

"The Metaphors of New Media Technology - where do we fit in the concept of cross-cultural collaborative learning?"

(Presentation for CADE 2000 by Dr. Ajanta Sen)

1

Introduction:

In a passionate outburst about how 'alive' the Web can get, Kevin Kelly, Executive Director of 'Wired', had said in 1995: "I have experienced soul-data through silicon". Way then, this might have been considered an overstatement about a technology's capability, and dismissed as being a trifle spooky.

But five years down the line, one now knows how to interpret the merit of that outburst. Basically, Kevin Kelly was attempting to cast the boundaries for viewing the Net not merely as a data-structure, which, of course as we all know, has the potentials to connect up businesses world wide. Kelly was, in fact, daring us to move beyond that and look at the Net as if it had the capacity to "come alive" and animate itself into something that almost had a life of its own.

2

The Web's outreach - for people or for technology-fulfillment?

With little hesitation about getting as passionate about something, which after all, is a mere tool of convenience, we would like to place the genre of the Project somewhere within the spectrum of information, entertainment, education, enterainment, infotainment, infocation and edumation. Almost anything actually that, in turn, could make a research-project move out of the university precincts, especially given the fact that the Internet is one technology that has the potentials to actually bring both dreams and realities at the doorstep of the common man.

And, therefore, most importantly for us, Project Solar Eclipse'99 attempts to make sense out of the claims that are already beginning to sound cliched.

Isn't it commonplace to say that the Web metaphorically has the potentials of a superhighway, in a way that could include along its trajectory, the various utilities for a given day - one's home, one's office, the playground, the gym, the casino, or even conceivably, one's own version of the carnival?

So what does that say? Quite simply, that "as we design technological systems, we are, in fact, designing sets of social relationships" - a commentary on technology that was made by social scientist Cooley way back in the early eighties. Which safely makes us, in turn, say that the Solar Project has got more to do with people than with technology. That, in its attempt to experiment with the

Networking/computer-mediated technologies, the Solar Project seeks to understand the ways that technology can be made to transpose itself onto the everyday spaces of the generic 'everyman'.

Ladies and Gentleman'.....

3

What is different about the Web on the Solar Project?

The CSCW technology

In its own way, Project Solar Eclipse'99 recognizes the Web to be a powerful device. It is a device that follows in the true spirit of the WWW being able to connect up the world, which was exactly how it was envisaged by its founder Tim Berners-Lee from the CERN labs in Switzerland in 1994, which was exactly a year before Kevin Kelly made that remark about the soulfulness of cyberspace.

And what is it that makes the use of the web-based technology for the Solar Project different from the conventional use of the Internet? Very simply by the fact that the Internet on our own project applies itself as a collaborative environment through the use of interaction and interface design technology, in recognition of the Web as a powerful facilitator for the convergence of ideas and activities.

Presently, there are two broad categories of Web applications. While the conventional use of the Net, by and large, restricts itself to the conventional tasks of resourcing and upgrading data structures. A collaborative environment through the creation of collaborative work spaces, on the other hand, is constructed with the help of the CSCW technology (which is an acronym for computer-supported co-operative work).

In other words, the CSCW works effectively towards the express purpose of developing "human intellectual production". Which is a strong derivation borrowed from the CHI'97. Which, in turn, is the biennial Computer Human Interface conference that dwells on Human Factors in Computing Systems, and where it was assumed that any experimentation that actually attempted to employ collaborative work spaces could be signaled as a collective engagement with 'inventing the future'.

4

What is the Project about?

As an experimentation with the computer-mediated technologies' potentials to connect up distantly located communities with one another through collaborative work spaces, the Solar Eclipse'99 Project attempts to understand issues related to the use or the abuse of the new media technologies. With FCA, UK and IIT, Bomby, India as principal collaborators on the project, the issues that have begged

5

for investigation, among others, have been the outcome of cross-cultural exchanges via the networking technologies or the exclusionary tendencies of the emerging technologies towards certain user-groups consequently leaving them technologically vulnerable. With children and design students as its focus so far, the project features a set of 'events' that were made possible via a set of design and technology initiatives that remain pioneering in the way they have been harnessed towards creativity-related goals/tasks.

The Project's mandate(s):

Our Project mandates us to explore and experiment with three major issues that have remained hidden beneath the obvious excitement of the arrival of this new technology.

Firstly, it has been the project's intention to create structures that would get communities from around the world, especially those located at great physical distances from each other, very likely from different countries and different cultures, to connect up and collaborate with each other over shared ideas and intentions through pre-designated tasks.

Secondly, to be able to work towards creating an extension of the 'physical' from the 'virtual'? And then, having attempted to understand the implications of the 'identity' of such physically available products. In other words, how does one create a physical product out of the virtual, and then, having collaborated with members from distant locations with different cultural setups to create such products, how does one define the identity of such globally-generated physical products that have been enabled through virtual exchanges? Obviously this has deep implications for corporate marketing in the arriving millennium, when more and more products will begin to get produced in federated setups worldwide for reasons of economics, and yet with the world a shrunken place, what could be more tempting than to leverage the cultural identities of these products as the USP for the conglomerates that would be controlling such collaborations, and which are already beginning to subsume the prevailing business scene?

And thirdly, it has been our intention to include within the folds of the new media technology, more numbers and more categories of "new audiences", a term coined by us to indicate technologically-vulnerable groups of users - the so-called "technology-illiterates" that are unlikely to become part of the computer-mediated technologies in the conceivable future. User-groups such as street children, artists, artisans, housewives, fisher folk, dyslexics and so on.

But even beyond this question lies another that could almost begin to sound like a piece from a science fiction. In our engagement and enthusiasm with the virtual, are we not making ourselves disappear? And I use the following scenario-building to describe our apprehensions. Five hundred years from now, conceivably with the

disappearance of the present human civilization and the arrival of a new one, what could be the basis for understanding the remnants of a disappeared past? If, in our hurry to subsume the realm of the 'physical', we literally destroy it through a primacy of the virtual, are we going to be able to leave behind us any physical artifact worth the name as signatures of a civilization long past? This battle of the atoms vs. the bits and the bytes, as Negroponte from MIT's Media Lab reduces the physical and the virtual into, is not just a romantic threat, it's real.

6

Is the Web actually an 'alive' entity? How does one reach the altered states of experience?

When the Project's very first award - the Macromedia Dream weaver Award - happened with the pilot 'event' in Feb'98, the overwhelming thought on everybody's mind was one of 'weaving dreams'. It forced us to reflect upon the intrinsic value of the Net and the basic drive towards this value system.

And the answer that came up was not what is usually offered as the overarching reason for the Net's revolutionary quality, viz., its economic viability. The answer to this new paradigm of communication, that seemed to hold the promise or the threat of a world shrinking before one's eyes within a matter of no more than minutes or seconds at the press of buttons, was in fact the Net's innate ability to come "alive".

Intrinsic to the project's workings remains the fact that the project revolves intrinsically around a major technology-premise viz., the CSCW. And how does the CSCW work? It works within an abstract concept of space that I have termed the Webscape, that is otherwise confusingly uniform and remains completely undifferentiated, but for the factor of time, that lends it its key textures.

The Net and the Web..... There is an essential distinction embedded in the new media technologies that we need to highlight here. It is the difference between the Net and the Web. According to the inventor of the WWW, Tim Berners-Lee, the Net is a connection of computers through the cables. The Web, on the other hand, is an abstract space of information.

One way to understand this space and how time enters the canvas of the Webscape plays an interweaving role within the Webspace is, if we were to use the concept of 'journeys' as a metaphor for traversing the 'Webspace'.

By borrowing from real life the metaphors of the 'journey' and the traversing of large distances across 'time zones' (since so much of the Web is actually about using metaphors) could we hope to understand the functional mapping of the 'Webscape'?

It means that if one were to decide to move across the Webspace by undertaking journeys it would have to amount to a kind of altered

state of experience rather like a transformation which would remain in contrast to moving from one location to another more in a manner of translocation.

So the next question - do all movements/transactions on the Webspaces amount to having undertaken a journey?

No, journeys are movements in real life when one feels the movement/texture of time - rather like when one begins to feel the palpability.

And that happens only when one travels relatively long distances (usually to other countries and therefore to other cultures), and is hence confronted with time zones.

Bringing us to our next question: when, for example, does one undertake a journey across the Webspaces?

Or, is all of the Webspaces about journeys?

No. Not all of it. It is only at the more complex levels of the technology's use does the need for a journey become apparent/necessary and leads us into altered state experiences.

7

Is it the creativity-driven applications made possible by CSCW that makes the Web 'alive'?

This is where arises the question of the technology-levels of Web-application as a correlation to when one undertakes a journey:

(i) At the very first level of the web technology use/application there is the information level. Which is roughly equivalent to the data exchange level - which remains one of the most widespread levels of the Web's use today. The best metaphor for that level would be the library. One travels to a library to gather data/info. But that is not necessarily travelling in the sense of undertaking a journey - no matter how far away the lib might be located. That is more like translocating oneself.

(ii) Then there is the interaction level, which is the next level of web technology application, at which level one begins to articulate or manipulate the information one has received from the lib with someone else with mutual interest/use for the information. This is when the need and the process of a dialogue sets in. The moment there is dialogue (metaphorically), there is an element of dynamism introduced into the system. This is when information from the lib is ready to be leveraged either for journeying/travelling or for other applications. This is a matter of dialoguing.

(iii) At the third and the most sophisticated level of Web-use arrives the collaborative level. This is when the process of exchange and interaction ripens into exchanges and interactions with a focussed agenda - usually to 'create' something through mutual exchanges and interactions. This is when one sees transformation of something into something.

(The difference between interaction and collaboration is that while one could endlessly interact or 'chat', it is when one begins to leverage all the 'chatting' to convert the information and ideas into something that one can expect transformation. Until then, the

process continues to be characterized by translocation of information and ideas.)

It is at the level of transformation that dynamism reaches its peak/crescendo, and 'movement' is of the essence.

And with movement now, one is most likely to encounter and experience 'time'.

The question now is why does one journey on the Web? It could be to access something known or the unknown. For example, if we were to go cross-cultural in our desire for knowledge.

Which is why we extend the metaphor of the journey on our project to include learning-driven exchanges from milieus that are relatively unknown to us - the concept of cross-cultural since the Web is potentially one of the most economical ways of reaching far and unknown vistas.

8

How does this technology get transferred on to everyday spaces?

Examples of Project 'events':

While these remain issues at the broadest level of abstraction, at the crux of the project lies the fact that our agenda to create "new art, new audiences and new experiences" through the computer-mediated technologies. Obviously, there are practical determinations that have given the mandates sharper focus with the practical progress of the project over the last year and a half. And so, we now get on under the skin of the project, as it were.

The first question that arises here is about the Project-title itself.

The reason it was called Solar Eclipse'99 is because here was a project that wished to use the universal context of the sun (the keeping with the idioms of the WWW and cross-cultural connectivity). And related to the sun, the complete solar eclipse that was predicted for the 11th of Aug'99).

Othe question was: on this given occasion of a universal cosmic phenomenon, could we create a "daisy chain" of communities along the eclipse's line of trajectory by means of the computer-mediated technologies? And since the first land mass on the straight-line trajectory of the eclipse was going to be UK's Cornwall and the last land-mass India's Western and Eastern India, beyond which the phenomenon was going to disappear into the Bay of Bengal, the partners collaborating on this project were quite aptly the Falmouth College of Arts (FCA) - a design university located in Cornwall - and the IIT, Bombay located in Wn India.

FCA and IIT, Bombay, across a little over a year, have engaged themselves with testing out their three-point mandate through what we term as 'events', which have usually taken the form of short outbursts of spontaneous project-activities conducted through synchronous exchanges supported by more prolonged and strategically-planned activities conducted through sets of asynchronous exchanges across the networks. By the networks we mean both the conventional networking technologies such as

9

telephone conferencing, fax and email as well as the 'emerging' ones represented by the Internet.

In our scheme of affairs (show chart) you will notice that

In conclusion:

*When, for example, does one undertake a journey across the "webscape"?

*Or, is all of the webscape about journeys?

*No. Not all of it. It is only at the more complex levels of the technology's use does the need for a journey become apparent/necessary.

(4)Conclusion:

In conclusion, an overwhelming thought that remains on our minds is the cyberworld's present preoccupation to 'forecast' reality (in a rather godlike fashion), in opposition to the conventional human attitude instead to 'respond' to reality. In that sense, there has been a certain tendency for us to glamorise the potentials of the cyberworld, as is often the case with a new technology, and consequently in that rush, the danger of overstating the technology's deliverables. It is most certainly underwritten in our undue haste, for example, to write-off the conventional technologies that depend more on the 'tangible' rather than on the 'virtual'. But, what is often not remembered is the sobering thought that it is the more tangible face of the networking technologies that have the capacity to produce at the end of the day a certain 'physical' vestige of our everyday living.

However, the wonders of the Web as a gateway to cultures continue to help us weave dreams. While at the same time admitting that in this experimentation with network technologies' humanising face, the set of design and technology initiatives that we have managed to create could actually tend to be avoided by the mainstream for fear of failure of delivering. And for that same reason some of the initiatives could remain untried and untested for a while. But equally, on the face of it, these initiatives could also carry along with them a sense of the unvanquished. And that's a feeling worth fighting for.

At the end, it could be like walking into a dark tunnel and remaining there for the sheer love of the excitement of participating in the discovery of the end of the tunnel. For us, that excitement has come through the joyous discovery of collaborating with potentially unknown frontiers of knowledge-systems vested in faraway cultures, the excitement of connecting up with unknown people without fear or favour of offending, the excitement of the flavour of a finished product borne out of time-bound and reciprocal exchanges. And so, in that sense, the project does not claim to offer solutions except to ask questions such as technology for whom and technology for what? But as they say, sometimes the answers could verily lie in asking the right questions.

Thank you.

The very first of the over hundred awards won by Project Solar Eclipse was at the time of the Project's pilot 'event' in Feb'98. This award, called the Macromedia Dreamweaver Award was given to Project for its very creative use of the Community Interaction models through the Internet:

If we looked at the structure of information paths through the net, we could decipher different ways in which people interacted with each other. While the norm is for the interaction amongst communities to take place within the same location as well as (this interaction) conducted asynchronously; it is entirely possible, on the other hand, to envisage the interaction of communities located at points widely separated from each other by physical distances to be interacting with each other synchronously, i.e., simultaneously during the same given time span.

Model I:

Communication is exchanged between users located between two locations A and B.

both A and B carry out a particular task by exchanging information between each other. It could be the case where inputs are essential from both the sides.

Ex1 Both A and B build kites by exchanging information from/with each other. (A strong case in point for accomplishment of industrial design-related tasks - tasks that carry strong inputs of ideation and skills - and the exchange of which could be said to be mutually beneficial for designers working in collaboration with one another, but on account of the distances are not able to work together in physical association with each other).

Model I

Again, communication is exchanged between users located between two locations A and B.

- A provides inputs for B with which a given task is carried out and B provides inputs for A with which A carries out the task

Ex 1 the pilot project towards building a collaborative mural had school children at A (Bombay) build a mural with information sent by B (Cornwall), and B (Cornwall) building a mural from the information sent by A.

Model II:

Communication is exchanged between users located between two locations A and B with a whole host of a community of Net-users either watching in or participating in the event. A version of Dumb Charades could be done over the Net to infuse elements of game-playing with the clues arriving from the observing participants as inputs for the given set of problem-solving(?).

Model III:

Communication is exchanged between more than two locations, maybe between A, B and C.

A provides inputs for B with which a given task is carried out, B provides inputs for C with which another task is carried out and C provides inputs for A with which a given task is carried out

Ex1 could be that housewives at A (Turkey) provide cooking recipes for B (Bulgaria) and housewives at B provide cooking recipes for C (Brasil) and those at C in turn provide cooking recipes for those at A (Turkey). Consequently, all of the participants cook food based on inputs from the other in the exchange-chain and in the process, in addition to getting around to interacting with each other. In the metaphor of the Chinese secret where a given story when retold or recounted across generations of listeners could in fact end up in a version far removed from the original, the potential for Turkish food e.g., becoming something quite pleasantly different in its sojourn across the European and South American cultural frontiers and ending up as a distinct identity of international proportions (as in world music), is a prospect well worth nurturing and exploring.

Model IV:

Communication is between location A and a multiplicity of locations represented by a whole lot of users connected to the Net

A task or event could be carried out at A by getting Net users to participate in the progress of the event.

Ex1 In a kind of a Virtual Celebration, something like Holi (or even the Spanish Carnival with the help of all its associated festival paraphernalia - masks et al) being celebrated over the Net with virtual colours being splashed. For example, a Net-user sending in his photograph to A at the virtual site of Holi, and the photograph is then sent back to the Net-user with a splash of Holi colours in the particular way that these colours are splashed.