Media and Technology in the Everyday Life of European Societies

Final Deliverable
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EMTEL - General preface

The European Media Technology and Everyday Life Network (EMTEL) was funded by the European Commission (grant number HPRN ET 2000 00063) under the 5th Framework Programme. It was constituted as a research and training network within the programme, Improving Knowledge Potential and oriented towards "creating a user friendly information society".

EMTEL conducted interdisciplinary social scientific research and training between 2000 and 2003. This report is one of 12 submitted to the EU in September 2003 as final deliverables for the project. Copies are available on www.lse.ac.uk/collections/EMTEL and a full list of the publications can be found as an Appendix to this report. Contributing partners were as follows:

- ASCoR, The University of Amsterdam
- COMTEC, Dublin City University
- IPTS, Seville
- LENTIC, The University of Liège
- Media@lse, London School or Economics (co-ordinating centre)
- NTNU, University of Trondheim
- SMIT, Free University of Brussels
- TNO, Delft
- SINTEF, Trondheim.

EMTEL sought to bring together young and experienced researchers in a shared project to investigate the so-called information society from the perspective of everyday life. It undertook research under two broad headings: inclusion and exclusion, and living and working in the information society. It then sought to integrate empirical work and developing theory in such a way as to engage constructively with on-going policy debates on the present and future of information and communication technologies in Europe.

Roger Silverstone
EMTEL Co-ordinator

Introduction

> "If we accept the argument that developing technological capabilities does involve a complex, endogenous process of change, negotiated and mediated both within organisations and at the level of society at large, it is obvious that policies cannot and should not be limited to addressing the economic integration of technological change, but must include all aspects of its broader social integration. We thus reject the notion of technology as an external variable to which society and individuals, whether at work or in the home, must adapt."
> (*Building the European Information Society for Us All*, Final Policy Report of the High-Level Expert Group, European Commission, 1997).

The work of the *European Media Technology and Everyday Life* Network over the last three years has addressed the *problematique* that the above quotation identifies. What is at stake is the significance of social processes for the nature, direction and speed of technological change and the significance of the everyday as a context for the acceptance of, or resistance to, new communication and information technologies. Such a perspective has potentially radical implications for it demands a different view of the so-called *European Information Society* than the one, which commonly informs both research and policy in this field at both European and national levels. It is one that is grounded in a requirement to investigate, and in that investigation to privilege, the ways in which the user, the consumer, the citizen, the worker, incorporates or fails to incorporate the new and the technological into the familiar, ordinary and more or less secure routines of his or her life in contemporary European society[1].

For it seems to us quite clear that it is at the level of social action and experience where the decisions and risks are taken which enable or disable access to, and participation in, this society. It is here where individual and collective judgements are made which affect the realisation of individual and collective capabilities. In addition, it is here where the material and symbolic resources are or are not available to engage with what many still believe is the brave new world which digital technologies are capable of creating.

This report is a synthesis. It is also an argument. In its first ambition, it summarises a range of empirical and conceptual work which seven young researchers have conducted within a framework of training and support provided by senior researchers in the field at seven different centres in Europe. In its second ambition, it intends to present a case for the importance of the detailed investigation of the everyday for the capacity subsequently both to understand and to direct the complexities of socio-technical change which the latest generation of information and communication technologies are currently creating. In the

latter context it will suggest that what takes place in the everyday life of all those within European society is a crucial determinant of what takes place, or will take place, in this context in European society as a whole. And it will suggest that all those involved in directing policy or developing markets in this emerging digital world will, likewise, need to take what ordinary people are doing in their everyday relationships to communication and information technologies, in cities, suburbs, provincial towns and rural areas, across Europe, entirely into account.

This report will be structured in the following way. The first section will elucidate the significance of everyday life as a frame for approaching the European Information Society and the dynamics of socio-technical innovation that may or may not be producing it. The second section will present the important findings and arguments from the individual research projects. The third and final section will identify issues, consequences and questions.

1. Everyday Life

It is within the sphere of everyday life that individuals and groups can be agents, able, insofar as their resources and the constraints upon them allow, to create and sustain their own life-worlds, their own cultures and values. It is within the sphere of everyday life that the ordinariness of the world is displayed, where minor and often taken for granted activities emerge as significant and defining characteristics. We take everyday life seriously precisely because it is in its distinctiveness and its generality that we can see and understand how meanings that sustain and challenge this taken-for-grantedness are generated and communicated. In addition, it is in the conduct of everyday life that we can begin to observe and try to understand the salience of information and technologies in humanity's general project of making sense of the world, both private and public.

Perhaps the most useful way to approach the distinctiveness of the everyday as a frame for understanding the dynamics of the information society will be to indicate what kinds of questions it allows us to ask – questions, perhaps to put it too bluntly, which are asked from below, rather than from the more familiar *de haut en bas*.

What does it mean to be part of the information society? What does it offer and what does it refuse its citizens? How might participation in its direction and access to its claimed benefits

be achieved? What are the constraints on, and what individual or socially provided resources might be needed for, that participation? What new skills or competencies will be needed, what literacies? Will new communication and information technologies improve or undermine the quality of daily life? Can we use these technologies meaningfully to change the relationship between work and leisure, work and play? What scope might there be for the marginalised or the excluded to claim a place in the mainstream, and will the new media reinforce or undermine the existing barriers to membership and citizenship? How far will the primary institutions of modern society, the family or the community be affected by new technologies; and how far will they be able to mould them to their own cultures? Will the new information and communication technologies increase or reduce anxiety, dependence and the capacity to manage the difficulties of life in the 21st century?

These are questions – and there are others – which emerge with some clarity once a perspective on the everyday is taken. However, to ask these questions from below in turn requires that their answers also must be premised on the requirement to take into account the quality and the character of the everyday.

First of all the answers must understand, as we have already intimated, that it is within everyday life that individuals and groups are agents, active, insofar as resources allow, to create and sustain their own life-worlds, their own cultures and values. Our answers must take into account the uncertainties and contradictions in everyday life. They must recognise the significance of cultural differences and the inequalities of access to the symbolic and material resources necessary for participation in European society. They must acknowledge that for many Europeans, both in the new and the old Europe, as well as the young and the old, life in the emerging *Information Society* is hard, and there is scepticism as well as enthusiasm, fear as well as hope, opportunities denied as well as offered, in their engagement with it. Our answers must take into account the specificity of the individual and the local as well as the generality of the national and the global. They must understand, finally, the particularity of information and communication technologies, which are central to the conduct of everyday life, not just as material objects, as technologies, but as objects of desire or dismay, and through whose use individual identities, as well as social networks and communities are defined and defended.

We therefore presume the importance of information and communication technologies to the conduct of everyday life in contemporary Europe. Nevertheless, we remain sceptical as to

their precise significance. Such scepticism leads to, and informs, our particular social scientific approaches to their investigation. We argue, and aim to demonstrate, how an approach grounded in studies of the ordinariness of the everyday and in the experiences and practices of ordinary people, the included as well as the excluded, will illuminate the otherwise easily ignored realities of the information society.

Illumination, however, is not the only possible consequence of this interrogation. For it is in the investigation of the ordinariness of the everyday that one can also begin to offer a critique of the everyday and, in this context, dissect the limits and misunderstandings embedded in the rhetoric of the information society. Above all, our inquiries aim to challenge the presumptions of rationality and efficiency (operationalised as they so often are in a discourse of consumer need) which impose themselves on the way we are encouraged to think about the relationship between information and communication technologies and social change, and which are grounded, always, in an equally pervasive, but equally ill-founded, assumption that technological change rules. The ordinariness of everyday life is not therefore to be found only in the mundane but also in our not infrequent capacities for transcendence, evidenced in the kinds of creativity that emerge both with, but also against, the grain of technological innovation, and which never fail to surprise innovators and policy makers alike[2].

This is a challenge that we would regard as important and long overdue.

There are four dimensions to this approach which require brief comment: the empirical; the epistemological; the methodological; the political.

1.1. The empirical

The world of everyday life is a specific domain. It is where groups and individuals act together and separately, in harmony and in conflict. It is where decisions are or are not taken: to work or to play; to participate or not to participate; to move or to stay put; to be sociable or to remain solitary; to communicate or not communicate. It is where the structures of the social: institutional power, the presence or absence of material and symbolic resources is most keenly felt. It is in our everyday lives where we confront the most profound and challenging ambiguities, contradictions and insecurities. The tools we have to help us manage these challenges have increasingly become technologically enhanced.

Indeed we have become increasingly dependent, over the last century or so, on a range of technologies, predominantly our information, communication and media technologies, which have come to provide us with a framework for making sense of the world in which we live. In addition, for those of us without those resources, without basic access, but more significantly without the reasons, skills and literacies to take advantage of what that access enables the consequences are profound. These frameworks, the frameworks for personal security as well as social and cultural participation, the frameworks of meaning and practice, which are a pre-condition for full participation in contemporary society, are potentially and often actually disabled.

Everyday life is an empirical domain in which our relationships to information and communication technologies are worked out and worked on. Both meaningful access to information resources and the equally meaningful capacity to engage in communication are preconditions for its conduct. The ability to make sense of the world, both within and beyond the range of individual experience, has become dependent on the mediations that flow through the various electronic channels – of broadcast radio and television, the Internet, the cellular phone – which are ever present in the daily lives of most citizens of European society. Everyday life is lived both in face-to-face and in technologically mediated spheres, which often contradict each other and where battles for control – over privacy or surveillance, for example – are central. Much of our everyday life is involved in the management of that interface and, as we have already suggested, in both its transgression and transcendence.

1.2. The epistemological

Framing everyday life as an empirical domain of this kind involves an equally distinctive approach to its investigation. The research reported here for the most part draws on an epistemology, which is derived from two converging approaches to an understanding of communication and information technologies. Both media and communication studies and the social studies of science and technology have, over the last decades, developed epistemologies which depend on seeing both media and other technologies as being socially constructed. This process of dematerialization, and the reconfiguring of technologies as symbolic objects and products has directed attention to information and communication technologies as being constituted in and through the everyday practices of both production and consumption. Without under-estimating the institutionalised power of such technologies

as they are introduced and sustained as significant means of information dissemination and communication, this approach challenges any simple or linear account of technologies as being determined either in their design and development or in their consumption and use. The particular complexity of information and communication technologies, that is their double articulation as both objects of consumption and as media of consumption, and their distinctive status – precisely – as key technologies for the conduct of everyday life, requires a way of seeing and understanding them as subject to the daily exigencies of social and individual action[3].

One major consequence of such an epistemology is the requirement to acknowledge the open-ended nature of technological innovation, its provisionality, its unintended directions and consequences. Since such innovation is subject to the actions of all those involved, albeit with different power and resources, then it is essential that, the trajectory of social change is not just read off from the trajectory of technological change (as if that itself was easily readable). It is equally essential that one accounts for the specificity of these technologies, that they are produced and consumed both as machines and as media, and as such that they are particularly vulnerable to their definition and redefinition through the human capacity to make meaning and order in the world. It is of course equally essential to recognise and understand technology's capacity to mould that world in its own image, or the image at least of those who design, market and regulate it.

1.3. Methodology

The methodologies developed and mobilised by researchers within the network, again for the most part, derive from these sets of theoretical assumptions and perceptions, as well as the continuous tensions between them. In practice, this means a focus on qualitative approaches to the study of everyday life. If everyday life in the information society is constituted through the actions and meanings that individuals and groups produce in their interaction both with each other and with the technologies that, at least in principle, enable that interaction, then an understanding of that process requires the researcher's focused attention on meaning and significance. While this does not preclude quantitative approaches, it nevertheless privileges those methodologies which seek to get beneath the surface of everyday life and practice, to explore the dynamics, the ambiguities and the contradictions as well as the certainties, of the relationships we create and sustain with our information and communication technologies, both old and new. For without this sensitised investigation of

the dynamics of the everyday and of innovation as a contested process of social as well as technological change we will misread and misunderstand the realities of innovation and the implications of those realities for policy[4].

Inevitably, the kinds of findings produced by close attention to process and meaning are not easily amenable to mechanical generalisation. The case studies that comprise much of the research of the network are designed both to complement, and to be complemented by, quantitative investigation. It is important to point out, however, that such latter kind of investigation is likewise limited insofar as it does not address the dynamics and complexities of the realities it purports to be describing. It is our contention that methodologies need to be implemented in social research that engage with meaning and agency as constitutive of both technology (as technological practices) and everyday life, and that such methodologies are defensible in their attention to detail, in their capacity to generate theory and in their ability to challenge the taken-for granted assumptions, perhaps in policy and technological discourses above all, that the world is as it is, and can be legislated into existence from on high.

Two dimensions of our methodology need further comment. The first is the scepticism built into the approach. The social dynamics of everyday life (society as it is experienced and constructed) get in the way of technological change, just as technological change poses both particular and general challenges for the conduct of everyday life. The mutuality of this disruption, and the uncertainties as well as the strains that it generates for all participants in the process, needs to be inscribed into the way in which research into the information society is conducted.

Likewise, the relationship between action and communication in on-line and off-line spheres also needs to be inscribed. It has been a recent commonplace of research, especially into the character and significance of the Internet, to presume that it can be investigated on its own terms, without reference to the social context in which access and engagement takes place. Notions of cyberspace signify such otherwise arbitrary attention to life on-line as if it were understandable *sui generis*. As so much else in everyday life, this is not sustainable. Recent research has pointed to the ways in which everyday life on-line and everyday life off-line are mutually constituting. There is a complex social dynamics within and between the "real world" and its cyber equivalent, which needs to be addressed. Such mutuality, and the need

to recognise its significance for an understanding of both life on-line as well as off it, is a precondition for effective research in this area.

1.4. Politics and policy

The quotation from the High Level Expert Group on the Information Society which acts as the epigraph to this report begins with a statement about policy and ends with a statement about epistemology. We, so far, have moved in the reverse direction. However, the point to be made is the same. Both the politics of, and the policies for, the European Information Society need to recognise what it is that makes the society, in its lived reality; that is, what the information society is and what it is not. The everyday is the ground upon which both through individual and collective action –and through individual and collective action that in its frequency and generality (as well as its uniqueness and originality) becomes significantly social in its consequences - the much dreamed information society will or will not be built.

Indeed, there is a politics as well as a policy discourse to be addressed. In relation to politics, there are recognisable struggles over access to and participation in the so-called information society. Further, if the information society is coming to be, as many argue and believe, the expression of a new kind of social formation in which access to immediate and accurate information and advanced communications are the *sine qua non*, then the capacity to participate, the struggle to be included, but also the struggle over its control, are becoming, and will remain, a crucial component of European political life, both at union and national levels. And if such politics is to be advanced and those who wish to participate in its advancement, but even more significantly in its direction, are to be heard and given the opportunities that are required, then national and European policies will need to be developed which go beyond the narrow confines of existing information or communication policy (Burgelman and Calabrese, 1999). They will need to treat information and communication as social goods, ones that can only meaningfully be mobilised in the context of Europe's diversity of cultures and the persistence of inequalities of access to both material and symbolic resources. They will need to address the dynamics of the appropriation and rejection of new information and communication technologies as well as the consistencies of economic and cultural inclusion and exclusion. We will return to these issues in the final section of the report.

2. Media, Technology and Everyday Life

We have suggested, in a framework paper, that the European Information Society can be seen as under construction (Silverstone, 2001). By this, we meant that it was still in formation and that its emergence was neither consistent nor confidently predictable. We also argued that no established single social theory would be adequate to encompass the full range of its variations and complexities; above all there was no single theory (either that privileging social or privileging technological determinism) which could provide an explanation for the relations between social and technological change that might otherwise seem quite straightforward.

Our research has addressed these relationships from a number of different perspectives. In its original formulation, it was framed through two primary concerns. The first was with inclusion and exclusion. Here the concern was with the particular implications of information and communication technologies for enabling participation in European society. It has commonly been presumed that the potential and the access to technologies, networks and services are sufficient to compensate for the otherwise disabling and excluding consequences of social and economic disadvantage. The second concern was with flexibility and the quality of life. Here again the innate characteristics of new information and communication technologies in particular are often seen to be able to provide for new possibilities for choices in the conduct of everyday life and the presumption is that those choices, freely made and enhanced by such access, will lead, individually and collectively, to a more satisfying and productive existence.

During the course of the research a third, albeit subsidiary, theme emerged which cuts across these first two. It is that of mobility and belonging. Here the issue is the particular role information and communication technologies have in the context of a significantly mobile Europe, one in which mobility is expressed through the migration of groups and populations as well as through the individual's capacity to breach the hitherto clearly bounded dimensions of public and private space.

2.1. Inclusion and exclusion

This theme emerged as a primary focus in three studies, though it should be restated that questions of participation, citizenship and exclusion are ubiquitous in our research as indeed they should be in all research on the relationship between technological and social change.

We explored this theme through specific projects on work, political activism and the culture of ethnic minorities[5].

One crucial issue in the debates on the capacity of information and communication technologies to make a difference to the ability to participate in contemporary society centres on questions of skills and training, as well as on issues of access. The project from Liege and Amsterdam focuses on a range of initiatives designed to create facilitating institutional frameworks for involving the less-abled and disadvantaged (principally in this study, the unemployed and the physically or mentally impaired) in work that would meaningfully connect those involved to the mainstream of social life. A training programme in IT skills and a call-centre specifically organised around the recruitment of the less abled were examined in order to evaluate their success in becoming conduits for meaningful participation and for personal contribution amongst those recruited to participate as trainees or employees. The study also assessed the implications for such involvement on the quality of the participant's everyday life, and above all, the degree of transferability of skills and competencies in the use of information and communication technologies into their own private spheres.

Skills in using information and communication technologies were found necessary but not sufficient for such participation. Organisations established with specific commitments to enable that participation found themselves, under commercial and other institutional pressures, increasingly unable to provide sustainable training or experience that could be translated into the wider domains of everyday life. Such failures could be differently understood.

First, the reasons were found to lie in the absence of links between the organisations concerned and other facilitating environments, which would provide continuity and connection for the individuals beyond the specific locations of direct work or training. The result was that few opportunities were available for trainees to take what they had learned meaningfully into the wider world of work, or develop or apply their newly learned skills in the open job market. Or, in the case of the call centre, the level of training and the pressures of work were such that it became a less than satisfactory experience, sufficiently unrewarding for those involved to feel that their involvement with technology should remain confined to the workplace. Secondly, and to a degree consequently, the reasons were found

to lie in the wider culture and character of everyday life, where there was often little reason either to invest or experiment with computers or the Internet, given the existing level of participation of these already marginalised individuals in on-going society. It was at this individual level where choices were made or not made, rationally and reflexively, on the basis of judgements of self-interest, need, competence and confidence, that were central in defining the degree and character of participation that information and communication technologies are seen to able to provide.

The second study, from Amsterdam, addressed the issue of participation and inclusion in the context of political actors in global civil society. Here the issues and questions were obviously different but there is also some convergence in the issues raised with the previous study.

The focus of the research was on the role and significance of the Internet for trans-national social movement organisations, in their own project of generating civic engagement and influencing political processes. The research analyses the dynamics, in four such organisations with their headquarters in Europe, of some current attempts to shift the political agenda to what might be called an embryonic global public sphere. It also addresses the capacity of such organisations to provide frameworks and settings for inclusion and participation, both among other subsidiary groups but also among individuals.

Here too the findings were premised on the recognition of the ambiguities and the complexities of the relationship between life and activity on-line and life and action off line. Each of the organisations surveyed, each with its distinct agenda, organisational infrastructure and trans-national character, used the Internet in different ways and with different consequences for their own organisational capabilities. Their capacity to reach, and communicate with, a wide range of partners and participants around the world was in effect the Internet's primary function. It was less useful as a way of genuinely mobilising participation in specific tasks or projects, and at all times what took place on-line was conditioned and translated by communication and action in the real world. Organisations too have their everyday lives. And in this context the trans-national political organisations studied clearly found the Internet vital as a decentralising tool for communication and organisation, and perhaps to a lesser degree and more problematically, as a tool to enable the construction of public or semi-public forums for on-line discussion and debate.

Yet, the question arises in such a study as to the effectiveness of such on-line discourse and organisation when it comes to meaningful political action in both local and national contexts. And here is where the realities of power and agency in the public and private everyday worlds of individuals and organisations intrude and significantly determine the effectiveness and transferability of both on-line discourse and the capacity of trans-national organisations to intrude into the public conflicts of off-line life-worlds.

The third, London based, study investigating inclusion and exclusion, engaged with the increasingly significant presence in media, communication and information environments of diasporic minority groups in European society. In this research, which involves both a mapping of the current context of minority media production and consumption in the 15 member states, as well as a number of more detailed case studies, effectively focuses on the cultural as a major dimension of exclusion in European society.

A sizeable and rapidly changing proportion of the population of the European Union have their origins in recent migration creating, albeit unevenly, an increasingly multicultural society, which is posing significant opportunities and challenges both for the Union and for its member states. Sources of and reasons for migration vary enormously as do the economic resources commanded by migrants. Their status in what are called their host societies also varies, in part depending on the age of the migration as well as its origins and its dominant ethnicity. The experience of migration is different for men and for women, for the first generation and for the second. It varies too, from country to country, depending on national policies both on immigration and integration.

The research sought to establish the significance of minority media in European culture, and to investigate the significance of media cultures for a wider understanding of social inclusion and exclusion. Particularistic media, appearing in print, broadcast and digital forms are produced locally and globally, yet are for these populations consumed locally. At issue is their role in creating and sustaining networks and communities, and the relationship between those networks and communities and the national majority cultures within which they conduct their everyday lives, the wider European society and the ethnically distinct global culture in which the minorities become majorities.

The questions raised by this research go to the heart of the European project of inclusion and suggest a greater importance in public discourses should be given to dimensions of culture

and particularly mediated culture in forming policies appropriate to the creation of more inclusive and tolerant societies.

2.2. Flexibility and the quality of life

We have suggested that European society has become progressively a fluid society (Silverstone, 2001). As a result of greater affluence, technological change, greater opportunities for social and geographical mobility and the spread of neo-liberal ideologies, a culture has emerged which has increasingly valorised, and for those with the appropriate resources delivered, a world of greater choice and greater opportunities for self-determination. Indeed, in contemporary discourses focusing on the quality of life, these dimensions –personal freedom, choice, the ability to control one's own private sphere and to manage one's own life course – prevail.

There are two issues for us in this changing environment. The first concerns the specific role of information and communication technologies in both enabling, and enabling the management of, such a world. The second is the capacity and consequences of individuals to appropriate new technologies and services into their everyday lives.

Three studies directly approach this agenda and do so from complementary perspectives. The first, based in Dublin, undertakes to examine the ways in which a predominantly sedentary and well-established community is using the Internet in a local setting. The second, based in Trondheim, effectively asks the same question of a highly mobile, cosmopolitan population of scientific researchers based, albeit temporarily, in either Norway or Germany. And the third study focuses on what is sometimes called the web-generation, that group in society, between childhood and "settling down", who have constructed patterns of appropriation and use of ICTs, especially the Internet and the mobile phone, as key resources to manage their own fluid, mobile, and flexible life-styles.

In each case, the focus is on consumption, considered as a dynamic process of engagement with the mass-produced products of contemporary global capitalism. From a perspective of everyday life, such processes are seen as creative, insofar as individuals and groups can adapt the affordances of new information and communication technologies to the exigencies of their own lives. Consumption involves active engagement with the intended functionalities of new technologies and services. Consumers engage with the new from a

perspective honed by their everyday life experiences with familiar technologies and from within a framework of their own values and perceived needs.

The study of neighbourhood life and the Internet in Ireland focuses on how the domestication of the Internet by families and households in a small seaside town in turn reveals how the technology and its possibilities are moulded to fit local and private cultures, while at the same time challenging the existing boundaries between public and private spheres. Here the Internet is being significantly privatised. It is being used to provide a private communication space linking families and friends otherwise out of reach. It is being incorporated into family cultures, particularly in those households with children. However, it is barely being used as a tool for local civic engagement. So although the Internet has the potential to become or significantly facilitate a democratic public sphere, it has so far failed at this local level to operate as a fully inclusive, interactive forum.

What are seen as the second generation of Internet users has, in this local context, come to terms with the sweeping information and communication functionalities of the Internet in particular, manageable and individual ways. Such domestication indicates, perhaps, a much slower and less determined process of innovation. It also indicates the power of the cultures of everyday life to incorporate the new on terms often different from than those envisaged by designers and policy makers, while at the same time seeking and mostly succeeding in protecting the established patterns and structures of their private lives from the possible disturbances caused by too rapid or dramatic technological innovation.

The study of the cosmopolitan offers related but differently inflected perspectives on the Internet and its significance at the interface between public and private spheres. A population of international researchers was investigated to establish how such displaced individuals both in their professional and private lives used the networking and communicational potential of the Internet. A number of issues become central: the relationship between the electronic and the face to face as modes of communication; the salience of the local as opposed to global cultures; the relationship between home and work; and perhaps most significantly the extent to which the Internet can be seen as a resource to enable the mobile to sustain their identities and their security in strange and sometimes temporary spaces.

It becomes quite clear how significant the Internet is for the conduct of professional life, in the communication with scientific colleagues and its status as a research tool. It becomes much more problematic in the context of everyday life and the constitution of a personal and private sphere, where the importance of the local and the face to face loom large. The research reveals a collective portrait of a group of people at the forefront of the information society and whose own lives express the flexibilities enshrined and often celebrated in the space of flows of the network society, yet who use the Internet (but also refuse to use it) in specific ways precisely to compensate for and manage the consequences of their displacement.

The Internet has become incorporated into the mix of media that enable the sustaining of personal relationships in both local and trans-local spaces. Amongst this group of researchers information and communication technologies (principally the Internet, satellite radio and television, the mobile phone) are treated instrumentally and domesticated into their everyday lives in ways that both enable the management of flexible work and likewise enable the "policing" of private and personal space when work threatens to extend its otherwise acceptable boundaries. Everyday life becomes a site of struggle, for connection and disconnection, and for the control and management of its space and times. These technologies are, then, both tools and troubles. They are immensely facilitative in many professional and personal settings and activities, but at the same time, they become threats. Users will develop responses that extend from a refusal to use them at all under certain circumstances, to strategies of using one to manage the disturbances caused by another.

This theme of the role of information and communication technologies in the management of personal space reappears as a central one in the study, conducted in Brussels, of the so-called web-generation and their use of the Internet. This generation is often heralded as being in the forefront of the information revolution, socialised into the technology from an early age and developing life-styles which both depend on and extend the inherent fluidity and flexibility of everyday life which characterises the post-modern condition. These are, we are led to believe, the vanguard generation.

This research brought a number of essential issues to light. The first was the centrality of personal availability for members of this group. The second is the centrality of these technologies in the life-project of constructing and managing identity and self-hood. The third was their role in creating a sense of belonging. In addition, the fourth was the much

more evolutionary, rather than revolutionary, process underway in the socialisation of the new.

However, none of these findings are simple or singular in their significance. The everyday lives of this generation manifest the same kind of contradictions that are present in the lives of their parents and information and communication technologies have the same ambiguous role in their conduct. For example personal availability was central but still needed to be managed. Face to face relationships were still preferred over mediated ones, and provided a base-line morality against which certain kinds of stigma were attached to meetings and friendships on-line. It also became clear that, in a related way, in the case of the Internet but also the mobile phone, that the immediacy and directness which these technologies afforded would be seen as more of a disguise than as a means for openness; they became screens for the self as well as windows on the self. The sense of belonging is extended, though not always unproblematically, through the communicative networks created and sustained through text-messaging and the sending of e-mail as well as through located action in the face-to-face and the neighbourhood. However, it was clear that in establishing such a kind of mediated culture, this generation was struggling with the need to create a set of conventions and rules, which increasingly came to be seen as having moral status. Their own uses of the technologies, but even more uses by others, were subject to constant discussion and examination. Here issues of trust, both in interpersonal relationships and in the mediated relationships that might emerge, in e-commerce or other ways, with institutions became increasingly salient.

The seventh study, from IPTS in Seville, consists of an analysis of ambient intelligence, and its social and technological future in everyday life in Europe. Its technological assessment is linked closely with the work of ISTAG (Information Society Advisory Group) of the EC, but it subjects that assessment to a critical review grounded in perspectives adopted by the research in the EMTEL network as a whole and from arguments based in the domestication approach.

Ambient intelligence is the next big thing. It is the object of considerable attention and investment within the 6th Framework programme. The AmI vision is to bring computing into the very fabric of everyday life (both literally and metaphorically); to make it invisible but at the same time to make it responsive to the information and communication needs of individuals in both private and public spaces, but most especially the former. Fabric,

environments, even dust particles, will carry sufficient active and reactive intelligence to enhance the quality of everyday life, by making both environment and context infinitely sensitive and responsive. Rather than a route leading to virtual reality, or indeed even to artificial intelligence, ambient intelligence (or ubiquitous computing as it is sometimes called) seeks to extend human reach, in the way that Marshall McLuhan would have understood well when he talked of the capacity of media technologies to extend the human sensorium, into the micro-regions close to home and close to bodies.

Such visions are not, generically, new. Nor are they likely to be fulfilled in any or all respects. Research in this report reverses our usual epistemology by drawing on existing work both within the EMTEL network and outside it to challenge the presuppositions that inform the technological agenda. Everyday life is not biddable to the desires of technology. The AmI visionaries recognise that the emergence of such supposedly enabling technologies will depend on a sophisticated understanding of the human, but fail, it is argued, to address the human as fully and as frustratingly social as it is and will always be.

The discourses of and from everyday life, consequently, speak to and debate with technology in a number of different ways, posing particular challenges to its otherwise determining claims. In this case they raise questions that are grounded in the nature of family and domestic life (full of conflict and political rather than harmonious, and a sphere of housework as well as leisure); in the capacities of technologies to work, to work consistently, to be trusted to work, and to be accepted as workable in environments where they will both challenge as well as enhance individual control; and to provide a manageable balance between rigidity and flexibility in the design and delivery of innovative software and hardware.

This project presents, we believe, a coherent case for bringing the empirical research of the kind that has been undertaken within the EMTEL network into the technological design process itself.

3. Issues, Consequences and Questions

A number of issues have emerged during the project. They illustrate the complex inter-relationship between information and communication technologies and everyday life. They raise questions both for further research and for the formation of future policy. Above all,

they reflect the significance of the domain of everyday life as being central for an understanding of the dynamics of technological innovation in this area.

These can be identified briefly.

3.1. The nature of change

The actual processes of social engagement with new technologies have proved to be evolutionary rather than revolutionary, contradictory rather than linear despite the discourses of revolutionary change that have accompanied the emergence of a number of new technologies over the last decades – with their implication of their convergence or over-determination as constituting a technologically led transformation of the nature and quality of life in modern societies - and despite the utopian endorsement as well as the dystopian denial of those claims. Technologies may change rapidly, societies and cultures change much more slowly. The absence of synchronisation reflects a complexity and indeterminacy in the social, and above all, in the practices of everyday life, which too rarely are taken into account in the plotting of future scenarios as well as the management of the present.

New technologies, services and content are appropriated into on-going ways of living and being, sometimes easily and without much consequence for the rituals and behaviours of the everyday, sometimes after a struggle and with quite significant changes to the quality of private or public life. Not all their functional properties will be accepted, and many will be transformed in use, as messaging transformed the mobile phone as a communication device. New information and communication technologies take their place alongside the old, which rarely disappear, but whose patterns of use might be transformed by the new. Neither the new nor the old is entirely new or entirely old. Functionalities evolve and their acceptance is dependent both on the characteristics of everyday social practices where they may be, or may not be, found a place, and on the pre-existing relationships to media which new technologies may offer to deepen or extend, as well as make obsolete.

However, everyday life also changes. Both adaptation and resistance to new technologies generate, often, quite profound shifts in the ways in which, both in public and in private, we conduct ourselves and relate to others similarly and differently placed to us. Our capacity to respond creatively, indeed our capacity to respond and engage with technological change at all, will depend on our financial but also on our educational and cultural resources. The first uses of a new technology are not always the last, nor are they likely to be uniformly spread

across all sections of the population, or even among those sections of the population most likely to gain from them.

3.2. Domestication

We are arguing that technological change is evolutionary because it depends on social action, and on social action, that takes place in multiple domains and in uneven and often contradictory ways. The acceptance of new technologies into the sphere of everyday life, both in public and private (of which more soon) can be understood as an active and, in the broadest sense of the term, as a creative one. Individuals, families and groups make choices based on their own perceptions of their needs and values, and on the often-unconscious frameworks which guide their actions and interactions.

This process, which has been called *domestication*, has emerged as an important dimension of the information society (Silverstone and Haddon, 1996). It is clear that in the case of the individual and his or her appropriation of the Internet or the mobile phone, the family or household, as well as that of the larger organisations, social processes are underway which transform and make more complex the innate characteristics of these new technologies, and disturb the singularity of their projection in the public discourses of both policy and advertising.

The research has suggested that the concept of domestication needs to be extended and deepened. Firstly, in respect of the need to attend to service and content issues. Secondly, in respect of the need to recognise the significance of the transformative work of everyday life in public as well as in private spaces. In both these respects, however, the work of appropriation remains significant. The relationship between technological and social change is dialectical, and both technologies and cultures change in the process. At the heart of this relationship is a struggle over control and over the capacity of individuals in their primary groups (family, community, and possibly neighbourhoods and networks) to create a sustainable moral space for themselves in which judgements of appropriateness and practices of use are legitimated. Information and communication technologies pose substantial challenges and opportunities to the conduct of everyday life, precisely because they affect the core meaning making and communicating components of social life. Managing them and positioning oneself in relation to them and what they offer as resources for communication and as tools for understanding the world, are arguably some of the essential socio-cultural challenges of the twenty-first century.

3.3. Changing boundaries

It is a commonplace of much contemporary social theory that everyday life, both in its structuring and in its living, has become liquid. Social life is no longer clearly bounded and such hitherto taken for granted categories of experience, identity and community perhaps above all, no longer have any real meaning nor the capacity to provide the kind of securities they once did. This post-modern world, for better and for worse, is a fluid one (Baumann, 2000; Urry, 2000).

Technologies, and in particular information and communication technologies have contributed to these ontological shifts, though there are other factors, both economic and political, to be taken into account. Likewise, technologies can be seen to be both boundary breaching and breaking as well as, boundary restoring and securing.

We suggest that boundaries are still important in everyday life. There are socially and individually defensible and defended boundaries between the strange and the familiar, between the past, the present and the future, between the individual and the collective. Three boundaries emerged as particularly salient during the conduct of the research in this programme. The first is that between public and private spheres and spaces. The second is that between the worlds of on-line and off-line social interaction and political action. In addition, the third is the boundary between others and ourselves.

Each, of course, can be seen to be increasingly porous and fragile in an information society, yet each is subject to practical work as individuals and groups in their on-going relationships to information and communications seek to preserve and protect the private, the face-to face, and what is seen as their own, within the conduct of their everyday lives. Each is defined, or sought, through a trade-off, for example, between security and surveillance, or between proximity and distance.

It is a truism to report that information and communication technologies are important mechanisms in the erosion of the boundary between public and private spaces. Media bring the public world into the living room. Mobile phones and transistor radios bring private conversations and media consumption into parks and railways carriages. Yet, the porosity of this boundary should not be over-estimated. The transition of media into private spaces does not go by without significant interruption and transformation, as families and households seek to control what they might see as unwelcome intrusions into their private spaces (just as

so-called celebrities seek to control by other means the media's intrusion into their private lives). This is the case in the domestication of the Internet; it is the case in the ways in which young adults manage their own mobile culture; it is the case amongst international researchers trying to protect themselves from the creep of work into their leisure time; and it is the case, though differently expressed and valued, in the context of the absence of the transferability of skills in the households of the less abled, where their private culture is unable to sustain what has been learned in public.

The relation, and boundary, between everyday life on-line and everyday life off-line also goes to the heart of what is presumed to be distinctive in the information society. For it is the opening up of new communication and information spaces, and the expectation that users will flock to them with a range of expectations in no way defined by the customs and values forged in the short and long durées of their everyday lives, which has had both methodologically and substantively such a powerful effect on the construction of the idea of cyberspace. Our research suggests that this boundary remains a salient one in the conduct of everyday life, and that increasingly our capacity to construct relationships and meanings in both contexts depends in turn on our capacity both to understand and manage them as perpetually intertwined. Not only are the on-line and off-line sociologically and politically inseparable, but they can only be explained in relation to each other. And when it comes to value, as perhaps surprisingly the study of the net-generation suggests, and perhaps less surprisingly the study of trans-national social movements reveals, it is the offline, the face-to-face, which is seen both to be in need of defence, and still the precondition for effective political action.

Finally to the boundary that separates us from others, a boundary that is, or should be, also, a bridge. That boundary is also central to questions of identity and culture in the information society; central too to both perspectives and policies, when it comes to multicultural society. Indeed, it is the overlaying of the one on the other in Europe, which provides for some of the most profound social and political challenges, ones which our researches suggest can hopefully illuminate, but which it will take concerted and informed political action to resolve.

3.4. Mobilities

We have suggested that the theme of mobility and belonging emerged as an increasingly significant one during the course of the research. Perhaps it should not have been as surprising as it turned out to be, for as we have just argued, questions of fluidity and change have long been part of the debate on the character of late modern society. However, it would be fair to say that this unexpected finding was not a matter merely of visibility, for we were investigating mobility in direct ways, but a matter of its density, complexity, salience and its implications.

Mobilities are first of all plural. They manifest themselves at many levels. We have observed them, for example, at the level of population movements, that is migrations. We have observed them in terms of the freedom of individual and collective movement between public and private spaces. In both of these cases, mobilities, both at the macro and the micro levels, are geographical. We have observed mobilities between roles and identities and between the spheres of work and leisure. In both of these cases, mobilities are social. We have observed mobilities between on-line and off-line communication and interaction, and between personal and social spaces. These mobilities are both technological and cultural. In addition, we have observed mobilities in both individual and collective identities, and in the instabilities of belonging and identification. Here we are confronted by psychology as well as by anthropology.

The so-called information society, at least insofar as it has emerged in EMTEL research, is one in which information and communication technologies can be seen, principally, to be enabling these mobilities, though in ways that are neither uniform, nor uniformly acceptable. Insofar as this is a sustainable observation then, we would argue, we need to attend to a range of consequences, not least among which is the fundamental characterisation of the nature of the social change and the social challenge that these technologies are required to address.

EMTEL research suggests, consequently, that the information society could well be a misnomer, and that what needs, on the contrary, now to be addressed is Europe as a *Communication Society*.

3.5. Towards the communication society

So, finally, to the Information Society itself, and its analytic and normative status. EMTEL research has begun to suggest that the Information Society is too imperial a notion, defining, expecting and valuing a new social order without sufficient sensitivity or understanding of the realities of everyday life within Europe. In addition, EMTEL research suggests that we might need to rethink the fundamental presuppositions, at the level of practice and of value, which arise when the relationship between technological and social change in these domains is on the agenda. Access to information is, by itself, a necessary but an insufficient condition for participation in late modern societies, and European society is no exception.

Policy makers in the EU, and elsewhere, perhaps in acknowledging the same limitations, have seen that what is at stake in this benevolent move into social engineering is not so much an information society as a *knowledge society*, for knowledge is meaningful information: information that can be applied and used, and which mobilises in creative ways the intellectual and experiential products of contemporary culture and society for the benefit, at least in principle, of all. Furthermore, it does this in inclusive rather than exclusive ways. Knowledge is participative. A key term and a key ambition at the heart of the knowledge society is literacy: the skills and capabilities which all citizens will need fully to participate in it, and fully to take advantage of the resources released by the Internet, mobile telephony and broadband delivery. This is both worthy and appropriate, but it is not always fully operationalised, since for the most part participation still seems to mean, predominantly, access, and the information society is defined, even in the most recent public pronouncements, principally as a market for new technologies (EC, 2002).

Our research suggests that maybe yet another step may have to be taken. Such a step follows from our observations of the centrality of multiple mobilities in the everyday life of the citizens of Europe and the consequent centrality of media and technologies of communication to those who are, individually and collectively, geographically and socially, culturally and psychologically, materially and virtually, on the move.

This involves addressing the issue of communication, and taking communication seriously. It is a truism to suggest that society is not possible without communication, and that communication must, morally and sociologically, precede knowledge, which in turn presumes information. Without the capacity to communicate, neither knowledge nor information has much meaning. The drivers of the so-called information society have, in

fact, been consistently those addressing the need for, and management of, communication rather more than the need for information. This is evidenced above all in our research in the cases of minorities, the young and the cosmopolitan in their use of the mobile phone, satellite television and e-mail. However, it is also a significant dimension of the Internet culture of the otherwise sedentary population of the town in Ireland and of the networking possibilities of on-line political activism.

Communication and connection, which are not of course necessarily the same thing, are, as Cees Hamelink (2002) has noted, curiously missing from the core rhetorics of the information society debates. EMTEL research suggests that this can no longer be sustained if we are both to understand and better manage the socio-technical changes underway in Europe as elsewhere in the world today.

Notes

[1] We wrote, in our initial proposal, the following: "The social acceptance of new information and communication technologies is not just important from the point of view of social policy but it is crucial to the development of a broadly based information economy. Indeed innovation is a social process, not just a technological and an economic one. Technologies do not emerge without active involvement of the consumers and users who have to accept them as relevant and useful in their everyday lives. Technological change is itself mediated. Technologies change in their social acceptance, and societies change as new technologies are accepted. But some technologies are resisted and some groups within society are excluded from participating in the benefits that are expected".

[2] The recent, grand, obvious and familiar examples are those of messaging and file sharing; but the capacity for transcendence is not limited to these market-shaping (or undermining) initiatives, as we will show in the account of the research that follows.

[3] For a discussion of media technology's double articulation see, Silverstone and Haddon (1997)

[4] This approach clearly needs to be differentiated from one that depends in whole or in part on bench-marking as a strategy both for research and implementation, since it eschews the *a priori* and self-consciously reflects on the normative, for example EC COM (2002) 655 Final, *Communication from the Commission to the Council and the European Parliament: eEurope 2005: Benchmarking Indicators*.

[5] Full references to each of the projects to be discussed over the next few pages will be found in the Appendix to this report.

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Appendix 1: EMTEL Deliverables

Final Deliverables

- Brants, K. and Frissen, V. (2003) 'Inclusion and Exclusion in the Information Society', University of Amsterdam (ASCoR) and (TNO Strategy, Technology and Policy)
- Pichault, F. and Durieux, D. (2003) 'The Information Society in Europe: Methods and Methodologies', LENTIC, University of Liege and ASCoR, University of Amsterdam.
- Preston, P. (2003) 'ICTs in Everyday Life: Public Policy Implications for Europe's Way to the Information Society.
- Punie, Y., Bogdanowicz, M., Berg, Anne-Jorunn., Pauwels C. and Burgelman, J-C. 'Living and Working in the Information Society: Quality of Life in a digital world', IPTS-JRC, European Commission, Sevilla; Centre for Technology & Society, Norwegian University of Science and Technology, Trondheim; SMIT, Free University of Brussels
- Silverstone, R. (2003) 'Media and Technology in the Everyday Life of European Societies', Media@lse, London School of Economics and Political Science.

Key Deliverables

- Berker, T. (2003) 'Boundaries in a space of flows: the case of migrant researchers' use of ICTs', NTNU, University of Trondheim.
- Cammaerts, B. and Van Audenhove, L. (2003) 'ICT usage among transnational social movements in the networked society', ASCoR/TNO, University of Amsterdam.
- Durieux, D. (2003) 'ICT and social inclusion in the everyday life of less abled people', LENTIC, University of Liege and ASCoR, University of Amsterdam.
- Georgiou, M. (2003) 'Mapping diasporic media across the EU; addressing cultural exclusion', Media@lse, London School of Economics and Political Science.
- Hartmann, M. (2003) 'The Web Generation: the (de)construction of users, morals and consumption', SMIT-VUB, Free University of Brussels.
- Punie, Y. (2003) 'A social and technological view of Ambient Intelligence in everyday life', IPTS (JCR-EC), Seville.
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