FIRST LOOKS: CATAC'98

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"Nothing human is alien to me." (Terence, 180-155 BCE)

Western Humanists from Montaigne through Marx have used Terence's phrase to affirm their belief in a universally shared humanity, one grounded in a *reason* held in common - a belief as old as the Stoic philosophers of the Greco-Roman world.[1] Over against ethnocentrism (the belief that one's own language/culture/ worldview are the only 'right' ones, and those who adhere to differing languages/cultures/worldviews are simply wrong, inferior), the Stoic philosophers inaugurated an optimistic conception of a shared humanity. This shared humanity, they believed, would lead to the *cosmo-politan*; that is, the citizen of the world, not simply the citizen of a given country and culture.

This ancient Stoic conception finds powerful expression in the contemporary vision of 'the electronic global village,' a *cosmopolis* which is literally wired together by new computer-mediated communications technologies manifested by the Internet and the World Wide Web. The 'digitarati' (such as Howard Rheingold and Nicolas Negroponte) and their commercial variants (Bill Gates and AT&T) present us with rosy visions of this digital future in which everyone everywhere will be able to 'talk' to everyone everywhere. In the electronic global village, instantaneous and world-wide *communication*, mediated through computers and computer networks, will usher in a revolutionary new age of peace, prosperity, and democracy. Buddhist monks in Nepal will communicate through their laptop computers with the Pope in Rome (so IBM); Tibetan rug-weavers will communicate through videophones with their French and American customers (so AT&T).

Paradoxically, however, the anti-ethnocentric cosmopolitanism underlying this vision of the global village may itself emerge as ethnocentric in its own right. One hardly needs to be a postmodern deconstructionist (à la Derrida) to call into

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[1] Peter Caws (1998) points out that this passage originally means something quite different from its subsequent Humanist interpretation: in Terence's play, *Heauton Timorumenos,* Chremes uses this phrase to justify his poking into other peoples' business.

question just how universally shared some human *reason* may be - and with it, the suite of shared communicative skills, styles, and intentions required to participate in the *cosmopolis*.

An emerging pattern of scholarship and research suggests, on the contrary, that the optimistic vision of the electronic global village rests on a number of assumptions which may be culture-bound. For example, rather than necessarily inaugurating an egalitarian and democratic global village, the new communications media threaten to expand, rather than resolve, cultural conflicts. Specifically, conflicts may be heightened between Western commitments to democracy, free speech, and individualism, and the cultural preferences of many Asian countries for more hierarchical governance, control over culturally significant media, and the collective rather than the individual.[2] Similarly, there is some evidence that new communications technologies, used from the 'top down' to enforce cultural unity, often fail in the face of deeply entrenched cultural differences. On the other hand, these same technologies may be used to reinforce distinctive cultural identities in the face of various pressures to conform to a larger cultural pattern of beliefs and preferences.[3]

The *First International Conference on Cultural Attitudes Towards Technology and Communication* (CATaC'98), and its affiliated publications, seek to bring together current insights from philosophy, communication theory, and cultural sciences in an interdisciplinary dialogue. The synthesis of disparate scholarly ideas will shed greater light on just how culture impacts on the use and appropriation of new communications technologies. Beyond the individual contributions themselves, some of our most significant insights will emerge as we listen and discuss carefully with one another during the conference itself.

As a way of preparing for that discussion, I offer the following overview of the CATaC papers and abstracts, along with a summary of the insights and questions they suggest. On first glance, the research and analyses gathered here both reinforce and dramatically expand the understanding of the complex interaction between culture, communication and technology that is sketched above. Briefly, between the poles of utopian visions and dystopian effects of an inevitable democratizing through CMC technologies, many of the papers gathered here sketch a nuanced understanding of a bipolar interrelationship between culture and technology. The interrelationship exists in a relatively neutral 'Internet culture' that fails to embed or impose specific utopian or dystopian values in CMC technologies, while at the same time allowing for value

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[2] See Goonasekera (1990), Low (1996), Wong (1994), Sussman (1991), Ang (1990).

[3] See Venturelli (1993), Tremblay (1995). And in the CATaC papers, Soraj Hongladarom in effect responds to both of these points, arguing that (a) Internet culture does not necessarily result in the imposition of Western values, and (b) the Internet may allow the selective appropriation of Western values while also reinforcing local cultures and identities. For a more extensive treatment of these issues, see Ess (1998).

choices, including the choice to reinforce and enhance local cultures. Taken together, these analyses thus suggest that CMC technologies will not lead to a homogenizing Internet culture (imposing either democratic or authoritarian values), but rather a connected plurality of diverse cultures and languages. The pluralistic *cosmopolis* may prove the Stoics right after all.

These first looks, however, are by no means meant to be definitive, but only suggestive. They are springboards for the conversations in London.

Session 1: The Politics of the Global Village

Steve Jones, *Understanding micropolis and compunity*, reviews a number of familiar communication theorists, including Ong and McLuhan, as he develops his own metaphors of 'path' and 'field' to discuss the influence and meaning of Internet messages. In particular, he takes up Carey's distinction between ritual and transportation models of communication to address 'compunity,' the merger of computers with communities and our sense of community - a merger that is strained between the traditions and rituals of real life and the kinds of communication as transportation facilitated through CMC. Jones analyses four areas - privacy, property, protection, and privilege - as central to possible on-line communities. His analysis both effectively represents the postmodernist approaches which have dominated Anglo-American analysis of hypertext and CMC, and uncovers important ambiguities in the effort to recapture lost community on-line. Such efforts, according to Jones, are only partially successful, and they introduce in their wake new difficulties distinctive to cyberspace. (Such ambiguities, we will see, will be characteristic of several analyses and research projects.)

Herbert Hrachovec, *New Kids on the Net: Deutschsprachige Philosophie elektronisch*, documents several experiments with conducting philosophy on-line in the German-speaking world, illustrating "the force and limits of attempts to install a computer-mediated space of Reason." Hrachovec is critical of too closely identifying at least the current realities of hypertext with such standard postmodernist theorists as Barthes and Derrida (an identification made most effectively and prominently by George Landow). In particular, it may not be accidental that 'electronic philosophy' is very much at the margins of German academic life: "some features of the new discursive forms are incompatible with the current educational system." Hrachovec's study of the contrasts between the 'microcultures' (my term) of traditional academia and on-line discourse may point to similar contrasts in larger contexts.

Barbara Becker and **Joseph Wehner**, *Electronic media and civil society*. In contrast to mass media, which established a kind of global public opinion, interactive media seems to support the development of so-called

Teilöffentlichkeiten - discourses that are characterized by context-specific argumentation strategies and special themes. We assume that interactive electronic media will not replace the traditional mass media, but will be useful for pre-institutional forms of public opinion, as they can be found in non-governmental organizations, community pressure groups, local activities and so on. Following this, electronic media will probably support movements of the so-called civil society.

The question remains still open, whether electronic media might help to find a more global political consensus within a society by overcoming the discourse specific perspectives.

Session 2: Homogeneity, Marginalization, and the Preservation of Local Cultures

Daniel Pargman, *Reflections on cultural bias and adaptation*, problematizes the relation between culture and CMC technologies in terms of: how American cultural attitudes (historically) and diverse cultural attitudes (today) shape the development and use of CMC technologies; and how diverse cultural attitudes manifest themselves in the implementation and use of MUDs in general and of SvenskMud (presented as the first vernacular MUD in the world) in particular. Pargman identifies important ways in which cultural biases are 'built in' to computer systems and the Internet (e.g., ASCII code and English as the Internet's *lingua franca*) and then identifies representative interactions between social practices and technological artifacts (the products of design out of a given culture) in the "social-technical design cycle." Pargman then provides a fine-grained analysis of the multiple cultures to be considered in thinking about culture and technology - Swedish culture, youth culture, hacker culture, fantasy culture, and CMC culture generally. Pargman's paper provides a specific instance of a <u>non</u>-English implementation of a significant CMC technology as it also reminds us that 'culture' is not a hermetically-sealed category, but a series interweaving flows of diverse beliefs, values, and behaviors.

Alexander Voiskounsky, *Internet: Cultural diversity and unification*, takes a sociohistorical approach to human mental development as his starting point for an analysis of Internet usage - a usage he finds to be both unifying and fragmenting in significant ways. Voiskounsky's analysis is distinctive insofar as he examines both techniques of hypertext browsing (something that is unique to CMC environments) and the influence of status/position/rank on holding the floor and turn-taking rules (traditional categories of discourse analysis, now applied to the new environment of CMC).

Voiskounsky further examines whether or not *emoticons*, ASCII-based icons intended to compensate for the emotively 'cool' content of e-mail text as ways of

signaling basic emotions, are genuinely universal. Finally, Voiskounsky points out the complex results of English, as the *lingua franca* of the Net and the Web, being taken up by non-native speakers, resulting in greater 'contamination' of other languages with English terms, as well as a new pidgin Network English. (This analysis suggests, consonant with several analyses gathered here, that *culture* and *language* are not monolithic and impermeable blocks of content and practice, but rather fluid and permeable entities in constant interchange with one another.)

Cyd Strickland, *Aspects of diversity, access, and community networks*, provides an ethnographic study of La Plaza Telecommunity in Taos, New Mexico, USA. La Plaza is an effort to realize the Clinton administration's early vision of a National Information Infrastructure accessible by all Americans in a community with an average income of less than $13,000/year and telephone coverage of 65%. In addition to economic obstacles, Strickland identifies cultural barriers that emerged between La Plaza Telecommunity, as a largely male/Anglo and thus individualistic enterprise, and the more communalistic culture of the Pueblos and the family- and relationship-oriented culture of the Hispanics. While the failures of La Plaza are disheartening for those who hope CMC technologies will facilitate greater communication and democracy, Strickland's analysis helps make clear both economic and cultural realities which must be faced to realize such lofty goals.

Scott McConnell, *Internet Use in Uganda: A report on Internet Service Providers in Uganda and the NGO's that use them*, in his survey, identifies both availability of Internet service and actual use among non-governmental organizations (NGO's). His initial work identifies training issues and communication patterns by NGO's (local in contrast with international communication). At CATaC, McConnell will report on additional fieldwork results from early 1998.

Session 3: Communication in Cyberspace

Fay Sudweeks' *Cybersocialism: Group Consciousness in Culturally Diverse Collaboration* reports the findings of surveying over 100 researchers involved in two-year collaborative project relying centrally on computer-mediated communication. She proposes seven criteria for determining the presence of a group consciousness, and, as a result of her survey, a number of predictive hypotheses concerning the emergence of collaborative group consciousness across cultural and geographic boundaries. Her findings will compare most immediately with **Maitland** and **Heaton**'s presentations.

Cameron Richards, *Computer mediated communications and the connection between virtual utopias and actual realities*, approaches cyberspace

through the genre of analysis defined by utopian and dystopian poles, so as to ask "how emergent notions of virtual utopia are related to the utopian functions of cultures generally." This calls into question, especially, the issues surrounding *embodiment* (my term); that is, are utopias envisioned for embodied human beings in 'real life,' face-to-face (embodied) communities entirely relevant to the virtual utopias made possible for disembodied entities in cyberspace? Richards further takes up two well-known postmodernist analyses of communication in cyberspace - Baudrillard's more pessimistic and dystopian perspective vis-à-vis Sherry Turkle's more non-committal, ambivalent position - and argues that Paul Ricoeur's reader-response theory offers a more fruitful framework for helping us distinguish between the use and abuse of utopian rhetoric in efforts to understand the new communicative possibilities of cyberspace. (Richards' turn to Ricoeur here may be compared with Hagan and Nayar's preference for 'reception analysis.')

Lucienne Rey, *Attitudes towards technology and communication across the multiple cultures of Switzerland*, focuses on Switzerland, which enjoys the 'luxury' of no less than four official national languages. This 'multiculturality' within a narrow space, however, is not often exploited fully, so as to enliven and enrich national discussions and debates. More often than not the public remains focused within its own language domain; facility in more than one language is the exception rather than the rule. It is hence little surprise that linguistic boundaries are at once cultural boundaries. This is often apparent in national elections; differences of opinion run along linguistic boundaries. The different linguistic communities also distinguish themselves one from another in their daily routines. Rey proposes a few differences can be ascertained in the communication of German- and French-speaking Switzerland. On the basis of a small study of letters to the editor, delivered via e-mail to various newspapers in German- and French-speaking domains, Rey develops some empirically grounded hypotheses concerning the different uses of electronic communication in German- and French-speaking Switzerland.

Session 4: Sociocultural Convergence of North, South, East and West

Michael Dahan, *National security and democracy on the Internet in Israel*, reviews several incidents in which 'freedom of expression' on the Internet led to what many see as serious breaches of Israel's national security (e.g., use of IRC channels and Usenet to 'broadcast' Iraqi missile points of impact, thus effectively serving as 'spotters' for the Iraqi military during the Gulf War). Dahan will address the conflicts between freedom of expression and information facilitated by CMC technologies and the specific political and cultural concepts of democracy and national security in Israel.

Jose Nocera, *Virtual environments as spaces of symbolic construction and cultural identity: Latin American virtual communities*, draws on Quentin Jones' definition of a 'virtual settlement,' along with symbolic interactionism and other social science approaches, to examine the group life of virtual communities in the Latin American context. It will be interesting to compare Nocera's results with those suggested by Jones and Richards.

Jason Rutter and **Greg Smith**, *Addressivity and sociability in 'Celtic men'*, take up 'Celtic Men,' a newsgroup originally specific to Shetland Isles (UK), as a both specific, culturally located example of developing communication and a more general example of newsgroup CMC. Their research explores how posters present themselves as agents with distinct identities and personas, and how this occurs within the frame of sociable interaction, specifically, the use of addressivity techniques to secure different 'footings' (drawing on the work of Goffman). Because their example is an on-line community originally developed out of - and still sustained by - a relatively isolated, close-knit community, this example may be suggestive for how CMC technologies both fray and preserve real-life cultural identities. This theme is taken up especially by Jones, Richards, and Hongladarom. This paper is also one of the few contributions to take up sexuality as a component of cultural identity, where sexuality touches on the theme of *embodiment* (which I suggest below.)

Jerome Heath, *Cultural attitudes and technology*, uses several different instruments to survey students in Hawaii, representing both Asian and US origins. His results indicate that acceptance of technology correlates most directly with gender, father's education, and area of national/cultural origin, in contrast with measures of interest in media, acceptance of newness and new people, and concern about public issues. These results suggest for Heath that old conceptions concerning what drives the growth of technology are flawed, and that we must include attention to belief systems or 'mind scapes.' Doing so, Heath argues, leads us to adopt a cyclic epistemology, described by Maruyama and adapted by Hegel, as a better way of understanding how technology is appropriated in response to needs.

Session 5: East/West cultural attitudes and communicative practices

Lorna Heaton, *Preserving communication context: Virtual workspace and interpersonal space in Japanese CSCW,* contrary to the view that technologies are value and culturally neutral, takes up two case studies to show how cultural values and communication styles specific to Japan are incorporated in the design of computer-supported cooperative work (CSCW) systems. She does so out of a social constructivist view, one that further suggests that technologies can be 'read' as texts, and drawing specifically on Bijker and Law's notion of

technological frame to explain how Japanese designers invoke elements of Japanese culture in justifying technical decisions.

Heaton highlights the importance of non-verbal cues and the direction of gaze in Japanese culture as an example of Hall's 'high context/low content' category of cultural communication style, in contrast with Western preferences for direct eye contact and 'low context/high content' forms of communication. She also notes in her conclusion the Japanese interest in pen-based computing, speech synthesis, virtual reality interfaces, etc., as resulting not only from the physical difficulties of using a Roman keyboard to input Japanese, but also the larger cultural preference for high context in communication.

Soraj Hongladarom, *Global culture, local cultures, and the Internet: the Thai example*, examines two threads of discussion developed in a Thai Usenet newsgroup, one dealing with critiques of the Thai political system and the other with the question of whether Thai should be a language, perhaps the only language, used on the newsgroup. In contrast with concerns that CMC technologies will erase local cultures and issue in a monolithic global cultures (cf. Keniston and Hall's 'bad dream'), Hongladarom argues that the Internet facilitates two different kinds of communication: (i) communication that helps reinforce local cultural identity and community (in part, as this communication fulfills what Carey calls the 'ritual function', i.e. strengthening community ties); and (ii) communication that creates an 'umbrella cosmopolitan culture' required for communication between people from different cultures. Hongladarom further suggests that we distinguish between a Western culture which endorses human rights, individualism, egalitarianism and other values of a liberal democratic culture (a 'thick' culture in Walzer's terms), and the cosmopolitan culture of the Internet as neutral (a 'thin' culture). The Thai experience suggests that the Internet does not force the importation of Western cultural values. Instead, Thai users are free to take up such issues and values if they wish, and they can do so while at the same time preserving their cultural identity.

This 'bipolar' result echoes and reiterates the findings of Jones, and possibly Pargman and Voiskounsky.

In *The Cultural Interface: the role of self*, **Satinder Gill** reports on differences between Japanese and British uses of and attitudes towards e-mail, especially with regard to the ability of e-mail to appropriately convey emotions. This study reinforces Lorna Heaton's observations - especially regarding a characteristically (but not exclusively) Japanese concern with contextual elements of communication not well captured by e-mail texts, over against British subjects' greater comfort with e-mail as a form of efficient communication. At the same time, Gill reiterates Hongladarom's observation that use of CMC technologies which favor a given set of culturally-specific communication preferences may in fact issue in changes in individual and social norms defining appropriate communication behaviors.

Session 6: Culture and the Design of Technology

Adrie Stander, *Bridging the gap: Issues in the design of computer user interfaces for multicultural communities*, identifies several cultural factors at work in interface design, including: intracultural class differences in use of abstractions and generalizations, where such abstractions and generalizations are required to successfully navigate graphical interfaces; culturally variant senses of the 'locus of control' (either more internal or external), where an internal sense of control might be necessary for successful mastery of computers; culturally-variant understandings of colors and symbols, as these are incorporated in the visual design of user interfaces; and the role of ethnicity, class, gender, and age in predicting individual success. Stander refers here to a study of South African students from eight different cultural groups and six languages, illustrating major differences in performance as correlated with cultural and linguistic differences.

Vanessa Evers' *Designing Interfaces for Culturally Diverse Users* summarizes and demarcates the limits of current literature on designing human computer interfaces across cultures. She seeks to overcome these limits in her own research, reported here, on metaphorical meaning and interface acceptance across cultures. Evers' project should provide helpful insights on the complexities of localization - a process central to the presentations by Hongladarom, Keniston, etc.

Andrew Turk and **Kathryn Trees'** *Culture and Participation in Development of CMC* endorse what they call a highly participative methodology for designing culturally-appropriate CMC, using a specific project involving three indigenous populations in Ireamugadu, Australia, as an example. Their report details the culturally-specific communication elements which must be included in a "Cultural Information System" intended both to avoid infringing upon local cultural constraints and to convey significant details and relationships characteristic of the social system. Their project further involves conjoining critical ethnography and visual anthropology with philosophical efforts to articulate ontological, epistemological, and ethical issues.

Carleen Maitland, *Global diffusion of interactive networks: the impact of culture*, collected data on Internet diffusion in different countries and uses Hofstede's five dimensions of national culture, enhanced by the work of Herbig and Hall, to develop five empirically-testable hypotheses regarding specific cultural dimensions and the diffusion of interactive networks. Conjoining sociology and economics, Maitland argues that three of Hofstede's cultural factors may be indeterminate regarding network diffusion; that is, individualism vs collectivism, femininity vs masculinity, and long term vs short term orientation. Maitland proposes that diffusion of network technologies will

advance more rapidly in cultures marked by weak uncertainty avoidance (cultures in which "What is different is seen as curious, as opposed to dangerous."), greater gender equality, and low ethnocentrism/high cosmopoliteness (orientation outside the social system). In direct contrast to the prevailing emphasis on equality and decentralization in postmodern analyses of CMC and hypertext, however, Maitland further suggests that network diffusion will also be favored by cultures with high degrees of power distance (i.e., preference for centralization and an acceptance of inequalities in power and status).

In *Building Cyberspace: Information, Place and Policy*, **Ken Friedman** provides an extensive history of the complex relationship between human constructions of the relationship between understandings of place and information. (This essay was previously published in the journal *Built Environment*.)

Session 7: Communication and Technology in Organizations

Diane Witmer and **Chutatip Taweesuk**, *Why people use the World Wide Web: an application of uses and gratifications theory*, rely on Csikszentmihalyi's notion of 'flow,' use and gratification theory, and additional theoretical considerations. Witmer and Tweesuk developed a survey instrument to measure functional uses, motivations, attitudes, and use of the Web and other media in a survey of public relations students and professionals in the U.S. and Mexico. Their results (limited in terms of sample size and representativeness) suggest that Mexican and U.S. business communicators are more alike than different in their use of the Web - probably because their professional needs override cultural differences which might otherwise affect Web use. They also suggest that the interactive character of CMC technologies may make the constructs of flow more appropriate than use and gratification theory as a basis of future investigations.

Paul Tully, *Cross-cultural issues affecting information technology use in logistics*, reports on a survey of members of the Society of Logistics Engineers, an information technology professional group with chapters in nineteen countries. Given that 25%-50% of an employee's job behavior is culturally determined, understanding cultural differences and their potential impact on job performance is obviously crucial. Tully reports, first of all, that Americans value individual choice and achievement in contrast with other cultures' valuing the demands and accomplishments of family, clan or village. (These results intersect with Hofstede's category of individualism vs. collectivism - and are consistent with others' use of Hofstede in their analyses, i.e., Dustdar, Maitland, and Merchant.)

Heejin Lee and **Richard Varey**, *Analysing cultural impacts of computer-mediated communication in organizations*, take up Hall's ten 'primary message

systems,' as constituting culture in a way useful for organizational studies and Stamper's use of these systems in 'evaluation framing,' as the framework for investigating the impacts of implementing a CMC system in an organization.

Panel: Global Culture, Local Culture, and Vernacular Computing: The excluded 95% in South Asia."

Kenneth Keniston and **Pat Hall** observe that India is the world's largest democracy, containing almost one-sixth of the world's population. Yet, given the nearly complete absence of software in India's seventeen official languages (besides English), 95% of her citizens are excluded from computer use, the Internet, and the World Wide Web. Keniston offers his bad dream of 'the Rule of the Digirati,' a small elite who will rule the digital future as English speakers and producers/consumers of a 'lowest-common-denominator world culture,' over against the remaining 99% of the world's population. This 99% represents the 95% who do not speak English in India, and all the world's illiterate and innumerate, which includes the underclasses of the North of India and the vast majority of peasants, farmers, and workers in the South.

India thus stands as a fair example of the global challenges to any dream of an 'electronic global village' as facilitated by CMC technologies. Keniston and Hall discuss collaborative efforts towards software localization in India as steps towards the 'happy dream' of making computers and networks accessible to the vast majority of India's citizens. Recognizing the role of political and cultural factors in localization projects, Keniston and Hall leave us with a series of questions which must be faced in such efforts. They suggest that technology alone will not determine our responses to such questions; rather, what we choose to do, particularly in the collaborative effort to set standards for localization that are 'global without being imperialistic', will determine which dreams are realized in our digital future,

This panel compares most immediately with Hongladarom's analysis of the Internet experience in Thailand. It further echoes the concern regarding the relation between democracy and freedom of speech, on the one hand, and CMC technologies on the other, raised in the Israeli context by Dahan.

Observations and Guiding Questions

Several thematic questions guided the organization and development of CATaC'98. For example, how far does the popular vision of 'the electronic global village,' while ostensibly cosmopolitan in its intention, in fact rest on culturally-limited assumptions and preferences, such as:

- belief in communication as a sufficient condition for bringing about global understanding and democracy;
- belief in some sort of technological determinism, so that providing the infrastructure of CMC technologies will encourage, if not inevitably lead to, the appropriation of democratic and egalitarian values; and
- belief in a universally shared humanity, one more or less transparently communicable via CMC?

These philosophical and communication theoretical assumptions are open to question.

- Do CMC technologies embed or encourage the appropriation of a given set of cultural values, and/or do pre-existent cultural values resist and reshape the use of such technologies?
- What culturally-related factors, including attitudes toward gender and gender roles, encourage and/or discourage the appropriation and use of CMC technologies?

Clarifying our responses to these sorts of questions then allows us to develop a refined, more empirically-informed understanding of the prospects of realizing an electronic global village and the culturally-related conditions we must consider *beyond* infrastructure alone if such a global village is to emerge, including

- a more comprehensive theoretical framework which incorporates philosophical, communication-theoretical, and cultural insights;
- a more informed understanding of the limits of communication, especially as mediated by CMC technologies, in the face of culturally-defined constraints on communication and related practices.

This first summary of papers and abstracts allows us to draw some preliminary responses to these questions, and to sketch out a more general understanding of the interrelationship between culture, communication, and technology.

Theoretical Considerations

THE NATURE OF 'CULTURE'

A number of understandings of 'culture' emerge here, ranging from Clifford Geertz to Hofstede's notion of 'national culture' as marked by five dimensions. Our contributors recognize additional cultural dimensions, e.g., Stander, and several observe that culture is not a fixed, monolithic entity. Pargman points to several cultures which intersect in a given user. Voiskounsky shows the dual impact of English as the *lingua franca* of the Net, such that English 'infects' local languages, while local languages shape a 'pidgin Network English'. Jones, and Richards, and possibly Pargman, document how cultural identity is both changed and preserved in cyberspace. Do these various definitions, enumerations,

and observations give us an understanding of culture which is adequate for examining, much less predicting (à la Maitland), the complex interactions between culture and technology?

THE OMISSION OF RELIGION

'Religion', while ordinarily recognized as a major source either directly or indirectly of the worldview of perhaps all people, is striking for its virtual absence in these papers. Can we have an adequate theory about 'culture' and CMC without considering religiously-shaped components of culture and worldview? Or is 'religion' fully reducible to the components of culture identified by Hofstede, Hall, etc.? In particular, given the central role of Islam in defining the cultures of the Arabic-speaking and Islamic worlds, failing to take religion into account may partly explain the absence of research represented here on Arabic/Islamic countries. (Cf. Scope and limits of this research, below.)

TECHNOLOGY AS 'CARRIER' OF CULTURAL VALUES

Different contributors provide different views on the question, "do technologies *embed* specific cultural values?" Pargman says yes; Voiskounsky, Keniston and Heaton suggest that specific *designs* (including use of language, etc.) reflect specific cultural values; Hongladarom says no. This ambiguity of responses concerning whether technologies embed specific values parallels a similar variance in responses to the broader question, "do CMC technologies *necessarily* result in the importation of specific cultural values (the issue of *technological determinism*)?" More precisely, a pattern emerges here which suggests that CMC technologies do *not* necessarily impose specific cultural values. Rather, while CMC technologies allow for some level of cross-cultural communication which can expose their users to the values of other cultures, they likewise allow for reinforcement of local cultural patterns and values (see The Future of the Electronic Global Village, below).

THEORETICAL ELEMENTS

Embodiment

Jones and Richards explore most overtly the connections and differences between virtual and real life, between on-line communities and communities of embodied people who sometimes interact face-to-face. Rutter and Smith's analysis of 'Celtic Men' also touches on the possible connections between virtual and embodied existence. Is *embodiment* otherwise taken for granted? Does the meaning of *embodiment*, including sexuality, need elaboration if our theories are to be more complete?

Gender

Gender is an important factor in the analyses of Rutter and Smith, Maitland, and Heath. What do these analyses imply concerning the prospects of gender equality in cyberspace? While Maitland suggests that network diffusion will proceed more rapidly in societies marked by gender equality, does this mean necessarily that the diffusion of networks will encourage gender equality?

THEORISTS AND FRAMEWORKS: HOW FAR POSTMODERNISM?

Communication theorists such as James Carey and Edward Hall are used frequently, along with more recent theoretical approaches perhaps more directly suited to the interactive character of CMC (Witmer and Tweesuk point us to Csikszentmihalyi, for example). Does a more complete theory emerge here? A theory more fully informed by more complete understandings of the meaning of 'culture, on the one hand, and by the wealth of empirical evidence collected here, on the other hand?

　　Are *postmodern* frames of reference, informed by McLuhan, Ong, etc. in communication theory (and addressed here especially by Jones, Hrachovec, and Richards in their references to Barthes, Baudrillard, Derrida, etc.), fully adequate for understanding the interplay between culture and CMC? Or, following the suggestions of Richards (pointing us to Ricoeur), and Hagan and Nayar (pointing us to reception analysis), do these postmodern frames need to be supplemented with different hermeneutical approaches?

Scope and Limits of this Research

These papers and research projects represent a considerable range of countries and cultures: Australia, Austria, Germany, India, Israel, Japan, Mexico and Latin America at large, Norway, Russia (and Russian émigrés), South Africa, Sweden, Switzerland, Thailand, Uganda, and the US (including Hispanics, and Native Americans). Despite this range, however, there are notable absences, e.g., China, France and (with the exception of Switzerland) francophone countries, and the Islamic countries of Africa, the Middle East, and Asia. What do these absences mean?

　　These absences *may* reflect real differences in how far CMC technologies have been appropriated and studied, at least with regard to some francophone countries (with the obvious exception of France, who led the world with its development of Minitel in the 1980s), China, and some Arabic/Islamic countries. If so, how far do Maitland's hypotheses - that diffusion will be high in societies marked by weak uncertainty avoidance, gender equality, and high power

distance, and low in societies marked by high ethnocentrism - help predict and/or explain these absences?

Similarly, Hall's distinctions between high/low context/content, utilized by many contributors, would suggest that at least current Internet and Web communications are better suited to high content/low context cultures. Zaharna (1995) argues that Middle-Eastern cultures, specifically the Arabic-speaking Islamic countries, are marked by a communication preference for high context/low content. Just as Heaton has documented how this preference in Japan has led to the development of distinctive CSCW software and hardware that is better suited to capture the nonverbal dimensions of communication crucial to high context/low content cultures, will similar developments be required to encourage greater participation among Arabic-speaking Islamic countries?

Taken together, these papers and research projects represent philosophy, communication theory, cultural studies, linguistic analysis, and other social sciences. Are there apparent ways - and if so, how - of conjoining these theoretical approaches?

I would propose an epistemological pluralism which acknowledges the distinctive strengths and limits of each, while seeking to bring them together in a coherent whole using the strengths of each to complement the limits of the others. But what would this mean specifically?

The Future of the Electronic Global Village?

Finally, what are the prospects for the electronic global village? Over against what James Carey (1989) characterizes as the 'Manichean' dualism characteristic of especially American discourse concerning new communications technologies (represented here by the 'angelic' cosmopolitan global village envisioned by AT&T and Keniston's 'demonic' dystopian vision of a digital future ruled by an elite) a more complex understanding of culture, communication, and technology emerges. First of all, it appears that while CMC technologies can embed culturally-specific values (so Pargman, Heaton, and Gill), it is also possible to recognize these culturally distinctive values and reshape our software and hardware accordingly (in addition to Pargman and Heaton, so Keniston, Turk and Trees, and Evers).

This suggests that neither the utopian nor dystopian visions of our digital future are *necessary* consequences of adopting new technologies. Rather, a considerable range of *choice* seems open to us with regard to how we shape and use these technologies. In particular, the possibility of localizing hardware and software to meet local cultural preferences and requirements suggests that CMC allows for an 'umbrella' Internet culture. This 'umbrella' culture is 'thin' or culturally neutral in many respects, as it allows for cross-cultural communication

while leaving intact individual/cultural worldviews and values. It allows local cultures to use these technologies in ways which both reinforce and expand initial cultural identities (so Hongladarom; cf. Jones, Becker and Wehner, Richards, Pargman, Rutter and Smith; Turk and Trees, and Evers).

Implications for the Praxis of Implementation

If such a complex pluralism of cross-cultural communication coupled with preserving local cultures is both possible and desirable, we may then ask: what steps can we take, beyond localization of software and hardware, towards such a pluralistic global community? Many responses will be necessary here but, along with the many contributors who use Hall and Hofstede's schema, Maitland's initial correlations between cultural factors and network diffusion may also provide concrete guidance for how to proceed.

This emergent conception of a global community - one connected in unparalleled ways by a technology that simultaneously preserves local cultures in dialogue with the larger world - stands as at least one alternative to the Manichean poles of utopia and dystopia forced upon us by an ostensibly autonomous technology. Interestingly, this conception meshes well with earlier observations regarding the inability of communication technologies to enforce 'top-down' models of cultural identity, while they enable 'bottom-up' efforts to reinforce distinctive cultural patterns. Perhaps the Stoics were not so far off, after all?

But these are simply first comments - one first reading among the many readings and views we will enjoy and debate at CATaC'98. Safe travels!

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