

Title:

Crossing Borders in a Connected World - exploring an idiom of translation defined by sensory-technology-media convergences in an emerging networked landscape

*(UGC National Seminar: 'Transcending Borders and Cultures: Translation and Interdisciplinary Studies', Baselius College, Kottayam, Kerala, 26-27 Mar '07)*

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### ***(1.0) Introduction - a discourse on translation in the land of the dynamic gateway (Kerala):***

In an anthology on writings from Kerala titled 'Where the Rain is Born' (Nair, 2002), it is said that: "The southernmost part of India was born when the mighty Parasuram - sixth avatar of Vishnu - threw his battleaxe to carve out the territory that would henceforth be his. And thus began the story of Kerala, the land of coconut palms ('ker'), backwaters and lagoons."

Amidst an imagery as evocative as this, it is tempting for me to continue: into this idyllic landscape came travelers from distant lands, crossing the seven seas to trade in spices, silks and Chinese porcelain ware. Carrying in messages of religions - ancient and new, carrying out messages of culture and humanity. And thus was born one of the oldest surviving cradles of confluences for thoughts, ideas, values and cultural sensibilities.

The difference between the two accounts from the above is that, unlike the novelist's tale of the birth of Kerala, the tales of facilitation of cultural influxes into Kerala are no myth. Surely, therefore, Kerala must know the essence of what it is to be a gateway land, and yet, to be open enough not to act as a gatekeeper to the flow of knowledge and influences. And surely, no construct of borders can be outside of her reach of comprehension.

Because, a long time ago, Kerala had already displayed to the world a marvelous variant of globalization - one where we cross borders not to conquer lands, but to conquer hearts, minds, intellects and appetites by specifically 'translating' new ideas to enrich existing frameworks. It is, therefore, apt that we should locate, in God's own country, any discussion on of how to 'translate' what we translate.

Ladies and gentlemen, it is an honor to have been invited by the Baselius College, Kottayam (Kerala) and its Post-Graduate & Research Department of English, to make a presentation at this UGC-sponsored national conference called 'Transcending Borders and Cultures: Translation and Interdisciplinary Studies' (UGC, 2007).

It has always been my dream to share space with intellectuals and thinkers from a land that, among other attributes, is now known to have nurtured a hundred percent 'literate' population, an accolade of no mean stature in the context of India.

### ***(2.0) The emergence of a technologically mediated new world order - the rationale for an alternate paradigm of translation:***

In this paper, I hope to be able to argue out the case for an alternate idiom of translation - one that has its moorings outside of the conventional school(s) of translation that are co-terminus in connotation with linguistically defined geographies. An example of this would be Malayalam, which originates from and inhabits in Kerala as well as residing outside of its geographical boundaries wherever Malayalam is spoken by anyone. Or, French and its variants, residing largely in France, Switzerland, Luxembourg, Mauritius and the Francophile African and Caribbean nations.

In the backdrop of the established, mature, well-rounded paradigm(s) of translation that follow extremely well-laid out precepts with clearly-defined terminologies such as 'source' and 'target' language, the aim here is to introduce the contours of an alternate paradigm. One that requires us to cross borders without losing identities since these are not spaces that are physical but are spaces that are virtual, mental and notional, and are strictly defined by the rules of the emerging networking technologies.

In a networked world such as this - one that threatens to flatten out cultural differences today (Friedman, 2005) - the fluidities and uncertainties unleashed by the intangibility of non-physical spaces now make it imperative for us to equip ourselves with new norms for apprehending languages. Arising as they do from the intervention of the new media technologies, and these being of such recent origin (from just the past decade or so), have arguably caused themselves to be standing outside of the comprehension of the everyday man.

Where, hitherto, in a world with linguistic boundaries co-terminating with geo-political ones, the matter of apprehending the incomprehensible was quite easily resolved through the conventional process of translation, where 'translation' itself was an act whose main objective was to facilitate the process of unraveling the mysteries of alien speech and text.

Under the changed set of circumstances, the question for us is: can we now achieve the act of translation differently in a networked world where we are faced with two new developments that are essentially technologically determined, and which strongly suggest the need for an alternate paradigm.

The altered/emerging conditions are as follows:

***(2.1) A networked, flattened world and an emerging interest in the cultures of the others:***

In spite of, or because of Friedman's assertions about a world getting defined by flattened-out identities through migrating markets and federated work spaces, cultural references have become heightened simply because people now have easier access to other cultures through the Net even without having to undertake physical travels. And for various reasons, connected to the migration of markets and the need for the right kinds of information transfers arising out of this kind of networked access, another's culture is something that has started affecting people's lives and hence kindled their interest; and

***(2.2) Augmented and annotated spaces in everyday life created through the ubiquitous presence of computing:***

In addition to the above development, there is the intervention of computing in every day spaces (through advances made by computer sciences) and its potential and actual ability to annotate human behavior through technology, which has heightened the perception of our sensory(s) via the medias. This means that we are now required to apprehend not just the semantics of the spoken word or the written text, but the finer the nuances arising out of such communications (through the medias), and which go beyond being just the verbal or the visual.

This multimodal and multi-sensory nature of communications makes for a media rich environment, where human articulation is expressed not just in text (vision/sight) or speech (audio/aural), but in potential combinations of the use of:

- (a) text and graphics which employ sight/vision
- (b) speech, music and special effect sounds employing the faculty of hearing/audio, and
- (c) gestures and motions using haptics which employ the faculty of touch/tactility.

Additionally, there are the recent experimentations, though still in the laboratories but augur well for communication modes into the future, and premised on the use of the following sensory faculties:

- (d) smell/olfactory and (e) taste/cunilingual.

Given this extremely complex but likely scenarios of communications between the human and the computer, one would need to look into newer idioms of translating these emerging forms of communications that fall outside of those capable of handling just the speech and text modes of communication.

And hence the need for us to ask: 'how might we facilitate these emerging processes'?

### ***(3.0) Conventional vs. emerging paradigm(s) of translation - establishing relevant contexts to help transcend existing idioms:***

We begin by establishing key contexts crucial to the proposed alternate paradigm of translation. For the purposes of the present exercise, there are two sets of contexts that need to be highlighted:

- (a) translation & language: ideal types and proposed types
- (b) information as key driver: information in various states:  
individual & relational + dynamic & static
- (c) information as key driver: information flows  
spatial and mental

We begin with contextualizing 'translation' and 'language' as these are independent variables and key to any exercise in translation.

***(3.1) Translation*** in its literal meaning represents *interpretation*. It is about decoding, such as while translating the meaning of un-deciphered scripts or establishing through *transliterations* or *renditions*, a fair

approximation of the original meaning of a text or a music composition respectively.

This conventional interpretation of translation suggests purely linguistic contexts where information is converted from *one linguistic reference to another*.

In the networked world, on the other hand, a more liberal and emerging translation would need to address the act of making available of material - whether written material (text), or spoken (words, lyrics, music, sounds) or gesture inputs (such as movements of fingers or palms expressed through a computer interface) - in all their sensory nuances, so that the cultural inflections behind these become apparent to the target audience.

In other words, it is the kind of translation that attempts to reveal the essential mannerisms behind sensory(s) driven expressions and communications, and which usually vary from culture to culture, even if the linguistic context are the same.

An example of this would be the inflections of spoken English and their accompanying gestures as seen in England vs. Wales vs. Ireland. Or, the way Indians or Spanish-speaking populations tend to flay their arms around as an expressive device, or use their facial expressions far more vigorously than, for instance, the English do.

In other words, we are looking at situations that require translation of expressions arising out of *one cultural reference to another*.

To relocate translation within this proposed idiom, what is it that we will need to look at that is different?

(3.2) *Language*, for the purpose of translation within the paradigm of inter-linguistic reference, is usually seen in Aristotelian terms as providing material for thought. There are manifold reasons for language to occupy the position of primacy within human civilization.

According to Noam Chomsky and Steven Pinker, both part of the faculty at MIT, Cambridge, USA, language is what separates man from animal (Chomsky, 1988, 2000, 2006; Pinker, 1994)

Indeed, it was the evolution of spoken language that had marked *the* defining point in human pre-history and which, according to second generation paleontologist (following in the footsteps of his famous parents), Richard Leakey. Leakey asserts that language is precisely what had equipped humans to "create new kinds of worlds in nature: the world of introspective consciousness and the world we manufacture and share with others, which we call "culture." And continues eloquently: "language became our medium, and culture out niche" (Leakey, 1994)

And further, in the words of University of Hawaii linguist Derrick Bickerton: "Only language could have broken through the prison of immediate experience in which every other creature is locked, releasing us into infinite freedom of space an time." (Bickerton, 1990)

So, while language had emerged to mark the watershed between civilization and pre-civilization itself, by giving us the mechanism for the formation of thoughts and to articulate thoughts into speech. Writing had emerged as

among the greatest inventions in human history to make possible the recording of speech into written words to create recorded history.

It is this articulation of thoughts into speech and writing (text+symbols) that go to constitute the Aristotelian construct of language.

However, in a bid to re-contextualize language to the emerging networked landscape and for the purpose of the proposed idiom of translation, language needs to go beyond the *Aristotelian construct of speech and symbols (represented by visuals and text)* to include into its fold something that is already implied in its attributes but continues to remain outside of the conventional definitions of language.

This *implied attribute* in language is something that goes deeper down into the human thought process, and shows up as a visceral response to a primary or native/innate system in the human being, and which is represented by the human's ability to communicate through touch, smell, sight, hearing and taste. The communication itself gets articulated through human gestures and expressions.

This viscerally-driven, direct and primary process of articulation takes place much before the human is inclined to respond cerebrally to his more secondary and acquired/learned systems, where communication takes place through indirect means of articulation expressed through speech and writing. Lest it be thought that words are part of our native knowledge structure, we need to qualify the situation with some linguistic references. It is well known that writing does not happen innately without acquired knowledge, but this is also true of speech where its success counts on our learning of the semantics, syntax and pragmatics of the structure and the meaning of the words that go to form the sentences of the speech. What would speech be without our understanding of the linear cause and effect structure of a sentence, or whether the words being used to give meaning to the particular speech have iconic, symbolic or indexical values? To learn not to use them interchangeably because we risk being misunderstood or misrepresented, is to acknowledge that a quantum of learning has preceded the use of these devices.

In the light of the above, it may now be said that in the emerging computer-generated communications systems, language has now come to include the sensory-driven primary level articulations and expressions mentioned above, and this has been made possible by the multi-modal new media technologies. In this scenario, language becomes a function of *new mental models of communications* (via the computer generated new medias) that are far more expansive in their expressiveness and are naturally of a visceral quality, than is possible through the cerebral nature of the written text or speech. And these primary level articulations being certainly closer to the way humans articulate themselves in real life, than words, text and icons can possibly express themselves through the conventionally driven mediums of print and audio.

Therefore, as part of the new mental models of communications, *language is being interpreted far more comprehensively than is compelled by its linguistic precepts, to include* (in addition to speech, text and icons), the

following modes of communications/medias, viz., music, art, sculpture, theatre, and storytelling, among others.

#### ***(4.0) 'Information' as key driver of technology - (a) signposts of information pathways and (b) modes of information flows:***

To repurpose translation within the proposed idiom, what is it that we need to look at differently as being our operative factors?

In a technologically-determined world order, the new science of language is the 'Information Sciences,' giving us the concept of an 'Information Age' driven by the computing technologies, where thought may be encrypted or decrypted (in discrete elements of bits and bytes), converting them into knowledge or 'information', and making information completely decipherable and quantifiable in one form or the other.

So, if language in Aristotelian terms is meant to provide material for thought, then could we look at this material of thought as being operative units of 'information', and view translation itself as a more abstract concept of 'information flow' arising from the best tradition of the word 'information' as in the Information Sciences.

#### ***(4.1) Signposts of the information pathway - from individual to relational and from dynamic to static:***

Therefore, if the key to any information-determined idiom of translation happens to be the notion of 'information' and its flow, there is the obvious need to then add to our understanding of language, the origins of the term 'information' and its subsequent derivatives in that order of their performance, viz., form, flow, exchange, transmission, media platforms and communications through media (Sen, 2005)

***(4.1.1)*** Etymologically, *information starts with 'form'*, and form itself derived from the Greek 'eidos', which is the root of the words 'idea' and 'ideal'. Where, moving from Plato's notion of 'form' as an archetype of an ideal to Aristotle's notion of 'form' as being less idyllic and more 'real', viz., "a sum total of the essential properties of a thing"), the present notions of 'form' bear closer relation to the Aristotelian construct of form than to that of Plato's (von Baeyer, 2003)

***(4.1.2)*** Across the centuries, 'form' has come to connote itself beyond its sense of the absolute as an entity to represent relationships, and so eloquently stated in Italo Calvino's 'Invisible Cities' where Calvino says: "it is spider webs of intricate relationships seeking a form" (Calvino, 1975) It is this insight of form's connection with relationship carrying over into a concept of information that represents the idea of a *flow*, which makes information as *the transfer of form from one medium to another*.

***(4.1.3)*** Pertinent to this proposition here is the act of the 'transfer' of form in the context of relationships as human *information-exchange*, and which may be referred to as the *communication of relationships*, making information a dynamic proposition.

(4.1.4) This *dynamic* phenomenon of 'form' as communication of relationships is then imprinted on a medium of *transmission* (airwaves, satellite transmission, geo-satellite transmission) to activate the underlying information flows.

(4.1.5) And finally, and most contrapuntally, the flow of form that we call information and is such a dynamic process because it transmits through a medium, *needs to now become a static phenomenon* with the coding/embedding of the changing patterns of information transmission, to be encased into technology modes, such as circuit boards.

This is a storage system of information flows and allows for the creation of the actual physical medium of the transmission (viz., radio and telephone for speech and sounds, phonograph for music, film and television for moving images, photography for still images, etc.).

So, e.g., just as paper and newsprint transform into the medium of the book or the newspaper to become a medium or vehicle for the written word, and printing (whether moveable hot press or digital printing/desktop or inkjet), becomes the basic encasing of the transmission of the word on paper. So also, the microchip embeds itself as part of the hardware into the computer to activate the computer as a medium for the digital transmission of information.

So, while the information transmitted is a flow and hence dynamic but also intangible, the facilitation of this flow is done through an entity that is static and tangible.

To sum up this section on information pathways, the above is the trajectory followed by 'information' in its path from being an absolute to a relational entity, with all the attributes that go to determine the fruition of information into communication.

Along the way, the relational element of this movement results in the exchange component of a communication, causing information to become dynamic.

And then, contrapuntally, there arises the need for the dynamic flow of information to become static just so long as it requires for it to build a platform that will help contain information within a crucible to enable the ensuing communications process through carriers that we have come to term as medium/media.

#### *(4.2) Modes of information flows - spatial/physical vs. mental/virtual*

Having spelt out the signposts of an information pathway that is followed by this new order of 'language' and which results in the creation of information as content what we need to understand is what is that 'language' of this content, that could require any translating at all? Translation, under these circumstances, needs to be seen as an act necessitated by 'flows' of information.

There can be two such flows. One, which is the conventionally generated set of flows within a linguistic-geographic frame of reference and hence seen as being spatial/physical. These carry a tangibility that is brought in by the secondary nature of the communications processes of speech/voice recordings and writing/printed text and visuals (as already mentioned).

The other set of information flow, by contrast, lies at the end of the spectrum of tangibility and encapsulates the outcome of our interactions that are activated by the human's primary sensory modes (viz., touch, smell and taste). Humans have always used these modes. And these continue to be paramount in our every day interactions. But the key difference here is that the intangible nature of this communications process had hitherto remained un-captured by technology into communication artifacts. Today, strides made by computing technology offers the promise of converting these responses into artifacts that we call media platforms, but the intangibility of primary responses forces upon us a language that resides in purely mental/virtual spaces.

So, what are the implications of information operating in these spaces?

*(4.2.1) As a physical flow of information, this moves from one culture to another* (e.g., English to Spanish) and gets located in the countries hosting these languages (in this case, England and Spain).

Or this flow of information could also flow from one cultural reference to another (Malayalam to Bangla) but get located within the same country (India).

Importantly for this category of information flow, information is carried forth spatially across a set of dynamics, essentially geo-politically determined. Which means, depending on the primacy of a particular power base(s), we will receive messages of translation mediated by the dominant language of the particular power bloc(s), and which, in turn, will determine its primacy of existence or sustainability - whether increased or decreased.

In an English-dominated world today, it is English that finds attention whether one is located in the English-speaking world or not. Tutors of English remain in great demand and learners eager to learn English. But, the prediction is that, with increased number of tutors by 2050, the demand-supply equilibrium will get reversed from the current situation of fewer tutors than learners for English into more tutors than learners.

What will not change, however, is the power of geo-politics to determine the issues of self and 'other'.

Hence, this flow of meaning and contexts from one location to another as a physical and spatial act of information-transmission, and which could involve distinct linguistic geographies within the same country (e.g., Basque and the rest of Spain, Jharkhand with its dialect and the rest of Bihar, Chechnya with its dialect and the rest of Russia), implies that even if the dialect (e.g., 'Bhojpuri' from Bihar-Jharkhand) resides within a country of its origin, the parent entity (Bihar) will continue to exert itself as a cultural force for driving the need for a certain language (as speech and text).

*(4.2.2) As mental flow of information, this moves from one media to another* and not from one culture or country to another. And where, translation may be viewed as a subset of the idea of communications itself without getting broken down into country/nationalist entities.

Which is to say, that information flow across the medias could assume the form of a primary form of communication, such as the 'chat' mode on the

Internet, which might or might not find simultaneous translation into different geo-politically driven language entities. But essentially remains an annotation of a primary human urge from the real world, viz., to chat (and quite akin to feeling hunger or joy, or sadness)

Unlike messages of words or texts across languages that may be part of an exercise such as reading or writing, with reading and writing being more intellectually driven and hence more secondary in their connection to the essential human condition.

### *(5.0) The translation challenges posed by human-machine interactions - the language idioms within computing:*

Our proposed idiom of translation premises itself on mental flows of information across the medias, with physical/spatial flows as a subset of a larger set of information flows. To make a case for this we need to understand the contours of the mental flows of information.

The contours of mental flows reside in 'language' developments within the computing technologies and which, in effect, have made it imperative for a new idiom of translation.

'Language' in this context means the mechanism through which the computer, which is a machine, makes itself comprehensible or tries to 'speak' to the human mind.

This involves an attempt on the part of the machine to mimic the way humans communicate with humans through spoken and written languages, and to what extent can the computer try to achieve this fluency that is so innate to human beings - and an act mastered by man and which essentially separates him from animals since the dawn of civilization.

As already mentioned, 'language' building in the computer has been premised on mimicking the human sensory system, and has historically taken place in two major consecutive steps as part of the developments in information/computer sciences.

#### *(5.1) Artificial Intelligence (AI) and 'indirect manipulation':*

The first step relates to a language protocol based on building a set of programmed responses for the computer to follow, in its interactions with the human. It meant encrypting or inseminating the computer with an 'intelligence', much in the way the human was naturally endowed with cognitive abilities that we call intelligence.

Since the 'intelligence' thus built into the computer was predicated on programming, without which the computer was powerless to understand or act, this particular genre of human-computer language of interaction was termed as Artificial Intelligence, usually refereed to as AI, and first conceived by a young psychologist working at MIT in the Department of Electrical Engineering as part of a group around Norbert Weiner, father of cybernetics (Bardini, 2000).

Subsequent work on AI was accomplished with great passion at MIT's AI Lab founded by Marvin Minsky in the late fifties, and known for his views on the subordination of the human to the computer and reflected in his intemperate remark about the computer as being nothing but the human

brain minus the flesh.

As known quite widely by now, AI was quite unlike the way humans effectively use language, primarily because AI had necessarily to follow a path that was 'indirect' and contrived and completely dependent on programming systems to give orders to the computer for this 'language' to work.

Quite logically, this mechanism of intermediation to elicit human-computer responses was termed 'indirect manipulation' - a highly machine-centric, programmatic mode of communication. As a language system, it was hardly spontaneous, and therefore, hardly 'human'.

The tedious nature of AI and its extreme affectations as a language system between the human and the computer, and its need to subordinate the human to the machine (rather than the reverse), called for a different idiom of language. The crucial need was for the machine to 'directly' interface with the human, and not indirectly through a set of machine language/programmes. The language had to become human-centric rather than being machine-centric.

This need for a different idiom, although officially recognized around the sixties and the seventies, was entirely *self-driven/self-referential*. Since the act of building 'intelligence' into the computer to *approximate the way the human mind 'thinks' and uses language* had become rather convoluted and ineffective as a mode of communication between man and machine.

The impetus to change the language system to become more human-centric coincided with post-Modernism in architecture and design in the sixties where these two disciplines became the principal mirrors used by computing to understand society. Through reflections in these mirrors, the computing industry had begun to realize that what it had at hand was a bunch of machines that were indeed proficient at achieving monumental tasks of calculations and computing activities. But had failed to establish any direct connection with the human, unable as it had been to reach out to it. This *lack of a suitable language* resulting in a *severe disconnect in communications between man and machine*, and the consequent rift this created had needed correction at the level of the translation paradigm because it was language alone that could translate the computer's intent on to human.

So, what developed consequent to this was a new translation paradigm driven by what the computing community called as a Natural Language for computing.

#### *(5.2) Natural language systems through 'direct manipulation':*

The natural language idiom worked through a system of what is technically termed as *direct manipulation*, allowing man to talk to the machine directly, and was based on an early recognition that the level of sophistication of a natural language would depend on how intuitively man was able to grasp the intent of the computer and vice versa (viz., how quickly the computer was able to grasp the requirement by its user, the

human being).

The more the human was able to understand without translations of the programming language into its normal languages, the more evolved the 'natural language' development would end up as. And just as in our everyday languages we concentrated more on tasks rather than on how the language itself worked, so also in the case of natural language, if it had to work successfully.

Apart from post-Modern design and architecture from the seventies, one of the key inspirations in natural language development was *hermeneutics*, which is a branch of continental European philosophy and concerns itself with human understanding and *the interpretation of the written texts*. Propounded by linguist-philosophers Dilthey, Jurgen Habermas and Martin Heidegger, it was used extensively as a premise among others by Terry Winograd, a scientist from the Xerox PARC in its hey days in the sixties to the eighties (Winograd, 1990, 1991)

With hermeneutics as a theoretical basis for understanding language, Winograd questioned the feasibility of AI and cognitive science to find *insights for understanding the meaning, translations, and architectures* for natural language developments. And was especially inspired by hermeneutics' common-sense reasoning to arrive at resolutions. What computer scientists particularly leveraged in hermeneutics was its ability *to use a lower order component to build a higher order component*, a scalable quality imbibed into computing since its origins.

It was also duly recognized that for natural language to be reasonably effective, it *would have to become extremely intuitive* in its comprehensibility, and *ubiquitous in its application*, such that we are able to stop figuring out how the computer works and concentrate instead on doing all the things that the computer has to offer.

It is this recognition by the computer industry predicating its language thoughts on the assumption that the more direct the vocabulary (hence the term 'direct manipulation'), greater the language comprehension for humans, and hence, greater the sophistication of the language itself, that *the next big step in translating computing language into human understanding was finally achieved*.

### ***(6.0) How does the proposed idiom work? Deconstructing the contours of mental flows of information:***

The contribution made by hermeneutics to the scientific community needs some mentioning here.

In its search for achieving the next big push for computer-driven language, the computing industry realized that language sophistication comes from establishing *progressive connections right across all the primary, secondary and tertiary sensory(s) capabilities* that man employs to learn any language, computing or otherwise, and a scalability feature salient to

hermeneutics. But what this kind of deconstruction primarily did was to aid in separating tangibilities of a language from its intangibilities.

*(6.1) Intangibilities of computing language outcomes:* The progressive connections derived from lessons in hermeneutics helped computer scientists to deconstruct human communications into three different levels, and which eventually threw up the need for its own mechanisms of translation. The levels identified were as follows:

*(6.1.1)* At the *primary level* it is the language instinct itself, whereby man will use his *innate/native aural sensory(s)* to begin to make sounds until they become words, and then add *gestures* to words to aid in the overall expressiveness of communication - all the while doing this intuitively, whether man knew the vocabulary of the language itself or not. So, through this and by the use of *tonal qualities*, man sang lullabies, told stories, sang songs, expressed shock and fear, and appreciated beauty and happiness. In computing parlance - within the above context of aural-gesture interface - storytelling and lullabies will represent the medias albeit being *primitive and extremely primary*, since there is minimal intervention of technology with a human-based media. To aid community storytelling or singing, there may be drums, e.g., to augment sound, but other than that, the human requires little help except to use his thoughts, voice, gestures, and his capacity to generate myths.

*(6.1.2)* The next step is to move on to the *secondary level* where man will identify patterns across the words to form/identify a vocabulary for the evolving language to make it into *speech*, all the while continuing with tonalities and gesture. For what would speech be without gestures?

*(6.1.3)* And then, in true hermeneutic tradition, progressively move on into the *tertiary level*, where he will combine his aural/audio with his *innate visual qualities* and *tactile sense* of the wrist, palm and finger movements to generate *writing* through images, symbols, and ultimately *typography* to give materiality to speech.

To realize this progression through language systems by computer scientists has been to realise man's ability to interface with the world by employing his faculty of human sensory(s), and leveraging these *to give materiality to intangibles*. Not only of viscerally-driven feelings, such as fear, happiness, distress and such, but also of cerebrally-driven abstractions that drive activities such as thoughts, ideas and dreams.

This realization became the guiding principle behind the computing industry's application of the idea of human sensory(s) as an instrumentality for human-computer interactions/communications, and begin to embed these intangibilities into computers to achieve progressive levels of language, in its evolution towards increasing degrees of sophistication. A lot of this work had been undertaken by scientists from Stanford University's Xerox PARC (Palo Alto Research Centre) and MIT's Media Lab and the AI Lab, as well as the Departments of Mathematics, Linguistics, Electrical Engineering and Psychology Departments.

*(6.2) Mental flows as a construct to understand intangibilities:*

The net outcome was the legitimization of mental flows of information - flows of communications primarily intangible, without even the benefit of the tangibility of physical spaces as in the case of the established contexts of translation with its benefits of geo-political boundaries.

Mental flows of information across the medias are an intangible construct, because these are shaped by the human sensory(s), and fundamentally offer a barometer to the essential human condition.

Mental flows are driven by four sets of conditions working in the following sequence:

*(6.2.1)* To begin with, *human sensory(s)* interact with the environment (viz., other human) to create communications, which then need to be housed in a carrier.

*(6.2.2)* This is termed as *media*, which, as the name suggests, is a vehicle for the conveyance of thoughts and ideas, and has a material outcome in the form of a platform that we call the radio, or television, or computer, or, in the earlier parts of our evolutionary history, tools such as those meant for writing or sculpting or painting.

Each of these tangible platforms will correspond to the particular human sensory(s) being employed, So, e.g., the use of sight and touch/tactility as human sensory could result in humans engaging in wall paintings, and results in a media that could only have been an outcome of the use of vision (sight) and haptics (touch).

*(6.2.3)* The third step constitutes the appearance of a *media environment*, which is the location in which the media embeds itself to articulate and materially manifest the human thoughts communicated through human sensory(s).

*(6.2.4)* This is created usually through its intersection with an external factor, usually termed as *technology*.

So, in the case of the above example, while the painting on the wall is the media environment through which the human has attempted to express his thoughts by employing vision, haptics and left-brain creativity, the external factor, that has mediated to create the media environment is technology in the form of the tools of the painting process, viz., brush, wood, sticks, leaves, etc., and the pigments and dyes.

Importantly, while engaging in the use of human sensory(s) is a *primary/fundamental* process, the build-up of the media environment itself through the intervention of technology is a *secondary/applied* process.

In other words, under this mental flow of information idiom, any act of translation needs to be seen as a flow of ideas across the medias, and the force of the translation of ideas itself will depend on *whether the translation has predicated itself on a 'media-rich' or a 'media-poor' environment*.

In simple definitional term, activity outcome that are more contained, individualistic, eclectic and inward-looking and employ single-purpose human sensory, such as in the case of writing, printing, etc., would be considered as being *'media-poor'*.

Whereas activities that employ parallel sensory(s) and carry a more visceral effect on its environment could be termed as being '*media-rich*' such as painting, dancing, cinema, video installations, etc.,. Media-rich or media-poor situations convey the extent of mental flows being achieved, and depending on whether the information flow is across media-rich or a media-poor environment, an output of *translation will gain or reduce in currency* in terms of sheer information to enrich experiences.

**(6.3) The human sensory-media-technology axis - a schematic depiction:**

The chart is meant to demonstrate the way our human sensory(s) interact with technology to create different medias and their respective environments. The three-way relationship arising out of the interacting component elements can give an idea why a 'rich' media environment is not necessarily a function of the so-called modernity or novelty of a given technology, as is normally assumed. And it needs to be understood that the depth of a technology is not necessarily arrived at by its emerging nature alone. Tried and tested conventional mediums may often have achieved far higher degrees of assimilation in their use with the user's universe by retaining synergies and rejecting redundancies.

Media and media environments are outcome of technology intersecting with human sensory			
human sensory	techno intervention	media employed	media environment
sight	camera	vision	photo
Sound	phonogram	audio	music
touch +sight	chisel	speech + audio	telephone, cell
touch + sight + Smell + sound	fire + utensils spices +cooking	cunilised taste	food
touch + sight	printing + paper	haptics + vision + writing	literature
sight + sound	telematics	vision	television

Hence, it is useful to factor into a premise of technology-use that assumes that what will indeed impart richness to a media environment is the potential for a technology to build multiple layers of meaning and syntax through its applications, and the resulting impact created in the universe of the user.

If a given technology is able to map effortlessly into the human sensory(s), enabling multi-tasking in as innate a manner as is possible in terms human comfort, without standing out as a noticeable artefact of technology, and if this survives the test of time, such a technology would have helped creat a media rich environment and vice versa.

So, for instance, culinary activities or theatre, that do not necessarily use a lot of modern technology, can in fact, result in experiences that are far more infused with multiple sensory(s) and media to give us a media rich environment than, for instance, photography or literature, whose accompanying media environments are less innate to human sensory(s) use, since the apprehending of these medias require secondary/cerebral levels of intervention. Making these less direct in experience than cooking, eating, enacting a play or watching the theatre.

Bearing in mind this distinction between media-rich and media-poor as being concomitants of the richness of human experiences rather than the novelty or complexity of the given technologies, could stand us in good stead in exercises undertaken to translate the nature of experiences from one media to another (being the core of the proposed alternate translation paradigm).

### *(7.0) Convergences between the conventional and the emerging translation paradigms:*

#### *(7.1) The universality of human communications*

A point of convergence between the conventional and the emerging connotations of translation is where they both predicate their respective idioms on the fundamental need for *human communications*, and we all know that all human communications are driven one way or the other by the human sensory(s).

Literature uses words to build a world that is otherwise visual, aural and even tactile, since the act of turning the pages of a book or the feel of its pages can only enhance the experience of the act of reading. And it would not be an exaggeration to conclude that embedded into words are the representations of the human sensory(s), and leveraged in printed form is text - all of which cumulatively go towards communicating a sum total of the human experience.

Since the advent of the information age, it has become necessary also to understand how we can leverage the emerging scenario of the networking technologies *to augment human communications*. If we can establish a set of positive connections between sensory(s) and communications, then we can expect to augment the process of translation itself.

Hence, it is in the interest of an alternate paradigm of translation to explore *the fundamental process of human communications*, which as we know, becomes media when intersecting with technology.

And so, taking off from this central idea of human communications as key driver for translating thoughts, can we look at the way thinkers have interpreted human communications systems in recent years?

#### *(7.2) Passion, powers and responsibilities vested in the translator:*

In spite of the differences in the fundamental premises of the two idioms of translation, what remains common to both forms of 'crossing borders' - spatial or mental - is that they are both emotionally driven as an activity. While mental flows derive their emotive content and value from being a

derivative of the human sensory(s), spatial flows are driven by geopolitical passions.

No doubt, therefore, that 'crossing borders' one way or the other can be emotionally charged as an idea, and hence, translation itself as an act, begins to assume such a 'force of nature'. And no doubt, also, that in spite of the preponderance of the computing technologies in every day life, it is in the spatial crossing of the physical borders into other cultures is where the most universal connotations of translations continue to be located, viz., that the translations that we commonly refer to still continue to belong to the domain of spatial information flows.

And needless to say, the responsibilities that accompany acts underlain with such passion and force can only entail upon the individual or the institution engaged in the acts of translation, to carry out their duties with an utter sense of responsibility.

### ***(8.0) The learning from the proposed alternate paradigm for translation:***

Our concluding thoughts on the idea of proposing an alternate idiom of translation carry the following messages:

***(8.1) Relocated contexts for translation: A broadening of the canvas of translation and relocating contexts*** can give the translator the legitimacy to cross boundaries to include sources or medias that are not necessarily directly connected to speech or reading (which means, text).

***(8.2) Cause and effect of technology and media convergences:*** Our attempt to arrive at a clear-cut *rationale* for an alternate paradigm comes from recognizing that *media convergences stemming causally from technology convergences* can make speech and text overflow into other sensory and media modes, and which can make the final outcome of a media environment rich with the available spectrum of the multi medias. In any case, because media convergences are all driven by computing, it is no longer an option but a necessity to look at text and speech from the points of view of the *language augmentation modes of computing*. It may also be useful to remember that in an age not too far away, computing technology will be able to take gesture as a sensory input to levels where it "can be used to reinforce, disambiguate, or replace spoken or written language." (Laurel, 1993)

And although we have not yet identified a universal gestural language, it is already possible to interpret through computer systems, gestural input that is not strictly semiotic. Brenda Laurel cites the example of attempts by Margaret Minsky of the MIT Media Lab, to have created a system that employs gestural inputs to manipulate objects in a graphical display.

***(8.3) The primacy of user-centricism against machine-centricism:*** The proposed alternate idiom of translation is also about the blossoming in full bloom of *post-Modernism* whereby the *Map Maker paradigm* had first gained in primacy. And which, in turn, is all about touching base with our elements and allowing our sensory(s) to bloom in their primary modes of operation, viz., speech, conversation (chat), music, gestures, storytelling -

all the experiences that were neglected prior to the advent of post-Modernism. Film maker Meera Nair, in describing her attempt to make 'Namesake' - the film based on novelist Jhumpa Lahiri's book of the same name - says that her primary intention was to present to her audience "*a multiplicity of universes.*"

### *(9.0) Concluding thoughts - in a world professedly flat, the power of translation proves, yet again, the world is round*

In the final analysis, it may be noteworthy to remember that the celebrated economist John Maynard Keynes from Cambridge had described civilizations like ours to be the crucible of *an unparalleled intellectual inheritance* built across the last 10,000 years of our epoch driven civilizational frame of history (Watson, 2005) - an inheritance not always finding adequate translations outside of our own boundaries.

And yet, it may be fair to say that the established paradigm of translation paradigm carries about it a certain prophetic quality. One of them has been its ability to foretell the story of the world being 'round', with a force that could conceivably be stronger than Friedman's current prediction that the world will go 'flat'. It means having to go back by 200 years to see how this had happened.

Up until the 1700's, not much of the intellectual inheritance mentioned by Keynes had even reached the distant shores of the West, the notable exceptions being the early attempts at translations of the 'Bhagwad Gita' into English by Charles Wilkins of the Bengal Asiatic Society in 1784, and then into German by philosopher Johann Gottfried von Herder.

And then came the translation of 'Shakuntalam', and translation as an act suddenly imploded upon the world in its power to bring the world closer together. For, when the English version of the President of the Bengal Asiatic Society, William Jones' translation of Kalidasa's 'Shakuntalam' reached the West in 1789, they say: at last, "*the world became truly round; (because) half the intellectual map was (now) no longer blank.*"

'Shakuntalam' had started casting its spell in Germany through a German version by scholar Johann Gottfried, making 'Shakuntalam' "the great miracle."

And then, as well as seducing von Herder, it gripped Goethe, who immediately said in praise: "*when I mention 'Shakuntalam', everything is said.*" 'Shakuntalam' also being one of the influences that had prompted Schlegel to learn Sanskrit. And Jones' translation of 'Shakuntalam' earning Jones the comment from Goethe: 'the incomparable Jones.'

But the most eloquent tribute of the translation into German of 'Shakuntalam' comes from Schwab who sets out the significance of this epic work as follows:

"It is well-known how von Herder, in rekindling for a deciphered India the enthusiastic interest that had been felt for an imagined India, spread among the Romantics the idea *of placing the cradle of the divine infancy of the human race in India.*"

Sine the 200 years when these words were spoken, the world has gone flat again, as they say, in a networked world order. But this time, India and its knowledge economy compel others to try and understand our cultural contexts on our own terms because globalization no longer carries overtly imperious messages of conquest of physical territories. Instead, in the words of Nobel Laureate Amartya Sen, today “globalization is the movement of ideas, people, technology, goods and countries”

The question for us is: who will translate this complexity for the rest of the world, two hundred years since the colonizers had done it on our reluctant behalf? And how do we hope to achieve this?

We could conceivably achieve this on the strength of the one factor and that one factor alone, one that is often difficult to grasp under Western monotheistic, mechanistic worldviews - which is our own deep faith in the knowledge that our culture has an inner core of sacred space and an outer core of resilience that can never be translated into a reasonably explanatory treatise.

But, if it must be done, it ought to be done by the future generations - those presently in schools and colleges and universities and engaged with learning the values of the new world order, and hence expected to be sufficiently versed in both the paradigms of translations.

They alone can be the essential link between the world at large and its potential connect with this land that John Maynard Keynes had called an intellectual crucible.

### *(10.0) References*

Nair, Anita, ed. (2002): **Where the Rain is Born - Writings about Kerala**, Penguin Books, New Delhi

University Grants Commission (2007): UGC National Seminar titled ‘**Transcending Borders and Cultures: Translation and Interdisciplinary Studies**’, Baselius College, Kottayam, Kerala, 26-27 Mar 2007

Friedman, Thomas. L (2005): **The World is Flat: A Brief History of the Twenty First Century**, Farrar, Straus and Giroux, New York

Chomsky, Noam (2006): **Language and Mind**, Cambridge University Press, Cambridge

Chomsky, Noam (2000): **The Architecture of Language**, Oxford University Press, Oxford

Chomsky, Noam (1988): **Language and Problems of Knowledge**, MIT Press, Cambridge, MA

Pinker, Steven (1994): **The Language Instinct - How the Mind Creates Language**, William Morrow, New York

Leakey, Richard (1994): **The Origin of Humankind**, Basic Books-Harper Collins, New York

Bickerton, Derek (1990): **Language and Species**, University Of Chicago Press, Chicago

von Baeyer, Hans Christian (2003): **Information: The New Language of Science**, Weidenfeld & Nicholson, London

Sen, Ajanta (2005): **'Information Technology and New Media as a Vehicle of a Lost Human Spirit - addressing the issues of connectivity, access and copyright of information'**, Report dated January-March 2005, featuring research sponsored under a 2-year (2003-05) Senior Fellowship awarded by Ministry of Tourism and Culture, Government of India, New Delhi

Calvino, Italo (1975): **Invisible Cities**, Secker & Warburg, London

Bardini, Thierry (2000): **Bootstrapping: Douglas Engelbart, Coevolution, and the Origins of Personal Computing**, Stanford University Press, Stanford, CA

Winograd, Terry (1990): **"What can we teach about Human-Computer Interaction?"** CHI (Computer Human Interaction) 1990 Conference Proceedings: **Empowering People**, ACM Press, New York

Winograd, Terry (1991): **" Thinking Machines: Can There Be? Are We?"** in **The Boundaries of Humanity: Humans, Animals, Machines**, Sheehan, J.J and Sosna, M, University of California Press, Berkeley

Laurel, Brenda (1993): **Computers as Theatre**, Addison-Wesley publishing Company, Reading, MA

Watson, Peter (2005): **Ideas - A History from Fire to Freud**, Weidenfeld and Nicholson, London

Keay, John (1981): **India Discovered**, Harper Collins Publishers, London