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Learning and Communication with Old and New Media

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Abstract

The author surveys five changes in method with respect to culture in the 20th century which temporarily pointed away from universal approaches. Attention is given to six areas that provide new sources for binding elements, *Das verbindende der Kulturen*: 1) relation and scale; 2) intangible and tangible culture; 3) texts as integrators of culture; 4) rediscovery of meta-narratives; 5) links between local-regional-national-international-global and 6) a discovery that language is unique. Some challenges for interfaces are outlined. It is suggested that basic cultural activities offer a framework that transcends the limitations of earlier Euro-centric and Asia-Centric models, and points to models which are global in scope while fostering diversity and uniqueness.

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1. Introduction

Once upon a time learning and communication was purely oral. The advent of media transformed this and led in the 19th and 20th centuries to a recognition of media as extensions of man. In the 19th century there were simple assumptions about the role media and convictions about a one to one correspondence between world views, theories of space, theories of vision and practice of representation. In the 20th century the pitfalls of such deterministic models and the totalitarian regimes they inspired cast a dark shadow over the earlier optimism of the Enlightenment. Detailed scholarship and research undermined these assumptions and led to five changes in method. For some, these

changes implied an end to progress, continuity, meta-narratives and indeed to all integration. If the 19th century announced the death of God, the latter 20th century seemed to announce the death of culture and the end of man's abilities to make sense of what we think, do, create and share. If this were true, John Donne's famous phrase would need to be revised as "Everyman is an island" and solipsism would be the order of the day.

The title of UNESCO's conference confirms that this is not the whole story. This essay outlines briefly four research areas that are providing new sources of integration: a) relation and scale; b) intangible and tangible culture; c) texts as integrators of culture and d) the rediscovery of meta-narratives. It considers briefly two other areas which are pointing to greater diversity than was assumed a century ago but paradoxically are offering new paths towards binding elements in culture namely: i) links between local-regional-national-international-global and ii) the discovery that language is unique and hence not translatable as a simple equation between different signs. Attention is drawn to the challenge of creating interfaces that reflect different levels of distance in cultures. Finally, it is suggested that further study in terms of basic cultural activities can lead to new models of culture that transcend earlier Euro-centric and Asia-centric models; that integrate the achievements of nomadic and settled cultures; of pre-literate, literate, print and new media cultures.

The day of meta-narratives in the sense of naïve assumptions that there is a single course for all persons and cultures is rightly gone. So too is the assumption that there is but one history of knowledge or culture to tell. Simplistic determinism is not a category for the human spirit or its expressions. This does not mean however, that history is passé, that there is no cumulative collective memory and wisdom. There is a need for new histories of different kinds of knowledge, of knowledges, of different ways of knowing and how they interact. There are many new stories to tell, reflecting the underlying dimensions we share, *Das verbindende der Kulturen*, in order that we can acknowledge more bravely our diversity, the subtle differences that make us individual and unique.

2. Media as Extensions of Man

In the 19th century, Karl Marx (1867)¹ discussed the idea of media as extensions of man. Ernst Kapp (1877)² and Sigmund Freud (1921)³ explored this further. In the 20th century Harold Innis, Buckminster Fuller, and especially Marshall McLuhan established the idea that each medium affects both what we can know and how we can communicate.⁴

The 20th century made great contributions to the history of printing in individual countries. It revealed that what we had assumed was a Western invention came from Korea and via China. It revealed many differences as some countries used printing for very different purposes ranging from law enforcement to spreading religion and political propaganda. Scholars such as Goody⁵ have made us aware that the shift from pre-literate to literate societies specifically in 20th century Africa was much more complex than one medium replacing another.

Giesecke⁶ has confirmed that the advent of printing had a profound impact and that this impact was very different in China, where it was used to impose state power and law, than in Germany where it became linked with a new notion of sharing knowledge, for the public good, the common weal and the commonwealth. Giesecke and others are noting that similar trends are evident today with the Internet. In Germany it is being used for open source, open theory, even open design. In some other countries, the rhetoric of copyright is being used to prevent free sharing.

So in retrospect we can acknowledge the insights of 19th century thinkers which inspired the claims of Innis, McLuhan and their followers. Media had an enormous impact. We can assert more bravely than they: media did not have one necessary consequence. There was no simplistic determinism. At the same time this is no reason for us to pretend that the advent of new media had no impact and no influence. They clearly did. The library of Alexandria was greater (both in terms of size, content and scope) than anything which existed in pre-literate society. Similarly the greatest libraries of the world today (Library of Congress, British, BNF, National Library in Moscow) are greater than Alexandria and by the same token the scope of the largest networks, such as the Research Library Group (RLG) is dwarfing even these in a whole that is greater than the sum of their parts. In 1630, the largest libraries in the West (Wolfenbüttel and the Vatican) had 130,000 books. In 1960, the largest libraries had 10-15 million books. Today, the largest networks have access to (at least the titles of) over 130 million books. While there may be no one who can say exactly and absolutely what the depth and scope of these changes may be does not detract from the magnitude of the changes which are underway. In a so called post-factual world, these are cumulative truths which deserve to be more than posted.

We are discovering also that our cumulative memory is a function of what we record and that this differs from culture to culture. So there cannot be a single world history that treats all peoples in the same depth, because these cultures did not record their past in the same ways. In some cultures such as Ancient Egypt or among the Aztecs or the Khmers there was a conscious choice to record mainly, at times exclusively, the memorable actions and achievements of a given class or caste. From a global viewpoint there has been a general tendency to begin with recording the achievements of a ruling class and gradually extend the scope of this recording process to include other groups and eventually everyman. How this happened, why there was no simple progression remains an area for as yet unwritten histories, not just of the facts, but of decisions to record only parts and aspects of a much larger whole.

On reflection we realize that precisely those cultures whose methods of recording chronicles and histories did not go beyond the original group, were also cultures which gradually died, sometimes unexpectedly as with the Aztecs and Khmers. Constantly expanding the scope of the sample one uses for one's collective memory is one of the ingredients for a sustainable culture. At an obvious level this confirms that collective memory institutions (libraries, museums and archives) play a central role in all literate cultures. At a deeper level it confirms that an expanding scope of collective memory, including expanding access to this heritage is one of the keys to becoming aware of what different cultures share, how we change over time and how we grow.

In the 20th century the Toynbees, Spenglers, and McNeills wanted to write only the big picture. Those in cultural studies have rightly noted that there were many problems with such an optimistic approach. In the 21st century we need to study more closely the histories of culture which led to a single big picture being infeasible. But if our qualms with problems of method preclude our studying the evidence of historical records, the fear that there are no meta-narratives could become a self-fulfilling prophecy.

3. World Views, Theories of Space, Vision and Representation

Underlying 19th century approaches was a vision of finding a universal answer to the big questions via world views. There was a dream that if only one could return to the sources, then one could arrive at the answers. In Austria, Vienna became one of the centres of this quest. Hence the great enterprises such as Eitelberger von Edelberg's *Quellenschriften für Kunstgeschichte* and Julius von Schlosser's attempt to document all the theoretical sources of history of art in *Die Kunstliteratur*.⁷ This quest for synthesis led to the notion of a *Gesamtkunstwerk*, which in Russia found its expression in the World Art movement. It seemed that if only one could agree on a common standard then everything would work efficiently. At the level of organizations, this led to International Telecommunications Union (ITU), the International Standards Organization (ISO), International Federation of Library Associations (IFLA), the International Committee on Museums (ICOM), International Federation of Documentation (FID) and later the UN and UNESCO.

In Germany, Aby Warburg explored connections between four basic ideas: Orientation (Religion, Science, Philosophy), Image, Word and Action (Political and Cultural History) and established his famous library on these lines. He was joined by Ernst Cassirer who came via the neo-Kantians at Marburg. There was an underlying assumption that one's world view, one's theories of space (geometry), of vision (optics) and practice of representation (e.g. perspective) were necessarily linked. A century of detailed research and study have brought to light a considerably more complex picture which first seemed to point away from a universal approach and more recently is pointing to new possibilities.

The detailed studies of the past century⁸ have revealed that there is no strict 1-to-1 correspondence between world views, theories of space (geometry), of vision (optics) and representation (e.g. perspective); there is no simplistic determinism connecting orientation-image-word-action as Warburg and his colleagues assumed. At the same time these detailed studies have revealed that it would be equally simplistic to claim that all is relative. For instance, while debates continue on some fronts whether the Ancients had knowledge of linear perspective, the evidence confirms that the Greco-Roman treatments of representational space were very different than those of the Renaissance and that they are not interchangeable. With the advantage of hindsight we are beginning to realize that the breakthroughs of literacy had less to do with linking a specific theory with a specific practice and much more with the phenomenon of linking what had hitherto been isolated practice with written theory about such practice.

After a century of study we now know also that Renaissance perspective was not an invention that spread over Europe suddenly in the way that a new technology spreads today. It took more than two centuries for the new methods to spread and even longer for their implications to be understood. We know today that the rise of linear perspective in the 15th century went hand in hand with the rise of cylindrical and spherical perspective and a number of other methods, some highly technical, others empirical workshop methods. The development of perspective was not the rise of one method to the exclusion of all others. But it did mark the growth of new links between theories of space, vision and representation, between theory and practice. These connections explain the intimate connections between perspective and the gradual rise of descriptive geometry which slowly evolved from the 16th through the 19th centuries. Curiously and in a sense ironically, the 19th and early 20th centuries assumed a more sudden process and looked to Renaissance history to find in a symbolic moment what had taken centuries to ripen. In retrospect, the latter 20th century taught us to abandon this symbolic identification of the discovery of perspective or invention of space with a specific person Brunelleschi and a specific moment (the panels of the Baptistery in Florence) sometime between 1415 and 1425, and link it instead with complex processes of the *longue durée* (cf. Braudel and the *Annales* school).

Similarly we have learned that the rise of constructivism, the rise of methods of representation, which no longer assumed a necessary 1-to-1 correspondence between original object and representation did not mean the death of scientific perspective as Novotny assumed at the time (1939). Perspective continued, indeed it flourished, but it no longer maintained the exclusive status, which those concerned with universal theories expected, assumed and asserted. Ironically, those who have patiently studied the detailed evidence of the historical record arrived earlier at the same conclusions as did the proponents of the re-, de-, post- -ism schools of the past century who asserted that one no longer needed the cumulative dimensions of this historical record.

4. Five Changes in the 20th Century

As noted earlier the all-embracing, deterministic visions of the 19th century led to totalitarian thoughts, -ologies, -isms and regimes which revealed the deadly pitfalls of this approach when taken to extremes. Partly as a reaction, partly as a result of new study, the first half of the 20th century saw at least five fundamental trends which changed fundamentally the methods of scholarship and research. 1) In science, the rise of relativity theory (Einstein, Bohr, Planck, Schrödinger) undermined traditions of objective knowledge. The indeterminacy principle claimed that knowledge was not simply passive observation of facts. To “observe” was an active process that affected the “facts” one wished to study. Science as the simple discovery of teleology, of a final or even a formal cause no longer seemed possible. Attention focused on material and efficient causes. Thinkers such as Whitehead, Russell and Cassirer explored the philosophical implications of these insights. In literature, this inspired new attention to problems of interpretation especially in the context of new criticism. 2) The scientific shift away from study of objects *per se* to their relations and movements, was paralleled in art by a shift away from copying objects towards constructivism, i.e. art constructed without any

reference to objects in the natural world. 3) The rise of psychology as an important field of study through Freud, Jung and their successors led to attention from the conscious to the unconscious, from the figure to the ground, from the (objective) object to its (subjective) context and its environment. It led also to study of archetypes and thereby to underlying structures. 4) This fascination with underlying structures led to structuralism as a new field in a series of disciplines: e.g. linguistics (Ferdinand de Saussure); language and art (Lev Vygotsky); anthropology (Claude Levi-Strauss). Karl Mannheim's study of *Structures of Thinking* (1922-1924) led him to explore the sociology of knowledge. 5) Fascination with psychological and structural dimensions shifted attention away from historical dimensions of knowledge and culture.

The second half of the 20th century saw a further development of these trends. 1) Relativity theory in science led to relativism across the disciplines. Mannheim's work on sociology of knowledge was taken up in Kuhn's work on the *Structure of Scientific Revolutions* (1962) a) to claim that world-views (*Weltanschauungen*) were ultimately relative and b) to focus on paradigms of "normal" science reached by consensus. This approach was subsequently adopted as a basic insight in the social sciences and the humanities. Some of course went further still to call for post-normal approaches. 2) The concerns with constructivism in art were paralleled by theories of Radical Constructivism in science. These began in the first half of the century (Jakob von Uexküll, 1928); were developed by scientists in the second half (Heinz von Förster, Humberto Maturana, Ernst von Glasersfeld)⁹ became linked with trends in computer science, education and spread to the social sciences and humanities. 3) The fascination with psychology brought a) recognition that even the boundaries of health and sickness, sanity and madness changed culturally and historically (Foucault) and b) a shift from psychology generally to personal dimensions of psychoanalysis. 4) The concern with structures became linked with the study of systems theory, which shifted increasingly to biological, living, autopoietic, organic systems. 5) The earlier concern with structures, which ignored the evidence of history, shifted to an ever-greater emphasis on problems of method, which denied the evidence of history and attempts to identify the new period as something fundamentally separate from what came before rather than as a continuity in a larger picture.

In Russia, constructivism was initially a reaction against what was seen as an over-emphasis on objective, passive elements of science by von Helmholtz in the European West in the late 19th century. The Russian artists (e.g. Malevich) who had close links with philosopher-poet-physicists (e.g. Florenskii) developed a more active approach through the concepts of *stronie* or *prostronie*, which translate into English as both "constructivism" and "post-modernism." This etymology helps us to understand why Western theorists, especially in a general Marxist tradition show a particular fondness for the post- word: post-modern; post colonial; post-normal etc.

One result of these developments has been that some are now so concerned with problems of method and interpretation that they no longer find time actually to do research of subject matter. Getting there is no longer half the fun. Studying the ways of getting there constitutes their entire journey. As a result, some (e.g. Lyotard) have claimed that the era of meta-narratives belongs to the past. The radical version of this

approach goes far beyond claiming that absolute truth is passé. This school claims that truth is no longer a topic, that all is relative and that there is no longer a big picture to understand, nor an encompassing story to share. In a world where one-to-one advertising inspires a view of students as one-to-one customers of education we are potentially all living in a chaotic, nearly –some would say fully—solipsistic world.

Ironically this extreme school which is the most vociferous about the death of truth, teleology and all claims for a single, exclusive ontology, is often the most prone to insist that their interpretation, their particular school deserves attention to the exclusion of all others. Hence, the new relativism becomes a tacit absolutism, which decries elitism and ignores history under the cloak of political correctness, diversity and tolerance. They call for peer review, but implicitly mean only the peers in their own clique. Equally ironically this school emphasizes buzzwords such as “fragmentation” as an “increasing diversity of culture in a "pick & mix" society” while bemoaning the spread of globalization with 'McDonaldisation' & 'Disneyisation'.¹⁰

Standing back it is clear that this extreme position of “absolute relativism,” is itself in need of being relativized. Indeed, the past decade has seen growing awareness and criticism of the limitations of this extreme position.¹¹ At the same time, it is clear that the five trends outlined above have also brought many positive contributions. They have taken us from a study of persons and objects as if they were isolated things and led us to study their (social, psychological and other) contexts, their environments, their interactions as well as their actions, their relations.

5. Relation and Scale

A century ago there was often the assumption that the visible world at the scale of 1:1 was the chief “object” of study. Today we realize that physical reality entails a spectrum from the nano-world (10^{-15}) to outer space in scales of thousands of light years (10^{24}). Increasingly there is a recognition that the grand challenges for research in the next generations lie not so much in studying reality at a given scale as in understanding how the realities of co-existing scales interact, are interdependent and still constitute a single complex reality, complexity or complex realities.

As we enter the 21st century we are recognizing in new ways that precise knowledge of objects, their quantitative measurements is by no means dead or passé. The over 800 million networked computers which are enabling us to add 7 million new pages of information a day rely very much on the unfashionable precise knowledge of the scientific and technical world. So too do the estimated 800,000 million (or 800 billion) sensors, with which we measure ever more of the world and the universe at an increasing range of scales from 10^{-15} to 10^{24} . Such scientific and technological knowledge is crucial for the development of new tools to help us understand culture.

Those who argue that such quantitative advances are irrelevant for the study of culture are typically unaware of the scope and range of recent applications of new media. For our

purposes, it will be useful to cite examples from three very different fields, painting, theology and library science.

Until the first half of the 20th century it was assumed that the study of paintings was limited to the study of their exterior surfaces. In the past half century the study of paintings has become multi-layered to include the surface in visible light and various layers beneath with Ultra Violet (UV) fluorescence, Infra-Red (IR) photography in pseudo colours; Infra-Red (IR) reflectography and X-radiography.¹²

The most obvious use of this layered approach is in terms of conservation and restoration. But they also have important implications for our theories of aesthetics. For instance, at the Centre de recherche and Restauration des Musées de France (C2RMF), researchers have discovered Flemish paintings where these layers invisible to the naked eye contain clear instructions from the master what colours were to be applied by his workshop assistants. Hence paintings which earlier scholars would have praised for their original, creative use of colours and themes are in retrospect seen as part of an everyday workshop practice. As the results of these studies below the surface gradually come to the attention art historians and scholars generally, there are corrections to be made in our views of the originality of individuals, schools and perhaps even while periods. It may well be that some histories of art will need to be re-written entirely.

Until very recently, few persons would have seen clear links between medicine, neurophysiology, religion and cultural practices. In 2001, a group from the Mind and Life Institute (Dahramsala), which includes the Dalai Lama and the late Francesco Varela, embarked on a remarkable set of experiments using the latest MRI (Magnetic Resonance Imaging) scanning techniques to study differences in persons engaged in different kinds of meditation techniques and were successful in measuring such differences.¹³ These studies point to unexpected bridges between research in one of the oldest “religions” and research at the frontiers of modern science. They also point to potentials for comparative studies of meditative practices in various cultures across the world. This is an unexpected and potentially important new dimension for exploring binding elements and dimensions of different cultures, *Das verbindende der Kulturen*.

At least since the time of Plato and Aristotle there have been discussions and debates about the relative role, significance and implications of universals and particulars. These debates have been closely linked with the rise of classification methods. The development of literacy meant that such systems could literally be spelled out. The development of printing meant that such systems could be more readily shared. It also meant that the lists were static and that any major change required a new publication of the entire classification. The rise of new media with complex distributed databases means, for the first time in history, that we can create dynamic classification systems which reflect changes over time, and potentially over place, school, interpretation etc. Where limitations of print technology necessarily led 19th century thinkers to approach classification systems in ontological terms, we are now able to recognize them potentially as multi-lingual, multi-cultural, multi-valent portals for our approaches to the world. If we can a) create databases which keep intact the original complexity and diversity of our

categories and b) create bridges between these differences we shall have a powerful new tool for discovering dimensions we have in common without risking loss of diversities and identities that make us unique.

6. Intangible and Tangible Culture

The 20th century brought new approaches that increased enormously the range of study. The notion of the remarkable individual which emerged in the Renaissance and which through the Romantics blossomed into an ideal of the genius in the 19th century led to an overemphasis on works of genius, masterpieces, the work of a small sample of elite culture sometimes to the exclusion of almost everything else. Fortunately, the 20th century also brought a number of correctives. One came through new explorations of popular culture, everyday things, a reversion in a sense to the Mediaeval concerns with *Everyman*. This brought to light the importance of the everyday, the fleeting and evanescent, from the local festival and pageant, to the role of pubs, cars, bicycles and even trivia.

The work of UNESCO brought a related corrective by drawing attention beyond the physical, tangible “products” of material culture (in the form of the built environment, painting, sculpture), to the importance of immaterial, spiritual, intangible culture (in the form of dance, music, customs). More recently there is a growing awareness that intangible culture has another dimension in terms of world-views, beliefs, myths and fundamental stories. This layer of intangible culture inspires expressions of both intangible and tangible culture and shifts as one moves from pre-literate society to literacy, print and later new media.¹⁴ This is Warburg’s concern with Orientation in a new light. The 19th and early 20th centuries focused mainly on physical products of culture. The 21st century faces new challenges of understanding how world-views and theories affect both tangible and intangible creation as well as production.

The height of the 19th century preoccupation with Romantic genius, was paralleled by a fascination with a possibility of applying Darwinian explanations of evolution to social Darwinism and to “The Evolution of Culture” which became the title of a famous article by General Sir Pitt Rivers (1875) and gave rise to many books on the subject. A narrow version of this approach became closely linked with (extreme) nationalism, colonialism, imperialism and with a Eurocentric bias, and was subsequently, rightly dismissed by the post-colonialists, post-imperialism and other post-schools.

Already in the 1930s the ways in which new media increase potentials for creation, production and especially reproduction, fascinated thinkers such as Benjamin, Adorno, Horkheimer and others. The latter 20th century devoted considerable attention to the problems and dangers involved. Perhaps the 21st century will begin to explore how we can write new histories of culture in terms of such insights. This would create new bridges between studies of cultures, studies of technologies and their respective inter-dependent histories.

7. Great Texts as Integrators of Culture

The 19th century was many things. While one group was fascinated by cultural evolution, other groups were working energetically at identifying, circumscribing, and increasingly defining the end-result of that evolution, which they assumed lay in themselves. To be sure the Victorians in London and Ox-bridge, their colleagues in Berlin, Boston, Paris, Rome and elsewhere had variations on the theme, but the big picture seemed clear. At Oxford and Harvard one could study the “greats” or the classics. There were a limited number of important places one needed to see as part of one’s grand tour. There was a limited repertoire of books a gentleman and gentlewoman was assumed to have read. There was a literary canon, which later evolved into canonical literature and for some simply into the Canon. These groups became ever more fascinated by the details with which to include and exclude others from ever more narrowly defined circles of culture which some saw less poetically as circles of a constraining noose on their *noûs* (*νοῦς*).

Meanwhile, the same 19th century led Sir Edward Fitzgerald to translate the *Rubaiyat* of Omar Kayyam; the explorer Captain Sir Francis Richard Burton to translate the *Arabian Nights* and the *Kama Sutra*; Max Mueller to collect materials for his monumental *Sacred Books of the East* and led Max Weber, famous for his *Protestant Ethic and the Spirit of Capitalism*, to look beyond Europe in trying to understand different kinds of human societies. This wider looking 19th century strand, which had 16th century precedents in Montaigne’s essay “On Cannibals,” inspired important work in comparative religion, sociology, anthropology and culture throughout the 20th century from the monumental vision of Pitirim Sorokin’s *Social and Cultural Dynamics* (1937-1941) to the many field studies of UNESCO including the work on Silk Roads of the 1990s and more recently on Digital Silk Roads.

This dimension of 20th century studies of culture, often ignored by the narrow proponents of cultural studies, is providing a basis for new generations of research. While one strand of the European tradition has explored the interplay between great texts (e.g. *Bible*) and expressions in various media (painting, sculpture, drawings, engravings, etc.); others both in Europe and around the world have established parallel interplays with the great texts of other cultures: e.g. the *Ramayana* in India, the *Three Kingdoms* in China; the *Tale of Gengi* in Japan. To be sure there are differences. In the West these expressions are more in the direction of the static fine arts (painting, sculpture), whereas in the East they tend more towards dynamic, performance arts (dance, theatre, even marionettes and shadow puppets).

The cumulative effect such studies has been paradoxical and complex. On the one hand it has shattered the complacency and illusory certainty of those narrow 19th century groups who assumed that their canon, their circle, their coterie was “where it was at” The limited euro-centric histories they wrote have since faded into the background they deserve. But they have also done us a great service. For as we stand back with the privilege of hindsight and a healthy breathing space of a century’s reflection, it is possible to recognize that these various circles in Boston, Berlin, Moscow, Paris, Rome and elsewhere were pointing to an as yet unperceived international canon which would need to recognize Shakespeare, Goethe, Tolstoy as colleagues and acknowledge the *Rig Veda*,

Buddhist Scriptures, *I Ching*, Confucius and Lao Tse alongside the *Talmud*, *Bible* and the *Koran*.

In this shift from a quest for exclusive national canons towards inclusive international canons, the meaning of greats has changed, some would say has been transformed but remarkably enough it refuses to go away. The 19th century judged the greatness of texts in terms of the words they contained. The 20th century taught us that the true greatness of texts lies not in their words but in their spirit whereby they inspire paintings, sculptures and indeed a whole range of cultural expressions. It is not the text, not the object itself (the *Ding an sich* as Kant would say), but rather what new things the text inspires. Herein lies a true basis for judging its greatness, a new kind of cultural indicator.

As we take a more global view, peer review remains, but it is no longer at the national level or even limited to the living at the international level. There is a higher “peerage” which is the judgment of time and where our efforts take their place, or not, among the collective writings of the ages. In the context of this larger arena of enduring and perennial wisdom, it has become clear that one of the underlying characteristics of all literate cultures is a concomitant diversification of expressions first in various media and then across various media, which leads to memory institutions and notions of a collective memory of mankind.¹⁵ This is one of the fundamental unifying elements of cultures, *Das verbindende der Kulturen* in the title of the conference. The potential histories thereof are many and still awaiting to be written.

8. Rediscovery of Meta-Narratives

As mentioned earlier, the collapse of one-sided, narrow, accounts of various 20th century –ologies and –isms has inspired some to conclude that there are no longer big pictures to see, big stories to tell, or in their terms, that the age of meta-narratives is gone and that at best we should fix our sights and sites on meta-data and on meta-phors. Others would disagree. More detailed studies of the contents of these great books which at least in the past have helped give direction to identities of peoples, cultures and even whole sections of the world, as for instance with Buddhism in India and (especially Southeast) Asia, has revealed that there are also a few fundamental stories which are more universal than beliefs and stories of a single culture.

Already in the 19th century scholars discovered that this was the case with the Flood which occurs in the *Bible*, the *Koran*, in Mesopotamian stories such as the *Epic of Gilgamesh* and in at least 600 legends around the world.¹⁶ Similarly the notion of a Tree of Knowledge and/or a Tree of Life is evident in the *Bible*, throughout the Middle- and Far-East, Africa and has versions elsewhere as Yggdrassil in Siberia and Scandinavia. The 20th century revealed that the theme of Mount Meru occurs in Africa and India, is found in the early Siberian myths and makes its way to the Scandinavian traditions. A similar route is taken by the notion of three worlds (an upper, middle and underworld, aspects of which are explored elsewhere in this Conference), which is found not only throughout Asia and Europe but also occurs among the Mapuche Indians of Chile. Other root metaphors involve cosmic eggs and dragon/serpents. Ironically, while one faction of

scholarship has spent its energies complaining about the death of meta-narratives, the patient work of others in literature, anthropology, archaeology and the study of cultures has revealed irrefutable evidence that there are underlying big stories. They may not quite be static archetypes as Jung dreamed; they may not be universal unchanging structures as the early structuralists assumed, but they exist. This is another unifying element of cultures, *Das verbindende de Kulturen*.

So there are new histories to be written. The 19th and 20th century attempts to write art histories and cultural histories from a purely Eurocentric viewpoint were as limited as their counterparts elsewhere, which offered only an Asia-centric, China-centric, India-centric or Japan-centric viewpoint. We need new models of culture, which examine the differing interplays of central texts and expressions in and across media in different cultures and trace how central themes, which are also linked with the Greek *topoi* (*τοποι*) make their way across these cultures. UNESCO's digital Silk (and Spice) Roads is an excellent framework to begin this process. But it needs to expand to include trade and pilgrimage routes that link with Africa, South America and Australasia so that all the cultural traditions of the world are reflected. In Europe there is discussion of creating a Distributed European Electronic Resource (DEER). Someday this would need to become a Worldwide Online Networked Distributed Electronic Resource (WONDER).¹⁷

The enormous challenges posed by such an agenda are not exactly new. Karl Bühler in his classic work on the *Theory of Language* (1934) reports the empirical studies of a Swiss colleague who traced the etymology of a given word through far over 1000 languages before arriving at "tentative conclusions" about what the word might mean around the world. Such modesty is both salutary and necessary but in a world of 6,500 languages no single person can hope to master them all, let alone their literature and their cultural expressions. Nonetheless, in a networked world, with the help of multi-lingual databases which create bridges across meanings rather than simplistic translations the way is open for new generations of insights.

The 20th century has also provided us with at least two further ingredients that will prove essential as we create new models which are universal in spirit without falling into pitfalls of hegemonic imperialism, which still bedevil some dimensions of trends towards globalization.

9. Local-Regional-National-International-Global

A first lies in a reassessment of relations between/among local-regional-national-international and global. In the 19th century the answer seemed clear. Local and provincial variants were provincial at best. They were embarrassing variants, nay deviations, from national standards which in turn needed to be harmonized in a single international standard. This vision inspired the ISO and so many institutions of the day. Culturally, it inspired study of a few internationally acclaimed geniuses living in internationally acclaimed centres. Hence, Florence became almost synonymous with the Renaissance, Paris with Impressionism and so on.

The 20th century revealed a much more complex picture. In Renaissance studies, scholars such as Chastel acknowledged the importance of Florence, Rome and Venice, noted that there were other centres such as Bologna, Genoa and Milan and drew attention to local courts at Faenza, Ferrara, Mantua, Parma, and Urbino, and other places which had hitherto been ignored as insignificant peripheries: Brescia, Bergamo, Città di Castello, Cremona, Gerace, Lucca, Padua, Pavia, Perugia, Pisa, Prato, Pistoia, Ravenna, San Sepolcro, San Gimignano, Siena, Spoleto, and Verona. Slowly it became clear that these places were anything but simple satellites of Rome, Florence and Venice. They were a key to the cultural diversity and richness of the Renaissance. In the course of the past half century these fundamental insights have gradually been generalised and have recently found a significant political statement in a book by Giorgio Ruffolo (European Parliament) on *The Unity of Diversities* (2001).¹⁸

The implications of these insights for research programmes of the next generations are fundamental. The 19th century quest for internationally agreed upon standards remains important. At the same time, the quest to impose a single universal “authority file” in the case of persons, places and things has been recognized as a threat to diversity. We need new kinds of databases, which use some standard version (more for the sake of technological ease) and at the same time keep intact and record local, regional, national and international versions. The preliminary work of the AMP (*Accès Multilingue au Patrimoine*) Consortium has been important in this context.¹⁹ So too is the work on cultural diversity and *Mondialisation* that is leading to the vision of a new European University of Culture which will have Berlin (aesthetics), Florence (humanities), Madrid (languages and literature) and Paris (philosophy and Internet) as initial seats.²⁰

This quest includes not only to terminology, library and information science, but extends to different versions of stories and histories, such that we can compare “official” national accounts with variants in the province, the region and at the local level. The post-modernists have made an important point in insisting that mono-lithic, mono-lingual, mono-cultural meta-narratives are a thing of the past. This does not mean, however, that we cannot create new kinds of meta-narratives that acknowledge the diversity of local, regional, national, international and global and still build bridges across them. This is a further unifying element of cultures, for *Das verbindende de Kulturen*

10. Language as Unique

Another fundamental insight of the 20th century has been with respect to the nature and role of language. Prior to the 19th century there was a widespread assumption that there had originally been a universal language (an *Ursprache*) from which all other languages had derived.²¹ Connected with this assumption was a premise that different languages were “simply” a matter of translation. By implication, different languages were ultimately saying the same thing, simply using a different code that needed to be learned. In the early 19th century Wilhelm von Humboldt (1836)²² became one of the first explicitly to link languages and philosophy, equating language and thought in what is now called the *Weltanschauung* (world-view) hypothesis, which was formulated anew a almost a century later as the Sapir-Whorf hypothesis (1929).²³ The French tradition has

taken these ideas further formally via Lerat in ISO 1087 (1990) in order to “put an end to the notion of nomenclature in the simple sense” and to accept “that each language slices and organises reality in a different manner.²⁴ By implication, there can be no meaningful reduction to only one natural language. Translation in the narrow sense of the word is dead. Long live the challenge of bridging, mapping, creating crosswalks, walkthroughs and other methods of finding ways to transcend what could become utter solipsism.

This discovery of the profound differences of different languages extends beyond culture to our notions of knowledge itself. Only 35 years ago, Michel Foucault was considered as one of the pioneers of new scholarly approaches when he published his *Archaeology of Knowledge*.²⁵ He was modern in his notion of knowledge as layers which could be un- and dis-covered in the manner of an archeological dig and yet he continued to speak of one knowledge (focusing on *savoir* rather than *connaissance*). In the early 1980s Howard Gardner, building on the ideas of Sternberg, argued for multiple intelligences.²⁶ Since then this notion has gone far beyond simple frames of mind. One of the most succinct statements of the problem was recently given by Philippe Quéau, who now heads UNESCO’s Moscow office:

The global information society tends to create a unified, global market of formatted exchanges and practices, while knowledge societies come in much more different cultural flavors, and are a key ingredient for an effective diversity. For instance, the Anglo-Saxon notion of a “knowledge society” is not equivalent to the French “société du savoir”, at least linguistically. The etymology of the English word “knowledge” and of the English auxiliary verb “can” are closely related, while in French, the etymology of the word “savoir” is linked to the Indo-European root <*sap*>, “to taste”, whence words like “sapience” or “sapid”. In Russian, “знание”, like the word “женщина”, comes from the Indo-European root <*gen*>: “to give birth to, to generate, to know”. At least etymologically, *knowledge* points to utility and power, *savoir* points to theory and contemplation and *знание* points to generation. This is not just a matter of words. It may be the symptom of differing philosophical visions vis-à-vis the role of knowledge. Ultimately it may reveal differing social ends in shaping up the fundamentals of a society.²⁷

Indeed, in the course of the past decade the phrase “ways of knowing” has acquired an unexpected range of meanings with respect to effects of new media,²⁸ women’s studies,²⁹ as descriptions for science and religion,³⁰ as an approach to the Tree of Life³¹; with respect to approaches of the Inuit,³² the Indians of North America,³³ and the aboriginals of Australia.³⁴

In light of the above, it is perhaps wise to recognize that dire predictions about the end of knowledge³⁵ and the *End of History* (cf. Fukayama, 1999)³⁶ are premature and may have more in common with a well known strand of apocalyptic writings than those a-temporally inclined are inclined to admit. Clearly the age old quest to write an *Organon*, a *Summa*, an *Encyclopédie* needs to be more than a *Wikipedia* in a new medium. A history of knowledge(s) needs to go far beyond a history of science, a history of the

sciences, beyond Science and Technology Studies (STS) in order to make clear how some approaches to knowledge focus on, favour and foster knowledge as power, control and domination whereas others focus on knowledge as understanding, as taste, as healing (in the tradition of the shaman and the medicine man), as something both physical as in the Hebrew tradition (of knowing someone in the *Bible*) and metaphysical as in generation, as giving birth and new creation.

Just as we have discovered that there are very different ways of knowing, different knowledges, so too are we becoming ever more aware that there are very different ways of communicating or not communicating what we know. In some cultures one judges the intelligence of persons by the extent to which they state everything they know. In other cultures wisdom is largely in terms of the extent to which one does not say all that one knows. If we are creating networks where persons from such different cultures encounter each other how do we create frameworks which will help chatty persons to understand that silence can be golden and not just a tacit confession of ignorance? How can we help the silent wise to not dismiss chatty knowers as mere chatterboxes? How can we create communication systems that make us aware of what Edward T. Hall coined the *Hidden Dimension* (1966)?

11. Challenge of Different Levels of Distance

Indeed, how do we create knowledge structures that allow us to understand very different approaches to the seemingly same themes, topoi, root metaphors and common strands that constitute unifying elements of cultures, *Das verbindende de Kulturen*? And how do we create new interfaces to such knowledges, to these very different ways of knowing, which permit us to appreciate at a deeper level that some cultures focus on separating us from what we see (what Cassirer described so eloquently as the subject-object problem in his *Individual and the Cosmos*), while others such as the Orthodox Greek and the Slavic traditions create a mid-way between devout observer and sacred figure observed via *Iconostasis*, while in the East the quest is different again, whereby the challenge lies in making us feel at one with nature and the beyond. In these three cultures the ways of knowing and the ways of believing are closely linked. In the East one becomes One with everything. In the West, as Robin Williams has flippantly reminded us “one with everything” is for hamburgers, but hardly for our relation with Yahweh/God/Allah.

In the 19th century there was still a temptation to dismiss pre-literate cultures as primitive and assume that there was a straightforward evolution from pre-literate, through literacy and print literacy to new media. Today, such an approach is not only politically incorrect it is downright wrong on almost all fronts, even if such a claim in turn is considered by many as politically incorrect. In retrospect, we are learning that what seemed to be inextricable links between written/print cultures and civilization is too narrow an approach. Many oral societies, especially nomadic peoples³⁷ are not bound by these conditions.³⁸

12. Cultural Activities as an Integrating Path

Ironically, the intensive and extensive research of the 20th century is leading us return to earlier 18th century notions of the “noble savage” (Rousseau), but in a new light. Persons in pre-literate societies cannot be dismissed as less human, or less anything as far as intrinsic worth is concerned. At the same time, there remains the reality (an earlier generation would have spoken of an objective fact) that pre-literate cultures typically have less cultural creations and “products” which become part of an accumulative, collective memory than those in literate or print literate or new media societies. Their goals, beyond those of mere survival, tend to focus on creating some kind of meaning or connecting, which links them with a world beyond them and with ordering via pattern and ornament that makes more manifest this process of connecting.

The advent of literacy adds imitating to basic goals. The advent of print literacy expands these goals to include matching, mixing and later exploring. Such basic goals can be linked with a small number of basic cultural activities (figure 1). In this approach, progress cannot be reduced to simple linear equations of later is bigger and better. Many of the basic goals are there from the outset. This is our common humanity which is *Das verbindende de Kulturen* at its deepest and most primordial level.

While “technological” advances such as literacy, print and new media may affect the quantity and often quality of cultural production and expression, a deeper change lies in the targets and audiences of these expressions. In pre-literate cultures, the purpose of the exercise is to express the common goals, insights and values of a group or tribe which leads via myths and legends to some form of religion, a word which is etymologically linked with the verb “to bind”, to bring together. In literate society, this sense making, which had largely been oral- verbal evolves into (epic) poetry, song and other expressions, and becomes increasingly linked with individuals who begin as shamans and bards and become poetic, literary and artistic figures.

In print societies the individuation of these individuals gradually becomes more pronounced to the point that the quest for individual expression may parry with, compete with and sometimes even threaten the binding themes of society and culture in a larger sense. So the artist as a cohesive force becomes a partial outcast to the extent he/she is more partial, becomes the rebel, the weirdo, even the madman, excluded from the norm while challenging the norm to expand its horizons of inclusion.

The advent of new media radically increase the potential range of diffusion, dissemination of cultural products but also introduce new parameters for the purposes of such activities. On the surface, it means that marketing and sponsoring become inextricably linked with cultural processes. At a deeper level the commercialization of culture misses the point about its deepest dimensions. Granted paintings can be bought and sold just as some weaker representatives of the faith are available for a price.

Cultural Goal	Technology	Means
1. Connecting 2. Ordering	Pre-literacy	1. Thinking, Mental Sense Making Mythology Religion Philosophy 2. Doing, Physical Sense Making Building Making 3. Expressing Literature Art Mathematics
3. Imitating 4. Matching 5. Mixing 6. Exploring	Literacy Print	3 Representing 4. Expressing Directly via Written 5. Translating Media 6. Transforming Media
7. Spreading	New Media	7. Publishing with Tolerance 8. Sharing 9. Helping

Figure 1. Seven goals and nine means as ingredients for a new model of culture

Even so, one cannot buy creativity, just as one cannot buy true faith. Is dissemination simply in order to increase control, or to increase tolerance? Is it simply in order to share or is it in order to help? In this approach, cultures are not simply about what they produce but also how they go about sharing their cultural products and creations. Dictators build great buildings and enormous monuments, but this not make them scions of great cultures. Great expressions may always be of interest, but they are of greater interest if they do not come at the expense of human suffering and death.

In these insights may lie unexpected answers to the provocative questions posed by Kishore Mahbubani's recent book: *Can Asians Think?* (1998). In the year 1000 as the author points out, Asia was the leading civilization and Europe was only just beginning to recover from barbarian invasions. A millennium later, in the year 2000, the West rather than the East appears to be the leading civilization. Does this mean, asks the author rhetorically, that Asians are less intelligent and cannot think? Obviously not. Standing back, however, we can see that for the past millennium the West has increasingly opened itself to learning about other cultures, whereas the East has frequently created physical and metaphysical walls to keep out other cultures.

This is hardly to say that all the actions in the name of Christianity were always Christian in the deepest sense of the word. Significantly, Western efforts to resort to raw power have proved and are proving as powerless as such efforts elsewhere. The British Empire was defeated metaphysically by a Gandhi who refused to fight physically. Those who seek to be imperial powers today would do well to remember that example. The quest to

understand, to publish with tolerance, to share and to help has triumphed over contrary methods. Intelligence is everywhere. What counts is how we use intelligence and subject it to a greater, common good.

Our approach may shock those who proclaim that intellectual progress lies solely in retreating from Aristotle's four causes (material, efficient, formal and final) to a more pragmatic view where only material causes remain, whereby man is simply what he eats (*Der Mensch ist was er isst*, Feuerbach) or man is simply what he does and knowledge is action (Huxley).³⁹ But then it would be too easy if proclaiming the death of progress were enough in itself to retrogress back to one cause, rather than accepting the challenge of seeing the existing four causes in a new light. The profound advantage of our approach is that it acknowledges the intrinsic contributions of pre-literate, literate, print and new media cultures, while simultaneously allowing for development in the direction of complexity without imposing simplistic linear frameworks of bigger is better.

Those who emphasize the death of meta-narratives and argue that there is no objective progress, simply a "playful celebration of chaos;" who almost nostalgically proclaim their "abandonment of the optimism of the Enlightenment," are right inasmuch that the rather simplistic notions of the perfectibility of man that inspired the rise of freemasonry, the Enlightenment and so many political movements towards a forced democracy are no longer true in the same way that they were in the 18th century. And yet those who proclaim the death of progress, who insist that there is no cumulative dimension, rely ever more on so called post-modern technology to ensure that they are comfortable in a very modern way and that they can rely on the latest media and networks to gain access to amounts of knowledge which were unthinkable even a generation ago. Being articulate about problems and dangers especially of primitive models of the past is still a long step short of creating new models for the future.

13. Conclusions

Plus ce que ça change, plus ce que c'est la meme chose said Voltaire. In some senses he was very right. In the 1890s, the neo-Kantians called artists the researchers of science.⁴⁰ Some sixty years later, Marshall McLuhan called artists the early warning systems of the future. Today, even cultural scientists who would have us believe that science is irrelevant are constantly citing artists (e.g. William Gibson) as prophets of emerging possibilities. Everyone seems agreed that science is not art, and yet there are books entitled both the *Science of Art* and the *Art of Science*.

Culture is both art and science and hence is more elusive still. In the past 50 years there were frequent moments when it seemed as if what was once thought ineluctable had become elusive and illusory, as if the earlier big stories were wrong, and as if storytelling was a playful habit of children outdated in a serious world of adults. That untold stories of the past were insufficient does not mean that un-told stories of the future are not there for the telling.

We have suggested that the bold title of this conference, *Das Verbindende der Kulturen*, is much more than an optimistic cry in a gloomy environment. We have acknowledged that the 20th century brought many developments which clearly revealed the limitations of earlier efforts in this direction. We have also noted that the 20th century also brought into focus four areas of research that point to new foundations for such binding elements and dimensions of cultures. These areas entail new approaches to 1) relation and scale; 2) intangible and tangible culture; 3) texts as integrators of culture and 4) the rediscovery of meta-narratives. We showed that these new strands are linked with two others which superficially point to diversity rather than binding, namely, 5) links between local-regional-national-international-global and 6) a discovery that language is unique and hence not translatable as a simple equation between different signs.

Michel Laclotte, a former director of the Louvre, has claimed that culture is the new religion and that museums are the cathedrals of the new age. This is a tempting explanation for a more complex relationship which Paul Tillich explored more profoundly in his *Theology of Culture* (1964). Sacred great cathedrals are striking but as vulnerable as secular Twin Towers. The products of faith make the news, the sources of faith are our only deeper hope. What concerns us here is that there are important ways whereby culture in this larger sense can create bonds that go beyond the narrow binding entailed in the etymological links with *re-ligio* (to bind), which have all too often led to religious wars and sectarian struggles. Culture in its deeper sense creates a framework for religion to become an integrating rather than an explosive and dis-integrating factor.

To conclude that new meta-narratives are possible is hardly to insist or even pretend that they will be easy to create or to maintain. We drew attention to the challenges of creating new systems that allow understanding between one culture where intelligence is saying and another culture where wisdom is not saying. We noted challenges of creating interfaces that reflect different levels of distance in cultures. At the same time we suggested that cultural activities offer new models of culture that integrate the achievements of nomadic and settled cultures; of pre-literate, literate, print and new media cultures, while fostering a unity of diversities.

The 20th century taught us that the ways of knowing, the knowledges of culture are infinitely more diverse than either scientific or artistic knowledge, alone or combined; more profound than knowledge as power, knowledge is power and knowledge = power. The realms of cultures are about many kinds of knowledge that include the tacit and extend into knowledge as taste, as physical knowing, as generation and parturition, as life giving and as creation. There are new histories of knowledge to be written that transcend the Euro-and Asia-centric limitations of the past, that enable us to see afresh the big picture while keeping alive the details which as the German sayings go is where God and/or the Devil dwells.

We need global models, which foster the interplay of more than the glocal (global-local) and reveal the inter-connectness of local-regional-national-international and global. If we achieve this then there will truly be new learning and communication with old and new media. If we achieve this we shall truly make progress beyond uni-modal knowledge

towards multi-medial, multi-modal multi-knowledge, ways of knowing and knowing of ways to go beyond knowledge as power towards knowledge as creative innovation and sharing. Such are the connecting elements of culture that we need, not just missing links, but links to missing insights; creating bridges to public worlds without encroaching on private ones; binding insights that can be com-bined while fostering the uniqueness of individuals.

Acknowledgements

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Notes

¹ Karl Marx, *Das Capital*, Hamburg : Verlag von Otto Meissner, vol.1, 1867, 1976, p. 285:

"An instrument of labour is a thing, or a complex of things, which the worker interposes between himself and the object of his labour and which serves as a conductor, directing his activity onto that object. He makes use of the mechanical, physical and chemical properties of some substances as instruments of his power, and in accordance with his purposes. Leaving out of consideration such ready-made means of subsistence as fruits, in gathering which a man's bodily organs alone serve as the instruments of his labour, the object the worker directly takes possession of is not the object of labour but its instrument. Thus nature becomes one of the organs of his activity, which he annexes to his own bodily organs."

This is cited by Paul Taylor who notes under Mechanical Extensions that Buckminster Fuller also pursued this idea in his *Operating Manual for Spaceship Earth*, 1969, p. 101. See: <http://www.nous.org.uk/mech.ext.html>

² Ernst Kapp, *Grundlinien einer Philosophie der Technik. Zur Entstehungsgeschichte der Cultur aus neuen Gesichtspunkten*, Braunschweig, 1877. He also spoke of "organ projection" and spoke of the not yet understood machinery that resulted as the "unconscious." Discussed in: Jacqueline C.M. Otten, "Dress Codes: work environments – wearables – protective wear." See: <http://www.generativeart.com/papersga2003/a29.htm>.

³ Sigmund Freud (1921), noted: "With every tool, man is perfecting his own organs, whether motor or sensory, or is removing limits to their functioning." Sigmund Freud, *Civilization and its Discontents*, trans. James Strachey, New York: W.W. Norton, 1961. The original edition was 1929. This is cited by William J. Mitchell, *E-topia*, Cambridge Mass: MIT Press, 1999, p. 177.

⁴ Marshall McLuhan, *Understanding Media: The Extensions of Man*, New York: McGraw Hill, 1964. Reprint: Cambridge, Mass: MIT Press, 1994. Particularly chapters 8-10.

⁵ For an introduction to Jack Goody see: <http://coppock-violi.com/preface/goody.htm>

⁶ E.g. Michael Giesecke, *Der Buchdruck in der frühen Neuzeit. Eine historische Fallstudie über die Durchsetzung neuer Informations- und Kommunikations-technologien*, Frankfurt: Suhrkamp, 1991.

⁷ Julius von Schlosser, *Die Kunstliteratur: ein Handbuch zur Quellenkunde der neueren Kunstgeschichte*. Vienna: Anton Schroll, 1924

⁸ The twentieth century saw over 6000 publications in this field. For a first overview thereof see the author's two volume *Sources and Literature of Perspective(800 pp)* which serve as an introduction to a standard bibliography of the field. Cf. www.sumscorp.com and www.mmi.unimaas.nl

⁹ Later also Gordon Pask, and George Kelly. Cf. radical Constructivism site.

See: <http://www.univie.ac.at/constructivism/>

¹⁰ At a very elementary level of the website:

<http://www.hewett.norfolk.sch.uk/curric/soc/POSTMODE/key.htm>

¹¹ Critical literature: Howard Bloom, *The Closing of the American Mind*, New York: Simon and Schuster, c1987; Landry, Donna and Gerald MacLean, ed. *The Spivak Reader: Selected Works of Gyatri Chakravorty Spivak*. New York: Routledge, 1996. See: <http://www.cddc.vt.edu/feminism/Spivak.html>; Terry Eagleton, *The Illusions of Postmodernism*, Oxford: Blackwell Publishers, December 1996; Kimball, Roger,

Experiments against reality: The fate of culture in the postmodern age, Chicago : I.R. Dee, 2000; Keith Windschuttle, *The Killing of History: How Literary Critics and Social Theorists are Murdering Our Past*, Paddington, NSW, Australia : Macleay Press, 1996; 1st paperback ed. San Francisco: Encounter Books, 2000; David Stove, *Anything Goes: Scientific irrationalism: origins of a postmodern cult*, New Brunswick, NJ: Transaction Publishers, 2001; Hilton Kramer, Roger Kimball, ed., *The Survival of Culture: Permanent Values in a Virtual Age*, 2003; Terry Eagleton, *After Theory*, New York: Basic Books, 2004.

¹² Cf. Editech Co. in Florence. See: <http://www.editech.com/uk/html/adorazione-01.html>

¹³ Daniel Coleman, *Destructive Emotions. How can we overcome them*, New York: Bantam Books, 2003.

¹⁴ . "Challenges and Potentials for Sharing between the Network of Excellence For Research and Education on Digital Silk Roads (NERE/DSR) and E-Culture Net," *Second UNESCO Digital Silk Roads Conference*, Nara, 10-12 December 2003, Tokyo: NII, 2004, pp. 37-48.

¹⁵ "Goals of Culture and Art," Lecture to the IIC, Kuala Lumpur, September 1999.

(<http://www.nmi.unimaas.nl> also on the site of the International Institute of Communications, <http://www.iicom.org>). Published electronically in TRANS. Internet-Zeitschrift für Kulturwissenschaften, vol. 1, Vienna, (<http://www.adis.at/arl/institut/trans/0Nr/veltman1.htm>).

¹⁶ Cf. For instance a website on Atlantis.

See: http://www.atlantia.de/atlantis_english/myth/doom/atlantis_flood.htm

¹⁷ See the E-Culture website and specifically the work of Dr Suzanne Keene and Francesca Monti which entails three ingredients: a Virtual Reference Room, Digital libraries in the form of Distributed Repositories and a virtual Agora for collaborative sharing and creation.

¹⁸ *The Unity of Diversities - Cultural Co-operation in the European Union*. Edited by the Parliamentary Group of the PSE, European Parliament, Firenze, Angelo Pontecorboli Editore, 2001, 112 pp, ISBN 88 85207 94 4. Cf. The reference in *Culturelink News*.

See: <http://www.culturelink.org/review/36/cl36eu.html>.

¹⁹ Cf. <http://www.culture.gouv.fr/culture/mrt/numerisation/fr/actualit/documents/amp-newsletter1-en.pdf>.

See: http://www.culture.gouv.fr/culture/mrt/numerisation/fr/f_01.htm.

²⁰ This important work is being spearheaded by Professor Jacques Poulain (Paris 8) with initial conferences organized by their *Université de la Mondialisation*.

²¹ Gerhard F. Strasser, „Lingua Universalis: Kryptologie und Theorie der Universalsprachen im 16. und 17. Jahrhundert (Lingua Universalis: Cryptology and the Theory of Universal Languages in the 16th and 17th Centuries).” *Wolfenbütteler Forschungen*, Vol. 38. Wiesbaden: Harrassowitz, 1988.

²² Wilhelm von Humboldt, „Über die Verschiedenheit des menschlichen Sprachbaues und ihren Einfluß auf die geistige Entwicklung des Menschengeschlechts.“ 1836: "so liegt in jeder Sprache eine eigentümliche Weltansicht." *Ausgewählte Schriften*, ed. by Th. Kappstein, 1917, p. 182, 196.

²³ Sapir-Whorf hypothesis. Cf. Edward Sapir (1884-1936), *The Status Of Linguistics As A Science*, 1929.

See: <http://venus.va.com.au/suggestion/sapir.html>.

²⁴ Cf. Abrégé de terminologie multilingue: <http://www.termisti.refer.org/theoweb2.htm>

Aujourd'hui, le champ de la terminologie est nettement investi par des linguistes formés à la démarche saussurienne, laquelle a censément mis fin à la vision de la langue comme une "nomenclature". On pense aujourd'hui que la langue donne une forme à la substance du sens et l'on adhère généralement à l'hypothèse de Sapir-Whorf selon laquelle les locuteurs de chaque langue découpent, organisent la réalité de manière différente. En ce sens, il peut paraître désuet de donner une si grande place au concept (ou notion), sorte d'idée néo-platonicienne érigée au rang de bienfait technique sur lequel fonder la communication interlinguistique.... S'il nous a semblé bon de conserver cette référence, c'est parce que l'approche conceptuelle, quoique critiquable, demeure une bonne manière d'introduire la problématique de l'équivalence et des réseaux notionnels, sans pour autant renoncer à une approche descriptive des différences entre les langues.

For further discussion see the author's: « Towards a Semantic Web for Culture,» *JoDI (Journal of Digital Information, Volume 4, Issue 4*, Article No. 255, 2004-03-15

Special issue on New Applications of Knowledge Organization Systems.

See: <http://jodi.ecs.soton.ac.uk/Articles/v04/i04/Veltman/>

²⁵ Michel Foucault, *L'Archéologie du savoir*, Paris: Bibliothèque Sciences Humaines, 1969. Trans. Alan Sheridan, *The Archaeology of Knowledge*, New York: Pantheon. This followed his *Les Mots et les choses. Une archéologie des sciences humaines* (1966). Trans. Alan Sheridan as *The Order of Things: An Archaeology of the Human Sciences*, New York: Vintage, 1970.

- ²⁶ Howard Gardner, *Frames of Mind: The Theory of Multiple Intelligences*, New York: Basic Books, Inc, 1983. cf. Marian Beckman, "Multiple Ways of Knowing: Howard Gardner's Theory of Multiple Intelligences Extend and Enhance Student Learning." See: <http://www.earlychildhood.com/Articles/index.cfm?FuseAction=Article&A=19>
- ²⁷ Philippe Quéau, "Information Policies for Knowledge Societies," EVA Moscow, 1-5 December 2003. See: http://evarussia.ru/upload/doklad/dokladEn_1080.doc.
- ²⁸ Cf. Professor M.A. Syverson, University of Texas, Austin, RHE 330 and TLC 331. See: <http://www.cwrl.utexas.edu/~syverson/330/spring01/>
- ²⁹ Mary Belenky, Blythe Clinchy, Nancy Goldberger, Jill Tarule, *Women's Ways of Knowing: The Development of Self, Voice, and Mind*, New York: Basic Books, 1997.
- ³⁰ Dr. Piet Hut, "Science and Religion as Ways of Knowing, Princeton: Institute of Advanced Study. See: http://www.datadiwan.de/SciMedNet/library/articlesN75+/N75Hut_scireligion.htm
- ³¹ Cf. Organelle: "New Ways of Knowing": See: www.organelle.org/
- ³² Cf. Marilyn Walker, "Ways of Knowing," *Janus Head*, Volume 2, Number 1 Summer 1999. See: <http://www.janushead.org/JHSumm99/walker.cfm>
- ³³ Cf. Frits Pannekoek, "The Virtual Circle: Transformation of Scholarship through Application of Aboriginal Ways of Knowing," *Digital Resources in the Humanities (DRH) Conference, 2003, University of Gloucestershire, Cheltenham Campus, September 2003*. See: <http://www.hcu.ox.ac.uk/ocs/viewpaper.php?id=40&print=1>. Cf. Reg Crowshoe and Sybille Maaneschmidt, *Akak'stinen. A Blackfoot Framework for Decision Making and Mediation Processes*, Calgary: University of Calgary Press, 2002. Cf. "Spiritual Ways of Knowing about Tornadoes," See: <http://www.tapestryweb.org/tornado/spiritual.html>
- ³⁴ Cf. Karen Martin, Booran Miraboopa, "Ways of Knowing, Ways of Being and Ways of Doing: Developing a theoretical framework and methods for Indigenous re-search and Indigenist research," *Major AIATSIS Conference held in 2001. The Power of Knowledge, the Resonance of Tradition – Indigenous Studies: Conference2001. The Australian National University, Canberra, Manning Clark Centre, 18 to 20 September 2001. Symposium B*. See: <http://www.aiatsis.gov.au/rsrch/conf2001/PAPERS/MARTIN.pdf>.
- ³⁵ Steve Fuller, *Philosophy, rhetoric, and the end of knowledge: the coming of science and technology studies*, Madison, Wisc.: University of Wisconsin Press, 1993. Cf. Knowledge Management Foundations. See: <http://www.warwick.ac.uk/~sysdt/kmf.html>
- ³⁶ Francis Fukuyama, *The end of history and the last man*. London, Hamish Hamilton, 1999.
- ³⁷ See: http://www.unesco.org/culture/dialogue/eastwest/html_eng/iisnc.shtml
Cf. <http://users.ox.ac.uk/~%7Ecnpc/>
- ³⁸ Some cultures such as Tibet and Nepal have traditionally been closed to outsiders and as such cannot be compared easily with other cultures where an open attitude with respect to "foreigners" has been the case for centuries or even millennia – e.g. the Lycians in Southern Turkey.
- ³⁹ Cf. Ether. Sharing Knowledge. See: http://ether.typepad.com/klog2/2003/10/action_is_the_e.html
- ⁴⁰ *For this source and for a more detailed discussion of the Warburg context see the author's: "Panofsky's Perspective: a Half Century Later," Atti del convegno internazionale di studi: la prospettiva rinascimentale, Milan 1977, ed. Marisa Dalai-Emiliani (Florence: Centro Di, 1980), pp.565-584.*