female subject that other female members of the sodality could as well enjoy and so goes the titles of spam messages “Hot Horny Young to middle aged Females”, or just “See Paris Hilton undress” or “Hot Celebs all naked” would carry URL of porn sites that one could click into. But where it is just a benevolent act of sharing cyber porn among members especially some of whom may be debarred from public access in their own countries, it would appear more innocent than if the intended female subject knew that her enjoyment of porn is being surreptitiously observed so as to frame her as perhaps an “immoral” character or a queer person. Like the 123 Greeting cards on the web freely available that indicate to the sender that the recipient has opened the e-card, these URLs indicate to the spam sender that you have visited the porn site.

It is possible to recruit new members into the sodality especially if they claim to possess the skills of an Indian snake charmer to catch the crocodile on the web. The crocodile is invariably a predatory member who has more odds stacked against him by the other players on the network. As the sodality continues its cyber espionage games indefinitely, there comes certain moments when members would want to reveal their or

other players identities through partial disclosures as when the predator gets identified by his national identity by some other member of the sodality through certain icons or brand names that immediately conjure in the observed subject the national identity such as for instance using “Rolex watches”, “Swiss Knife” or “Chocolate” for a Swiss national identity or “Kurta” or “Nehru jacket” for the Indian identity of a perceived predatory player.

Illicit sodalities are not bound by any principle of collective action and solidarity for there is no single interest that unites them in the first place or if it did the unstated interests are not only camouflaged but become more overriding than what is presumed to be the common interest. Also as the virtual rape game progresses in time, there is bound to be mutation of interests. Hence feedbacks need not be done by the sodality as group but by individual members of the sodality for their divergent purposes. Thus while one individual may use one print media for feedback purposes, another may elicit support of yet another newspaper if they have prior knowledge of the observed’s newspaper reading habits.

Given the multiplicity of interests in the illicit network, it is to be expected that there would be counter surveillance by the members themselves on what each interprets and how they think and act vis-a vis the observed target. This then leads to games within games where effectivity depends on garnering the maximum information and giving feedbacks based on assessment of strategies of others being incorporated into one’s own strategy. One spam message sent to the observed by a sodality member would for instance read “We can ship Rolex Replicas for Christmas” or “Get Rolex Replicas Cheap” and another could read “Rolex Watches Do not Read”. Soon the observed begins to suffer from a schizophrenia of sorts and behaves like the genius John Nash in the memorable film “The Beautiful Mind” wherein with newspaper clippings pasted all around him in his log cabin, he tries hard to decipher what he imagines are coded messages of cold war espionage.

The modalities of internet surveillance are many and so are the available software packages for spying and deterrence. But it is just simple to assume that there are technical possibilities accessible to competent people to ensure dispersion and multiplication of incoming and outgoing emails in one account into numerous other accounts that others could access as though it were their emails. Similarly it is now well known that keyboard activity while surfing the internet could be tracked via the servers by other machines located at distant places. Quite obviously surveillance and counter surveillance techniques need to be developed to combat real terrorism that is planned over the internet. Such possibilities can be put to numerous other uses as well. Increasingly newspapers are reporting similar possibilities of surveillance of communication through cell phones as well.

Email surveillance by employers are generally made known to employees and only those violating the rule are caught may be for moonlighting on the job, being in chat rooms furthering on-line romantic affairs during office hours, passing on company secrets through file transfers to corporate competitors or just sending resumes looking for better jobs. Corporates eager to market their products want to learn consumer’s tastes and preferences and keep track of the sites that net surfers visit through data mining cookies that gets sent to targeted surfers by tracking URLs, servers and email IDs. Espionage

activities by states and state agents so far had posited larger national and international interests that were delinked from the private interests of individuals. But the more dangerous possibility is the one of private surveillance of a single individual through the coming together of sodalities that keeps the person observed in the dark of the members of the sodality and their motives. The likely pervasiveness of such kinds of surveillance call into question the very notion of freedom and access in the network society that is meant to promote greater openness in society both real and virtual.

But what is more worrisome if not frightening is the kind of social relations and the construction of self that pervasive surveillance in society engenders. For one, network society does not stand apart and aloof from real society. With such kinds of surveillance and sodalities, social relations and everyday encounters will be characterized by mutual suspicion and mistrust. Social scientists have increasingly brought to light the role of trust in fostering relations and transactions in the reproduction of social system harmoniously. Few would have imagined the possibility of societies operating on suspicion and distrust as social commonsense even in individualistic and competitive scenarios that pervasive surveillance will engender. Correspondingly the presentation of self in everyday encounters would be marked by duplicity, feigning and pretension for one would never know if a decent person in the real world is really a decent person in the virtual world. If suspicion and duplicity characterize social relation and self in the post-internet world of instantaneous and mobile communication, then such multiple and shifting identities in the real and virtual world are in fact a precondition for survival.

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Sanskrit Knowledge & Social Discrimination

I have had occasion to study, for my doctoral research, premodern legal texts in Sanskrit that have to do with the regulation of knowledge. Specifically, these texts that I have considered as an archive for the first time in the historical scholarship on pre-colonial India, try to regulate the access of low-caste persons to Sanskrit knowledges that are considered intellectually authoritative and ritually prestigious. In my dissertation I have tried to present at length the arguments as well as the rhetorical strategies that these texts use to safeguard certain genres of Sanskrit knowledge from the curiosity or ability of sudra students, readers and listeners (we are talking about a culture of learning that is as much oral-aural as it is literate).

In the discourse of Sanskrit law, dharma-sastra, all rights are caste-based, but the entire argumentative edifice to this effect is built on the protection of rights to the Veda. It's amazing how graphically access is diagrammed, via precise mappings of the speech situation: who speaks, who listens, who mediates, who's shut out, what is spoken, which words are used, what registers of speech — it's all very carefully set out in the late medieval texts I have studied. Vedic knowledge is the most prized intellectual property, and thus rights to it are the most restricted relative to all other types of knowledge available in the premodern world of South Asia.

It would be useful to prepare a report on Sanskrit knowledge as the intellectual property of brahmins in South Asian premodernity. I am not suggesting, of course, that certain kinds of knowledge really *was* the property of brahmins. But the fact that it was theorized as being brahmanical property, to be safeguarded from attempted access by ritually inferior persons, is itself interesting. Even more interesting is the fact that such theorizations are found in dharma-sastra, i.e., on the site that is closest to what we now understand as the discursive space of the law. Potentially we have here a deep history of IPR in legal discourse on the subcontinent, or at least the possibility of arguing that such a history remains to be written.

I have also written, again in my dissertation, about how the prescriptive and normative statements of dharma-sastra are contested by the likes of Jotiba Phule and B.R. Ambedkar, who precisely try to bring prestigious and authoritative knowledges into the space of the commons, as well as make Sanskrit texts – or for that matter English texts – available to the public, which largely consists of sudras and ati-sudras, low castes and untouchables. This notion of a commons is an effect of modernity, which tends to disrupt the nexus between high caste status and

intellectual property, for the first time in India in the late 19th and early 20th centuries. It's very clear, such an attempted trespass, in the polemical writings of both Phule and Ambedkar that have to do with access to knowledge.

I frame my discussion of privileged knowledge in south asian premodernity in terms of the categories within IPR work, primarily –

(a)

property

a principle of ownership

a principle of exclusion

claims

value

(b)

public domain

the commons

open access

trespass

I would certainly be open to testing, using, deploying and if necessary discarding these categories for thinking about sanskrit knowledge, veda etc., in the legal texts that i have studied. Certain categories will translate across disparate historical and cultural contexts, some may not. I wouldn't want to impose a terminology that makes no sense before modernity – you can imagine the dangers in that kind of forced translation. We don't want to end up sounding like the advocates of rocket-science in vedic india or supercomputers in the indus valley. 'IPR in the discourse of dharma' could be a disastrous kind of position to take, if we are not really careful about our politics.

In what sense is knowledge of the veda 'property'? I can extrapolate several questions from there: whose 'property' – or 'intellectual property' – is it? how is the 'ownership' of a brahmin established? how are 'claims' over veda — and other valued texts — staked? how is the sudra shown as lacking a valid claim over such property? and so on. The rationale for restricting access to knowledge elaborated in my dharmasastra texts (and also in mimamsa as a system of vedic exegesis) is available to us for critique and debate and indeed rejection.

The other set of questions is also there for the asking: when Phule says let sudras perform their own rituals, without brahmin priests, what is he doing to sanskrit knowledge other than bringing it out of a zone of sacral exclusivity, into the public domain? When Ambedkar says that by relegating sudras and untouchables to a state of ritual pollution that excludes them from authoritative

knowledge, brahmins have dropped “an atom bomb” on these groups, what is he suggesting? I really love this image, coming as it does in 1946, right after Hiroshima: talk about knowledge being power! When Periyar burns the manu smriti, what is the symbolic politics there, if not a politics of knowledge? One way to read the non-brahmin struggle is precisely as the trespass into the realms of privileged knowledge permitted and indeed demanded by secular citizenship, by egalitarian values. that sanskrit knowledge subsequently becomes quite devalued in modernity is a different matter: Phule and Ambedkar are equally insistent on opening modern education to the lower castes and to untouchables. Both studied in English themselves.

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ज्ञान, राजनीति और भाषाई समाज

भाषा और समाज :

कम्प्यूटर-इन्टरनेट के आ जाने के बाद से भाषा का सवाल फिर से एक महत्वपूर्ण सवाल बनकर उभरा है। औपनिवेशिक काल के दौरान भाषा का सवाल महत्वपूर्ण बना था। साम्राज्यवादी शक्तियाँ उपनिवेशों पर अपनी सत्ता को मजबूत करने के लिये तरह-तरह के तरीके अपना रही थीं। उनमें से एक स्थानीय भाषाओं को मिटाने, तिरस्कृत करने, और बहिष्कृत करने की नीति भी रही। फ्रांस के कई उपनिवेशों में तो सार्वजनिक जीवन में लोगों से उनकी भाषा में पढ़ने-लिखने या बोलने का अधिकार ही छीन लिया गया था। परिणामतः दो या तीन पीढ़ी के बाद उनकी अपनी भाषा ही मिट गई। भारत में अंग्रेजों के राज में सार्वजनिक जीवन में अंग्रेजी भाषा को ही प्रतिष्ठा मिली। नतीजा यह हुआ कि सभी देशी भाषायें सार्वजनिक जीवन से बहिष्कृत होती चली गईं। दुनिया में जहाँ-जहाँ साम्राज्यवाद से मुक्ति की लड़ाई लड़ी गई वहाँ-वहाँ कम या अधिक अपनी भाषा का सवाल एक मुख्य मुद्दा बना। जगह-जगह लोगों ने अपनी भाषा की प्रतिष्ठा को अपनी स्वतंत्रता, पहचान, अस्मिता और स्वाभिमान से जोड़ा और अपनी भाषा को पुनर्स्थापित करने के प्रयास किये।

आजादी के बाद हमारे देश में स्थानीय भाषायें प्रदेशों के पुनर्संगठन का एक आधार बनीं। लेकिन इसके बावजूद आजाद सरकारें स्थानीय भाषाओं को अंग्रेजी के बराबर प्रतिष्ठा दिलाने में विफल रहीं। अंग्रेजी का महत्व बरकरार रहा। लेकिन ऐसा भी नहीं है कि अंग्रेजी के प्रभुत्व को लोगों ने मान लिया था। हिन्दी प्रदेशों से 'अंग्रेजी हटाओ' आन्दोलन उठा। इस आन्दोलन से हिन्दी समाज में आत्मविश्वास की लहर दौड़ गई। लेकिन आर्थिक शोषण की मार ने इस आत्मविश्वास को अधिक दिन टिकने नहीं दिया। औद्योगिक विकास का तेज दौर और साइंस की प्रतिष्ठा ने अंग्रेजी को वापस प्रतिष्ठित कर दिया। ज्यादातर हिन्दी प्रदेश औद्योगिक विकास के उपनिवेश बने, यानी सस्ते श्रम और प्राकृतिक संसाधनों के स्रोत बने, औद्योगिक प्रगति के हिस्सेदार नहीं बन पाये। यहाँ कोई बड़े उद्योग स्थापित नहीं हुए। यही हाल कुछ अन्य भाषी राज्यों का भी रहा। सामान्य लोगों ने औद्योगिक विकास की कीमत चुकाई। सामान्य लोगों की भाषा सार्वजनिक जीवन से बहिष्कृत कर दी गई।

परिवर्तन :

अब औद्योगिक युग खत्म हो रहा है और सूचना युग की शुरुआत हो रही है। यह नया दौर है। कम्प्यूटर-इन्टरनेट ने भाषा के सवाल को एक नये ढंग से महत्वपूर्ण बना दिया है। अब सूचना का संकलन और संगठन एक बहुत बड़ा उद्योग है। कम्प्यूटर-इन्टरनेट केवल एक नई तकनीक नहीं है बल्कि एक नई व्यवस्था है। दुनिया के

किसी एक कोने से सूचनायें उठाकर दूर दूसरे कोने में संचार माध्यम से ले जाने की क्रियायें मुनाफा कमाने का स्रोत बन चुकी हैं। सूचना ज्ञान भी है और बाजार का निर्माण भी करती है। इन दोनों ही भूमिकाओं में सूचना का भाषा के साथ घनिष्ठ सम्बन्ध है। किसी एक भाषा का सांस्कृतिक अथवा राजनैतिक प्रभुत्व सूचना के कारोबार में नकारात्मक माना जा रहा है। इस सबके बावजूद अंग्रेजी भाषा नई व्यवस्था का प्रमुख आधार बनी हुई है। हालाँकि अंग्रेजी भाषा बदल रही है, बदल चुकी है। यह अमेरिकी अंग्रेजी है। यह अधिक सहज और लोगों के करीब होने की कोशिश में है। व्याकरण के कड़े नियमों को तोड़ती हुई यह तमाम अन्य भाषाओं के साथ मिल-जुलकर चलने का रुख अपना रही है। बेशक अंग्रेजी का वर्चस्व अब भी बना हुआ है, बढ़ा भी है लेकिन अन्य भाषाओं के साथ उसके व्यवहार में परिवर्तन आया है। यह क्यों हो रहा है? क्या इससे अन्य भाषाओं के विकास के लिए रास्ते खुलेंगे या दूसरे शब्दों में, अंग्रेजी न जानने-समझने-बोलने वालों के लिये क्या नये रास्ते खुलेंगे? क्या भाषा का सवाल पहचान की राजनीति की सीमा से बाहर निकल जायेगा? क्या यह शोषित तबकों के हित की राजनीति को खड़ा करने का आधार बन पायेगा?

हिन्दी का अंग्रेजीकरण :

हम हिन्दी भाषा और हिन्दी भाषी लोगों को लें तो यह कहा जाता है कि हिन्दी भाषी लोगों की संख्या बहुत ज्यादा है। दुनिया में हिन्दी बोलने वाले लोगों की संख्या दो नम्बर पर है। चीनी बोलने वाले लोगों की संख्या सर्वाधिक है। आज यूरोप और अमेरिका के कई प्रतिष्ठित विश्वविद्यालयों में हिन्दी पढ़ाई जा रही है। हाल में अमेरिका में ड्यूक यूनिवर्सिटी में हिन्दी पढ़ाने की माँग को लेकर भारतीय मूल के छात्रों ने आन्दोलन तक कर दिया। महानगरों के फैशनेबल युवाओं में हिन्दी और अंग्रेजी मिश्रित बोली (हिंग्लिश) की प्रतिष्ठा है। हिन्दी साहित्य का विश्व की अन्य भाषाओं में अनुवाद हो रहा है और उसे प्रतिष्ठा मिल रही है। हिन्दी के कुछ साहित्यकारों और विशेषज्ञों को विदेशों में जाने के अवसर पैदा हो रहे हैं। मीडिया ने हिन्दी के लिये बेहद लुभावना और विस्तृत क्षेत्र खोल दिया है। यह क्षेत्र नौजवानों को आकर्षित कर रहा है। कला, विशेषकर संगीत और सिनेमा का क्षेत्र तो लगता है जैसे क्षेत्रीय भाषाओं के लिये जीवनदान लेकर आया है। हिन्दी और हिन्दी से जुड़ी बोली और भाषाओं के लिये रचना के लिये नये क्षेत्र खुले हैं। ये सभी क्षेत्र फैशन, चमक और तौर-तरीकों में अंग्रेजी (अमेरिकी) दुनिया के नक्शे-कदम पर चलने की पूरी कोशिश और तैयारी में है। ये हिन्दी उन लोगों की हिन्दी है जो अंग्रेजी भी जानते हैं। ये उन लोगों की हिन्दी है जो सोचते हिन्दी में हैं लेकिन उनकी चाहत और आदर्श अंग्रेजी दुनिया के हैं। ये अपने जीवन के आधार अंग्रेजी-अंग्रेजियत की दुनिया में देखते हैं। यह हिन्दी एक अलग दुनिया रचती है। इसे बोलने वाले लोग अमेरिकी दुनिया के प्रभाव क्षेत्र में विचरते हैं। इनके लिये हिन्दी इनकी पहचान और विरासत है। इनके लिये हिन्दी पराये देश और पराये लोगों के बीच अपनेपन का सहारा है। अपने देश में अपने लोगों से खुद को अलग बनाये रखने का भी सहारा यही हिन्दी है। लेकिन हिन्दी के अन्ध प्रेमी हिन्दी के इसी चमकदार विकास से बेहद प्रभावित हैं।

जमीनी हिन्दी :

दूसरी तरफ हिन्दी क्षेत्र में बसे लोग जो अंग्रेजी-अंग्रेजियत से दूर हैं हिन्दी के इस चमकदार विकास से खुद को बहिष्कृत हुआ पाते हैं। ये हिन्दी के इस विकास का कोई लाभ नहीं उठा पाते। क्योंकि इनके लिये इनकी हिन्दी जीवन है। जीवन से अलग भाषा कैसे हो सकती है? और भाषा से दूर जीवन, जीवन कैसे कहलायेगा? हिन्दी क्षेत्र के लोग भाषा के सवाल को जीवन के पुनर्संगठन के सन्दर्भ में देखते हैं, समाज के पुनर्संगठन में देखते हैं। खुद की और मनुष्य की सक्रिय पहल, भागीदारी और रचनात्मकता में देखते हैं। इसलिये ये शिक्षा-क्षेत्र में, परीक्षाओं में, हिन्दी की अनिवार्यता की माँग करते हैं, शासन-प्रशासन में हिन्दी का आग्रह करते हैं, सार्वजनिक गतिविधि और व्यवहार में हिन्दी की चाहत रखते हैं। इन स्थानों और क्षेत्रों में हिन्दी भाषा का व्यवहार उनके जीवन को सरल, सक्रिय और सृजनशील बनाता है; उन्हें मनुष्य की हैसियत से जीने का आधार देता है। इस हिन्दी की दुनिया ही अलग है। इसे बोलने वाले लोगों की दुनिया अलग है। ये समाज के वंचित, शोषित लोगों की दुनिया है। यह हिन्दी मनुष्य से शोषण, उत्पीड़न और अन्याय से लड़ने की सतत माँग करती है। इस दुनिया की हिन्दी मनुष्य के सम्मानपूर्वक जीने लायक दुनिया बनाने की ऊर्जा पैदा करती है। हिन्दी सिनेमा, हिन्दी मीडिया और हिन्दी के विशेषज्ञ हिन्दी के बल पर धन और शोहरत बटोरते हैं लेकिन हिन्दी आन्दोलन में कभी भी सामने नहीं आते और न हिन्दी क्षेत्र की समस्याओं पर उठी हलचल या आन्दोलनों में हिस्सा लेते हैं।

हिन्दी और राजनीति :

हिन्दी क्षेत्रों की राजनीति भी भाषा के मुद्दे पर मौन रही है। हालाँकि सत्तर के दशक के बाद से इसके लिये अनुकूल स्थितियाँ बनी थीं। पिछड़ी और अनुसूचित जातियों की राजनीतिक दखल का बढ़ना और फिर उनका सत्ता में आना एक महत्वपूर्ण परिवर्तन था। पिछड़े वर्गों और शोषित तबकों में उत्साह और सृजन का उफान उठा। इनकी आशा और आकांक्षाओं का प्रतिनिधित्व करते लालू प्रसाद यादव, मुलायम सिंह, मायावती, कल्याण सिंह जैसे नेताओं के दल सत्ता में आये। इनकी सरकारों ने शुरु में ऐसे कई कदम उठाये जिनसे पिछड़े और वंचित तबकों के एकजुट होने का आधार मजबूत हुआ लेकिन बाद में ये दल राजनैतिक समीकरणों और उठा-पटक में फँसते चले गये। इन दलों से उम्मीद थी कि इनकी सरकारें भाषा के मुद्दे पर सकारात्मक रवैया अपनायेंगी, अपने समाज की सक्रियता को बढ़ाने में हिन्दी की भूमिका को पहचानेंगी। लेकिन सत्ता में आने के बाद इन्होंने भाषा के मुद्दे पर कोई पहल नहीं ली। अंग्रेजी की प्रतिष्ठा बनी रही। पढ़े-लिखे लोगों की, सवर्णों की, अंग्रेजी दाँ लोगों की शासन पर पकड़ बनी रही। प्रगतिशील दलों ने भाषा के सवाल को अधिक महत्व नहीं दिया। हिन्दी को संस्कृति और पहचान से बाँधकर देखने वाले दलों ने हिन्दी के सवाल को अपनी सेहत सुधारने के लिये ही उठाया।

भाषा का मुद्दा :

इन दो दुनियाओं की हिन्दी के बीच कैसा रिश्ता है? एक दुनिया की हिन्दी फैशन की हिन्दी है, अंग्रेजियत की हिन्दी है, अमेरिकी संस्कृति के पीछे चलने वाली हिन्दी है। दूसरी दुनिया की हिन्दी लोकज्ञान से लबरेज हिन्दी है। यहाँ पहली दुनिया की हिन्दी दूसरी दुनिया की हिन्दी से ताकत प्राप्त करती है जबकि दूसरी दुनिया की (हिन्दी भाषा क्षेत्र की) हिन्दी अपने बल पर खड़ी है। हिन्दी क्षेत्र को हिन्दी का सवाल ज्ञान, भाषा और पूँजी के बीच सम्बन्धों के सन्दर्भ में सामने लाना होगा ताकि एक ऐसी राजनीति उद्घाटित हो सके जिसमें भाषायी समाज नेतृत्व का सपना देख सके।

भाषा, ज्ञान, पूँजी :

आज की वैश्विक सत्ता का केन्द्र अमेरिका में है और उसकी सत्ता का आधार निस्संदेह अंग्रेजी भाषा में है। सूचना युग साइंस को ज्ञान के एकमात्र आधार की मान्यता नहीं दे रहा है। औद्योगिक विकास के दौर (औद्योगिक युग) में साइंस को एकमात्र ज्ञान का दर्जा दिया गया था। सवाल यह है कि सूचना युग में ज्ञान का प्रकार क्या है? अभी तक जो सामने आया है उससे लगता है कि साइंस को सर्वोच्च प्रतिष्ठा देने से सूचना युग के विकास में बाधायेँ खड़ी होती हैं। सूचना युग में साइंस के तर्क व मूल्य के दायरे के बाहर ज्ञान के अन्य प्रकारों से भी सूचना का निर्माण हो रहा है और यह एक बहुत बड़ा स्रोत साबित हो रहा है। इसके चलते संगीत, सिनेमा, चित्रकला, वास्तु, तकनीकी, स्वास्थ्य-रक्षा, उद्योग, कृषि, मीडिया आदि सभी क्षेत्रों में सूचना का असीमित भण्डार दिखाई देने लगा है। इस भण्डार से सूचनाओं को छाँटना और उन्हें मुनाफा कमाने योग्य संगठित करना एक बहुत बड़ा उद्योग बन चुका है। इस उद्योग के लिये सूचना का संगठन और संचार कम्प्यूटर-इन्टरनेट के माध्यम से किया जा रहा है। सूचना नये युग का एक प्रमुख संसाधन है और कम्प्यूटर-इन्टरनेट से संगठित सूचना पूँजी का सबसे प्रभावी रूप।

सूचना के संगठन के ज्ञान को सर्वोच्च प्रतिष्ठा मिल रही है। इसे ज्ञान-प्रबन्धन कहा जा रहा है। अब धीरे-धीरे शिक्षा के उच्च संस्थानों में साइंस की पढ़ाई कम होती जा रही है और ज्ञान-प्रबन्धन की पढ़ाई को सर्वश्रेष्ठ माना जा रहा है। इंजीनियरिंग के शिक्षण संस्थानों में पाठ्यक्रम बदला जा रहा है। साइंस के कोर्सेस घटाये जा रहे हैं और उनके स्थान पर ज्ञान प्रबन्धन के विषय बढ़ाये जा रहे हैं। कहने का अर्थ यह है कि सूचना युग का ज्ञान साइंस से भिन्न है और इस ज्ञान की यह जरूरत है कि वह दुनियाभर की देशी ज्ञान परम्पराओं से एक ऐसा रिश्ता कायम करे जो तिरस्कार पर आधारित न हो (जैसा कि साइंस का था) बल्कि उसके अधीन बने रहने का हो। यह एक ऐसा गैर-बराबरी का रिश्ता बनाना चाहता है जिससे देशी ज्ञान का निर्बाध दोहन होता रहे। ज्ञान के प्रकार में इस परिवर्तन के चलते अंग्रेजी भाषा में परिवर्तन हो रहा है, उसके रुख में बदलाव आ रहा है। इस संदर्भ में हिन्दी भाषा और हिन्दी समाज की गति

को देखना होगा। दो दुनियाओं की हिन्दी के बीच सम्बन्ध को भी इसी संदर्भ के अन्तर्गत समझना होगा।

हिन्दी क्षेत्र की हिन्दी लोकज्ञान यानी लोकविद्या से लबरेज हिन्दी है। ज्ञान की ताकत इस हिन्दी में है इस बात की चेतना का विकास किसी भी लोकहितकारी कार्य अथवा राजनीति के लिये आवश्यक दिखाई देता है। इस ज्ञान का दोहन कर साम्राज्य अपनी ताकत बढ़ाना चाहता है। इसी ज्ञान को देने से इनकार अथवा असहयोग का कोई प्रकार, देशी समाज की ताकत और सत्ता को स्थापित करने का आधार भी बन सकता है। ऐसा कहना शायद बहुत सरलीकरण है लेकिन इसकी संभावना से इनकार करना लोकहितकारी राजनीति को खड़ा करने में बाधा है। इस भाषा के पास लोकविद्या का समृद्ध भण्डार है। इस भाषा के लोगों का क्षेत्र शोषण का शिकार रहा है। अन्याय से लड़ने की एक समृद्ध परम्परा भी है। ऐसे में सूचना युग में हो रहे परिवर्तनों के संदर्भ में शोषण से मुक्ति के संघर्ष के लिये सही मुद्दों की व्याख्या करना एक महत्त्वपूर्ण कार्य है। भाषा का सवाल भी इसी के अंतर्गत आता है।

– चित्रा सहस्रबुद्धे
विद्या आश्रम



Lokavidya is a term understood by the speakers of most of the Indian languages. Loka means people, it also means world. Vidya is knowledge with wisdom etc. It is understood somewhere in the interaction of knowledge, science, art, language, philosophy, wisdom, reason, faith etc.

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