Barriers and boundaries in the information age

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COMPUTER MEDIATED COMMUNICATION (CMC) is the latest buzzword which heralds a new era of worldwide, networked computer systems. This article is concerned with barriers or boundaries, the realistic limits of technology and the question of what is possible and what is desirable. The technology offers new ways of constructing social reality: electronic capabilities that both enhance the human sense of identity and self-expression, and that limit and transform existing 'real-world' interactions. What is really important about all this is that nearly all of the issues surrounding the developments, success and implementation of new technology have *human* implications: questions about how to cope with information overload; about the search for alternative forms of community; about the struggle to implement new forms of democracy and participation in the political process; about the trust and confidence we place in electronic transactions.

Essentially spirituality involves integral human freedom, not only at the level of individual subjectivity but also at the social, economic and political levels.[1] With the impact of the 'information age' so much is likely to change: personal relationships; our view of the physical world; lifestyle and beliefs; social formulations and institutions; personal identity and the nature of communication with God. A Christian vision of CMC must revolve around the kingdom of God as the criterion of value, and will acknowledge the incarnate nature of human structures, societies and communities. The history of humanity with technology is, of course, a long one and the effects of technologies on culture are widely acknowledged. The difference for an 'information age' composed of networked computers, however, is that they are no longer tools but rather media or 'virtual' zones (also called 'cyberspace') in which users can communicate, exist and construct alternative realities. This has profound implications for spirituality, for many previously held assumptions, about personal identity, human limitations, geographical and spatial existence, no longer hold true. What we are experiencing is a paradigm shift into a new realm of digitalized information flows, mediated by computer processors where spatially separated people can

interact in vastly different ways. In a thoroughly postmodern age and in the face of increasing secularization, how will Christian spirituality fare? Will it be relegated to the dustbin of history like so many other technologically outpaced human inheritances?

Technology-push versus user-pull

One of the dangers of the information age is the almost mystical aura that attends the technology and the unrealistic expectations attributed to the 'information revolution'. Typically it is surrounded by a wave of subjective optimism and a lack of critical analysis in the rush to 'nuzzle up to computers'.[2] And yet essentially we are speaking of a human invention, a technical product of scientific research on electronics: symbolic logic systems, telecommunications, data storage media, computer programmes which transform data, network protocols which allow computers to 'talk' to each other and a series of user-interface input-output devices. A lot of academic research products do not make it on to the shelves and only those which have been thoroughly tried and tested and are commercially viable are released on to the market.

On the other side of the technology development equation are the users of the technology: the customers, companies and firms that see the products as useful applications to improve their business, work or leisure. Ideally, detailed and rigorous customer research comes up with a profile of the people who will use the product, and considers how it interacts with other technologies, what is the education and skill level of the user, and how the product will affect their lives. Arguably, the introduction of Microsoft Windows as a standard operating system (a 'platform' on which other programmes are built) is a good example of how the customer requirements (here it was 'ease of use' and intuitiveness) drove the design of the technology. Previous operating systems such as Disc Operating System (DOS) proved impossibly difficult and involved learning scores of arcane command names. Understanding the customer context through user-needs analysis was the key to making the technical changes necessary. Again ideally, a marriage of technology and users will involve the moulding of the technology to suit user needs. But technology should be the servant of the customers and their needs and not the other way around, and the providers ignore human, social and economic analyses at their peril.[3] The history of new inventions is replete with disaster stories of products that rapidly disappeared from view (e.g. videotex[4]) and others that were unexpected successes (e.g. the fax machine).

Technology-push risks ignoring real needs and thorny, existential problems. User-pull, on the other hand, places the users at the centre of the design process and examines the human problems or demands that are in need of creative solutions. Many current IT products, and specifically the internet, have developed as a combination of various factors, from the linking up of networks to the capacity for person-to-person communication which the infrastructure makes possible. While some of the facilities offered are incredibly useful and beneficial, there are other unexpected drawbacks – for example, the loss of proprietary ownership, the availability of dubious material, the threat of vicious viruses. Ideally all the players in the technology drama should be involved in its design, production and introduction, from humble users to mighty corporations, from ecologists to government standards groups, and from sociologists to theologians. With such a background, what about the human, social and spiritual implications of the IT revolution?

Community versus exclusion

Computers had been around for many years and fulfilled a variety of mathematical, accounting, graphic, editing and publishing tasks before the introduction of wide-area networking introduced a whole new dimension. This is most obviously to be noted in the success of the internet. Originally it was seen as a worldwide information search-and-retrieval mechanism; now it has been overtaken by an upsurge of different communication structures: bulletin boards, electronic mail, news groups, usenet groups, chat rooms and multi-user dungeons. This is 'virtual' in the sense that none of the parties is physically present to any other. Human communication is mediated by machines. There is no physical 'reality' apart from what the social actors make of it.[5] The fact that so many people buy into this digitized reality and report such strong affective investment with 'virtual' strangers attests to the power of the illusion.

One of the foremost advocates of virtual community is Howard Rheingold, who defines this new human behaviour as 'social aggregations that emerge from the Net when enough people carry on those public discussions long enough, with sufficient human feeling, to form webs of personal relationships in cyberspace'.[6] What is interesting from Rheingold's definition is the focus on communication and human affectivity. Despite the limitations imposed by the technology (the prevalence of largely text-based interfaces) and the lack of connection

with 'real life' communities, there is no doubt that people attribute human feeling to these on-line interactions. Virtual community proponents emphasize the egalitarian and decentralized aspects of CMC, the formation of common interest groups, and the possibilities for new types of social and political organization.[7]

But virtual community is not without its critics. It is said that this machine-mediated connectability is not community at all but rather something approaching Scott Peck's notion of pseudo-community.[8] Far from representing meaningful contact, what we have is 'distant, impersonal contact among strangers'.[9] A hardware interconnection enabling a type of limited interaction does not amount to genuine community. After the initial wave of hype surrounding the utopian claims of a digitally created paradise have disappeared, there comes the disappointment in the impossibility of engineered communities. It is impossible to construct meaningful communities in the artificiality of digitized space; there is no meaningful person-to-person interaction between the virtual players and an absence of communal action or political involvement.

The backdrop to this debate is a fragmented postmodern society which seeks to fulfil its longings for closeness on line. While it may seem as if virtual community represents the failure of contemporary physical communities and causes a withdrawal into virtual safe places of avoidance, what is evident is the centrality of the need for community in human existence.[10] The virtual community experience highlights above all the deep human need for community, the desire and willingness to relate to others.

This discussion demands a redefinition of the meaning of community itself. The concept traditionally refers to geographically clustered individuals or groups. This definition has been subsequently broadened to include any aggregation of individuals linked by common interest or fellow-feeling. Internet virtual community takes the concept to its limits, stripping out geographical and bodily aspects to leave the 'pure' act of communication or 'we-feeling'. A Christian account of community which would emphasize commitment and consensus poses challenges to the on-line creation to widen its scope to include those on the margins and to develop practical and social action. Virtual community has a way to go if it is to meet human and spiritual needs.[11]

Equality versus élitism

Possibly the most widely circulating myth surrounding the information society is that of the brave new age of worldwide equality and democracy. The existence of an ethnically neutral, class- and gender-free medium will lead to an all-inclusive mass communication that will solve existing problems of exclusion, under-development, prejudice and fear of the other.[12] Many see the information superhighway as a great equalizer, allowing any human being access to the benefits and information distribution regardless of their background. The metaphor of a highway is itself no accident. A term coined by the Clinton-Gore administration, it is highly emotive, evoking images of the open road, freedom and the frontier mentality so central to US culture.[13]

But the metaphor is also negatively loaded, conjuring up images of rugged individualism which represents an impediment to social co-operation. The danger is, of course, that far from representing a panacea for society's contemporary ills, the information highway will exacerbate existing inequalities. As Andrew Calcutt puts it: 'In some quarters the information highway is billed as the direct route to equality. But others regard it as the terrain upon which a new elitism is already emerging.'[14]

What becomes evident is the nature of the monocultural vision operating behind the marketing hype and the variety of corporate interests tied up in the technology's commercial success. Most of the world's population has never used this technology, as they simply do not have access to the necessary hardware. The sobering statistic of a mere 1.6 per cent of the world's population having internet access pours cold water on the technologist's dream of an entire world wired and networking for peace and mutual benefit.[15] Another prevailing myth holds that technology will somehow save us from the political and social failure of many societies. This flies in the face of economic reality. Hardware continually becomes more complex and user-needs shift accordingly. Market forces continually privilege leading-edge technologies and the networked community becomes yet another market to be exploited, at the expense of excluding those who cannot keep up.

There is a danger of creating an information élite which excludes many members of society for economic, educational or class reasons. Those who have the wealth to purchase the leading-edge technologies, who can afford the best access and privacy protection, will create the equivalent of a walled housing estate where only the élite can operate.

While this may be an extreme vision of the future, we need to make sure that information technology becomes an equalizer and not a reinforcement of existing inequalities. The actual equipment needed for current internet access cannot be taken for granted, especially in many parts of the developing world. Other barriers are the educational and cultural assumptions that go along with computer usage: having to learn new norms and skills; the presence of a certain level of education and familiarity with technology; assumptions about the value of information. History teaches that, far from delivering equality, IT often enhances existing inequalities and imbalances in the distribution of wealth.

A Christian vision questions such élitism in the interests of social justice. The key strategies in achieving a more just distribution involve public access to the technology through education or social schemes, the provision of training for those who would normally be excluded from these possibilities, assistance in the construction of communications, services and sites for the marginalized and, most importantly, participation in decision-making and the technology design process. The widely hailed new generation of digital televisions, which includes internet access, is one positive development – but it assumes that the set-top boxes and digital TV sets will be widely available and cheap.

A radically free environment

The technology of the internet is essentially a radically decentralized infrastructure that transcends traditional boundaries of geography, nation-states and cultures. This robust design (which was originally designed in cold-war days to withstand a nuclear attack through the re-routeing of data flows) is defined by the fact that there is no centre, authority or control. Some see this as the ultimate expression of freedom of expression and action. Others are worried about an anarchic lack of limits which imposes no controls for any type of behaviour, no matter how anti-social. The relative anonymity of identities facilitates the infliction of electronic damage. The adoption of protective measures against hackers and viruses obviously must be part of the solution, but any hope of avoiding draconian measures must lie in the adoption of the greater good of mutual co-operation and respect. Towards this end many sites promote an explicit code of behaviour, and the concept of network etiquette (also called netiquette) is accepted as a general norm.

A positive spirituality of CMC would encourage open debate, mature exchange of views, responsibility and civil behaviour in relation to others. In the interests of preserving the democratic and open nature of the internet, self-regulated behaviour is the ideal option. In these open cyberspaces free speech should be encouraged, but not at the expense of others. In other words, a policy of self-imposed courtesy is in everyone's best interests and facilitates an open and honest exchange of views.[16] Some reduction in anonymity is probably necessary to curb the excesses of on-line crime and violence. A policy of centralized authority or regulations is probably unworkable and goes against the philosophy and basic design of the network.

Privacy versus freedom

The secret of the internet's success lies in the fact that so many people and institutions are willing to co-operate to make data accessible. The infrastructure offers creative and varied opportunities for communication (from on-line conferencing to multimedia messages). Like the post office or telephone, it only exists because of the mutual trust, confidence and tangible benefits that are engendered by the technology. However, the very openness of the internet makes it easy to wreak havoc through hacking, crashing hosts or introducing viruses. Various solutions have been proposed but some of them are the electronic equivalent of building a thick wall around your house, setting up searchlights and hiring security guards.

A lot of these measures may seem excessively reactionary and élitist. Nevertheless there do remain a number of delicate privacy issues to be addressed. For example, a lot of the traditional religious public 'services', such as spiritual direction, counselling in all its forms, confession and human rights promotion, involve the inter-communication of very sensitive personal information. Clearly the issue of trust in the confidentiality of the revealed information is crucial. The internet does not on the face of it appear to offer any advantage over the face-to-face situation. Any sense of empathy or compassion is difficult to emulate with e-mail or chat lines.

On the other hand, the technology does prove effective in particular cases of rural or remote displacement from services where people can be given a space to reveal their trauma or troubles to professional ears. The notion of a support group or therapeutic encounter can also be facilitated, overcoming the traditional barriers of geographical separation and time. User anonymity and the ease with which the technology

allows identity to be masked can be a very positive factor in allowing people to reveal deeply seated pain and hurt. What is so striking about on-line conversations is the level of intimacy which people are prepared to reveal to virtual strangers. Anonymity may help this process, but the possibilities for manipulation and misrepresentation are rife. I think, for example, of the widely reported case of the male psychiatrist who masqueraded as 'Julie', a disabled older woman who became a listening ear for other women's deepest problems. Some reported that they felt 'raped' or violated despite the genuine gains in their personal and emotional lives.[17]

The most pressing problem, however, is lack of accountability. Identities can be forged, assumed or stolen. Traceable digital footprints that will remove the screen of anonymity can be introduced. For the user, however, there needs to be some way of protecting particular privacies. Issuing pseudonyms that are dispensed and monitored by a licensed third party (e.g. a bank) is one way of handling the secrecy–accountability balance.

Some implications for Christian living

Complex human and social problems are raised in the information age. From a Christian perspective there are some well-known problems at centre stage: how to offer freedom of expression while protecting the rights of others, how to promote the common good in the face of individual self-interest, anonymity versus privacy, and how to promote values and ideals within the framework of a radically 'free' environment.

The existence of CMC challenges the Church to reorientate its horizons quite radically, away from a traditional centralized power base to regain a sense of a communitarian network of people searching for meaning. The Church obviously needs to be on the net and have worthwhile offerings for those that are genuinely on a spiritual search. The current contribution to web sites is extensive,[18] but it lacks co-ordination and structure and needs to be thought through with the needs of someone with a spiritual quest in mind. Most importantly, the Church needs to be more centrally involved in the design and production process, for this is where the real decisions are made. As well as developing a theology of the human spirit in an information age, this also means ensuring a wide spectrum of public involvement in decision-making and taking the side of the 'information poor and marginalized'. Interactive forums to get feedback on the consequences

of design choices need to be set up. Essentially this involves embracing the information age and seeing it as the new forum to form public opinion (Habermas' notion of the 'public sphere'[19]). The internet offers dramatically new possibilities for human interaction, a virtual reality that we have not even fully understood or really come to grips with yet. Active participation in all types of authority and government is now within our grasp, as is the actualization of the mature, responsible, discerning human being. We will have to act fast, however, to avoid the whole project falling into a growing commercialization, a tempting solipsism (the ability to create an isolated, individual reality) or the tragedy of becoming a mere entertainment channel.

Finally, it is certain that we need a new spirituality for an information age, a spirituality which will have to be properly incarnate as never before. It will have to be based in the prevailing postmodern cultural context of people's lives and be concerned with finding God in all things, no matter how unlikely that seems in virtual spaces. The challenge is to humanize these spaces in a way that meets people's desire for community and belonging. This will necessarily involve new structures and techniques, such as spiritual direction and praying on line; the Irish Jesuits' Sacred Space web site is a good example.[20] A key issue will be the holistic integration of the body in prayer and discernment, for the virtual temptation is to forget about the body, an old Cartesian trick. And there remains the need for reflection about the human good and social welfare in an information age. Minority groups, the undereducated and women are likely to be under-represented in cyberspace, emphasizing the need to reduce inequalities and promote an 'option for the poor and marginalized' that must drive all authentic spiritualities.

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NOTES

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20 See www.jesuit.ie.