UNRISD United Nations Research Institute for Social Development

CONFERENCE NEWS

Contents

Understanding "Informational Developments"

A Reflection on Key Research Issues

Report of the UNRISD Workshop
26–27 September 2003, Geneva

Introduction

This workshop brought together academics from various disciplines, researchers working with civil society, and subject specialists from donor and multilateral agencies in a collaborative effort to begin mapping key research issues relating to "informational developments" and development policy. Key research themes and ideas for future research were discussed in the context of how research findings and evidence were being used in preparation for the then upcoming first session of the World Summit on the Information Society (WSIS, held in Geneva on 10–12 December 2003), as well as in other global information and communication technology (ICT) and development policy forums.

The rationale for the workshop, elaborated in exchanges before it began, was based on recognition of a number of factors. Questions of whether informational developments are provoking fundamental changes in economic and social relationships need to be addressed. In parallel, and almost irrespective of the answers to these questions, the "information society" discourse has acquired an importance in and of itself. This derives in part from the perceptions of the scale of the information "revolution"—and if world leaders talk of an unprecedented revolution, then such perception is significant. More concretely, the role, witnessed in the Group of 8 (G8), WSIS and the United Nations ICT Task Force, of the information society as a serious factor in development policy making has major practical implications for the planning, implementation and budgeting of development assistance. What is less clear is how these factors interact with each other. Logically, they should be closely connected and inform each other, but any such connections are far from transparent. A need to critically examine each factor, and if and how they are connected, lay at the heart of the workshop agenda: that and the potential for theory and empirical research to illuminate the changes taking place and the consequent choices facing development actors.

The focus on how the intellectual agenda should serve development needs is vital but far from straightforward. There are a number of complicating factors. The "information society" is a *political* arena. Changing social relations of production and reproduction are always reflected in politics. One of the arenas for such politics is in the shaping of how such changes are studied, debated and understood—that is, in the struggle for control of discourse. The "information society" is a *contested* arena. Some argue that it does not exist either because they do not perceive information-related change as significant or, like Manuel Castells, the author of the most exhaustive and referred to sociological analysis of the

"information age"[1], because they see the information society as an erroneous way of conceptualizing or describing what is taking place. Others make extravagant claims about the scale, pace and opportunities of change, claims which can have political or commercial overtones. It can be hard to elaborate positive development options without appearing propagandistic. And the "information society" is a *confusing* arena: terms like "ICT revolution" (that is, the assumption of a technology-driven process), "knowledge economy" and "network society" are often used with little reference to their origin or to potentially significant differences between them.

In planning this UNRISD workshop, it was necessary to agree on a conceptual approach that would allow the multiple perspectives of the subject area to be explored without implying a preconceived preference for any one. One notion is common to all approaches to this subject area: those for or against a revolution thesis, those who see change as driven by technology and others who see social or economic drivers, those who perceive common worldwide trends and others focused on local particularities. All agree that information is being handled and, at least sometimes, used in new ways. If we accept this, and label such new ways of handling and using information (which clearly include its communication, reception, response, adaptation and re-use) "informational developments"[2] we have a core phenomenon, the nature and impact of which may be studied and discussed. Informational developments are clearly taking place. They are shaped by and in turn shape sociopolitical, economic, cultural and technological processes. From a study of informational developments, their varying forms in different contexts, and how they lead to action for change and transformation, and from a recognition of what we do not know about them, it should be possible to shape a critical understanding of current discourse and to determine how intellectual work may contribute to the identification and choice of development options.

Three background papers on current discourses, existing research and WSIS, written by Mike Powell, Tommi Inkinen and Cees Hamelink, respectively, served to catalyze the workshop discussions. Participants contributed brief outlines (spoken or written) on what they saw as key issues. In broad terms, the agenda was structured to start with a critical analysis of existing work in the subject area, and then to move on to issues for future research. While the multifaceted discussion did not always fit neatly into such a linear agenda, it was broadly adhered to. Likewise, this report aims to present a summary of the workshop and its surrounding exchanges in a form that structures the various threads of discussion for the reader, rather than according to the actual meeting agenda.

> *The notion began to grow that a revolution was under way—but one that could be "managed" by the powers that be on behalf of society, rather than a social process like every other revolution in history. This top-down approach was characterized by an overemphasis on the need for technical solutions and an erroneous belief that such solutions could only be delivered by the private sector.*

Analysis of Current Discourses

Environment for research and debate

Even the best research is of little value if it is not read and used. Equally, people must be able to identify and access information that is, in form and content, relevant to their needs. Both processes would benefit from a structured and signposted information environment. In his background paper for the workshop, Mike Powell argued that, for different reasons, both the institutional and the academic environments related to informational

[1] See Manuel Castells, *The Rise of the Network Society, The Information Age: Economy, Society and Culture,* Vol. I. Blackwell, Oxford, 1996 (second edition, 2000); *The Power of Identity, The Information Age: Economy, Society and Culture,* Vol. II. Blackwell, Oxford, 1997 (second edition, 2004); and *End of Millennium, The Information Age: Economy, Society and Culture,* Vol. III. Blackwell, Oxford, 1998 (second edition, 2000). An excellent summary of his thinking at the time is *Information Technology, Globalization and Social Development*. Discussion Paper No. 114, UNRISD, Geneva, 1999, a paper Castells presented at the UNRISD conference, Information Technologies and Social Development, in 1998.

[2] Cees J. Hamelink. 2003. "Human rights for the information society." In Bruce Girard and Seán Ó Siochrú. (eds.), *Communicating in the Information Society*. UNRISD, Geneva, p. 123.

[3] The following sections on institutional discourse, academic discourse and articulation are excerpted from Mike Powell. 2003. *UNRISD Social Impact of Information Technology Programme: Perspectives Past and Present*. Workshop background paper, mimeo, UNRISD, Geneva.

developments are chaotic, as are the linkages between them.[3] Nor, he argued, were the demands of academic research the same as those facing an institute such as UNRISD, which is mandated to carry out research that can be applied by the development community.

Institutional discourse

At the political and policy level it was, for a long time, difficult to attract attention to broad issues of information-related change. To this day, most governments and large development organizations make little or no distinction between ICTs and wider informational developments. Accordingly, up to the late 1990s, they tended to leave all issues relating to informational change, including social and organizational ones, in the hands of their internal ICT experts. Those organizations that were the first to recognize the policy importance of ICT–related issues tended to see this as an area in which they could gain competitive advantage relative to other organizations, a process that required them to become the "expert" on the subject rather than a participant in a collective learning and development process.

The notion began to grow that a revolution was under way—but one that could be "managed" by the powers that be on behalf of society, rather than a social process like every other revolution in history. This top-down approach was characterized by an overemphasis on the need for technical solutions and an erroneous belief that such solutions could only be delivered by the private sector. And in this context, the private sector was, primarily, the multinational corporate sector. It had the resources to participate in the multiplicity of consultative processes where global policy was shaped.

The role, for example, of small and micro businesses, social actors and artists in technology innovation, or the potential for multi-player collaborative development of new products and services, were little understood or supported. As a result, most international policy on the information revolution has evolved from a poorly developed set of options, paying insufficient attention to the complexities of social and economic change or the diversity of local responses. The dominant paradigm has been one of a globally standard and linear process to which countries need either adapt, or fail.

Some acknowledgement has been made of other approaches. The Digital Opportunity Task Force (DOT Force[4]) Plan of Action, in particular, gives some emphasis to the value of local content and technical innovation, and a number of funding schemes exist to promote such activity. But the process of collating such local activity, learning from it, and examining its potential as evidence for developing distinct and appropriate policies—at even a local level—is almost always lacking. The chances of having the lessons of such activities—or the potential impact on them of global policies—considered in the formulation of global policies and agreements are yet more remote. In this, the decision-making process as it relates to ICT and development mirrors that of other development debates. Participatory methodologies are often hindered by political glass ceilings.

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Academic discourse

From the perspective of an outsider wanting to be informed about and make sense of such profound changes allegedly affecting his or her life, academic responses to the information revolution and information society are problematic for different reasons. First, and not surprisingly given the importance of the phenomenon, relevant work is being done in a multitude of disciplines, none of which can offer a holistic interpretation of what is happening. These disciplines range from the very new (infonomics, information society studies, new media studies), through the continuously evolving relatively new (media and communications studies, cultural studies, computer science, information studies, development studies, organizational and business studies) to the more traditional (geography, economics, political and social

[4] The DOT Force, created following the 2000 G8 summit, was to identify concrete ways of bridging the digital divide between industrialized and developing countries, and to ensure that developing countries fully participate in the construction of a truly global information society.

sciences). Second, and beyond interdisciplinary politics, genuine problems exist in effective communication between disciplines: there may be little in the way of common basic knowledge or approaches. Third, and perhaps most importantly, there is little common ground to define exactly what the phenomenon is which needs to be studied: new social relations, new economics, new technology, information systems, networks? And if this is not clear for a discussion of information revolution or information society in general, it is further clouded when a development perspective is added. Approaches range from ICT as an integral facet of capital-led globalization, through a range of "development as catching up" scenarios, to more considered views of informational developments within and between localities, and their implications for local development strategies.

> *To the long-running debates on differing philosophical approaches to knowledge, must be added more modern debates about knowledge as merchandise, commodity or public good.*

Finally, any discussion that includes the concepts of knowledge society or knowledge economy needs an explicit definition of knowledge. Is knowledge the "justified true belief" of traditional post-enlightenment Western science, or is it a more complex, holistic and adaptable entity, as argued increasingly by feminist and other critiques of scientific objectivity? At the very least, the issue of whether the discourse is being limited to Western concepts of knowledge needs to be clarified before talking about knowledge and development or knowledge societies elsewhere in the world. Indeed, to the long-running debates on differing philosophical approaches to knowledge, must be added more modern debates about knowledge as merchandise, commodity or public good.

Articulation

As the multitude of journals and conferences suggests, there is no shortage of research on aspects of the information revolution, or of initiatives aimed at bringing researchers together. But such processes have not yet successfully shaped or articulated the range of relevant academic work on the subject so that it becomes comprehensible and accessible. Shaping and articulating the research does not mean a desire or an expectation of unanimity or consensus. It reflects a need for some topography by which the differing views and debates on offer can be located, and their relationship to each other made visible. It also reflects the advantages of the common use of concepts and terminology—a shared language—or at least of habits of explaining what is meant when alternative uses of a term exist.

Articulation is also developed through networking. Many networks of researchers in these areas exist, although effective multisectoral networks involving practitioners and policy makers as well are less common. Many have a limited life-span, others are either very specific to a certain issue or lack clarity of purpose. In organizing this workshop, UNRISD was aware of a number of networks and listservs relevant to related topics, but of no single one successfully bringing together and articulating an understanding of social actions and reactions in an information society.

Information society research in the social sciences

In comparison with what might be expected in more established fields, knowledge of valuable sources of relevant research and writing on informational developments tends to be specific to individuals, constituted not only by particular disciplinary backgrounds but also by personal experience and networks. Tommi Inkinen's background paper for the workshop aimed to provide a more objective survey of the current body of social science research in this area.

Common themes

The paper outlines certain essential issues and concepts, beginning with "information and knowledge society" and tracing the various uses and understandings of the terms information, knowledge and post-industrial society in sociological research. The value of such descriptions is undermined because the conceptual diversity of the term allows its use to mean an almost infinite variety of issues. A structured answer to the question "Does our societal reality constitute a service, knowledge, information or knowhow society?" remains to be found.

In Inkinen's paper, the term most commonly used is information society, as the focus is on the various actors using ICTs and the relationships between them. According to him, these actors constitute public organizations, companies and citizens, and their

interactions re-form communities and societies. "Social scientific information society research" refers to work assessing the changes introduced by ICTs to societal processes, including aspects of regional development, social stratification, the effect of entrepreneurial activity on communities, and changes in how organizations operate.

Inkinen's paper also surveys the use of the term "digital divide". Although its use to describe divisions within a society is acknowledged, Inkinen primarily uses it to imply disparities in the adoption of and access to technologies between different countries. Inkinen provides an overview of research into the Observatory on the Information Society, an Internet-based gateway to online resources on ethical, legal, sociocultural and policy issues of the information society maintained by the United Nations Educational, Scientific and Cultural Organization (UNESCO).[5] The research cited by Inkinen found that the categories that have elicited the most attention and discussion via the Observatory are the digital divide, e-commerce, freedom of expression, international organizations, "infostructure" and transborder privacy.[6] He notes that the number of items relating to intellectual property issues were less than a fifth of those relating to the digital divide.

The rapid rise in Internet usage and the opportunity to engage in new entrepreneurial activity has brought about the concept of "new economy". The concept does not refer exclusively to companies operating through the Internet, but rather to the new, accelerated production achieved through the development of ICTs. While the new economy has been an important aspect of discussions about the information society, there has been no unanimity as to whether this does or does not relate to broader processes of economic change. There remains, however, no doubt that the emergence of new, more efficient guidance and evaluation systems, novel business arrangements enabled by ICTs and new, lean organizational forms have affected business in many fields. Understanding the economics of these changes remains an important precondition for global information society development.

[5] www.unesco.org/webworld/observatory

[6] Inkinen cites I. Tuomi. 2001. "From periphery to center: Emerging research topics on knowledge society." *Technology Review* No. 116. Sitra, Helsinki.

Gender issues are also at play in the information society. The question of the direction of change is still blurred, and whether ICTs will narrow or exacerbate existing gendered divisions in society remains to be seen. There is evidence, however, that women are not as strongly associated with the "development project of the information society" as are men.

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The late 1990s saw a surge in the number of publications about "virtual communities" at the theoretical level and in the form of edited collections with little empirical grounding in the societal role of ICTs. Both mass and specialized media also gave substantial coverage to these issues. Since the burst of the dot-com bubble in global stock markets in 2000, the idea of "virtual change" has suffered a substantial loss of appeal. According to Inkinen, the effects of the Internet, for example, were in most cases largely overestimated. This is because the empirical data related to ICT usage patterns was limited, and thus most of the writings were theoretical exercises. Yet in the academic world, the concept of virtuality introduced some fresh ideas to social theory.

The virtual community arguments are connected with another popular theme of the mid-1990s: "identity and the Net". This refers to the individual usage of networks, the disembodiment of the user and the possibility of a self-created "network self".

Existing materials

Inkinen's background paper goes on to offer a brief description of some major sociological approaches to the information society, most notably the pioneering work of Frank Webster and Manuel Castells. The paper then considers a number of policy-related reports on the information society such as the Human Development Report 2001, *Making New Technologies Work*

for Human Development.[7] This report contains detailed explanations for why technological development does not necessarily lead to uneven distribution of income in the global economy but acknowledges the following points, in particular (pp. 1–8).

- The market is a powerful engine of technological progress—but it is not powerful enough to create and diffuse the technologies needed to eradicate poverty.
- Developing countries may gain especially high rewards from new technologies, but they also face especially severe challenges in managing the risks.
- National policies will not be sufficient to compensate for global market failures; new international initiatives and the fair use of global rules are needed to channel new technologies toward the most urgent needs of the world's poor people.

Despite these caveats, the tone of the report is that no state, company or other organization will be able to ignore technological development. ICTs are becoming, and in many sectors already have become, an essential part of daily activities or procedures. This constitutes a development process that has already changed the traditional patterns of operation both in governance and in business, and will continue to do so. Indeed, the report concludes, breakthroughs in digital technology enable the information society in much the same way as the steam engine and electricity enabled the emergence of industrial society.

In the case of developing countries, technology as an engine for development may appear as a distant idea. The UNDP report raises a number of challenges that developing countries should meet, including raising the general level of education for a resulting increase in the professional workforce; and securing economic resources. The report recommends, among other things, an increase in direct and indirect investments and the provision of global institutional support.

Inkinen's review of recent reports from United Nations agencies and other multilateral organizations such as the Organisation for Economic Co-operation and Development (OECD) and the European Union found striking similarities between them. Most take a positive view of the potential impact of the information society, despite acknowledging the same structural problems for the information society in developing countries: the nature and credibility of the political system, reform of economic life, and the modernization or creation of physical infrastructure. In general, the reports do not detail how the measures they suggest can be implemented, and they tend to repeat generalizations such as the importance of "investing in education" and "investing in quality"".

Current research

Inkinen's overview also looks at current research and dissemination, based on a survey of researchers working in the field and an assessment of the research agendas of a number of centres specializing in information society research.

His findings include the following:

- the high level of activity in social scientific research on the information society with numerous new series of publications;
- a strong bias toward research on the information society in developed countries;
- a plethora of works that are theoretical and make little use of empirical data to verify the hypotheses presented;
- a parallel lack of research grounded in local realities, and evidence-based comparisons (what significance does technological equipment have for its users; what meanings does the information society harbour for its citizens; do citizens and their opinions differ between different regions?);
- lack of good-quality data sets, and indicators that are unimaginative, too rigid to involve the local context, too technical, and need to be developed in the direction of social sciences;
- the wide range of topics studied at specialist "information society research centres", with a concomitant lack of clear research agendas or of acknowledged expertise in defined areas; and

[7] United Nations Development Programme (UNDP). 2001. *Making New Technologies Work for Human Development*. Oxford University Press, Oxford. www.undp.org/hdr2001/

- the problems of making the necessarily multidisciplinary character of information society research work in practice, despite inadequate resources, differing work habits and diverse areas of scholarly focus.

In conclusion, Inkinen's paper argues strongly for more empirical research, especially on the interaction of local and cultural factors with innovation; for more human-centred approaches to the study of technology; and for better indicators of change. More broadly, he argues, it is impossible to conduct a thorough study on any aspect of society without considering developments in technology and changes in communications.

The WSIS Discourse in the Context of Social Development

In his background paper, Cees Hamelink places the WSIS discourse in the context of social development. While the subject of the summit was the nebulous and contested concept of an information society, and while there was some initial interest in research-based inputs to the summit process, in the end, Hamelink asserts, WSIS did not make formal reference to existing academic work. According to Hamelink, therefore, there is a disturbing lack of clarity in the WSIS documentation—up to and including that produced at the third WSIS preparatory conference (prepcom)—on vital societal issues.[8]

UNRISD and social development

Hamelink assesses the extent to which WSIS discourses address issues of social development, defined by UNRISD as improvements in social relations, social institutions and social welfare.

However, because "improvement" is subjective and may therefore be ambiguous, we need a sense of direction in which this intended improvement should go. Here we can use the two core values that have been important guidelines for UNRISD research:

- that every human being has a right to a decent livelihood; and
- that all people should be allowed to participate on equal terms in decisions that affect their lives.

Thus, Hamelink asked, "Is the currently available WSIS discourse promising for the type of improvement implied by social development? Are the core values of decent livelihood and participation supported or ignored in this discourse?"

The Information Society

The key notion of all the WSIS texts is "the information society", yet the concept is not defined in the documentation, remaining an obscure and contested variable. In various texts one finds formulations like "the information society can" or "the information society will". Apart from his observation that it is rather nonsensical to propose that a society would do something (a classical case of "reification"), Hamelink notes that the texts basically say that the key agent in essential social processes is an undefined actor.

He proposes that it may be more appropriate to use the concept "informational developments". This refers to the growing significance of information products and services, to the increasing volumes of information collected, stored and made available, to the essential role of information as a backbone of many social services and as crucial factor in economic productivity, and to the input of information processing into transactions in trading and finance. Societies are confronted with informational developments in many different ways, at different speeds and in different historical contexts.

Reference to the information society has become routine, and the fact that the validity and usefulness of the term has been challenged by academics as misleading is ignored. Such routine use of the term suggests a consensual understanding of its meaning. In many of the popular, business and political writings on the topic it remains unclear what kind of social arrangement the information society represents. Nebulous concepts lend themselves easily to different purposes, and it makes a great political difference, for example, whether the information society is inspired by a neoliberal politico-economic framework or is driven by "alter-globalist" aspirations. After reading though the official WSIS documentation, the question remains as to what "worldview" stands behind the information society proposition.

[8] The remainder of this section includes lengthy excerpts from Cees J. Hamelink. 2003. *An Analysis of the WSIS Discourse [in the WSIS Draft Declaration* and Supporting Documentation*] in View of Social Development*. Workshop background paper, mimeo, UNRISD, Geneva.

This makes it difficult to assess whether the current WSIS discourse—if implemented—promotes the goals and values of social development.

No structural analysis

In Hamelink's view, a striking feature of the WSIS preparatory documents is the lack of serious and critical structural analysis that takes into account the wide range of political, economic and social environments within which ICTs may be debated in terms of policy or introduced as tools. For example, there are references to the democratic potential of ICTs, both in the sense of a democratic utilization of ICTs and in the sense of the reinforcement of democratic practices though the application of ICTs. Statements about ICTs and democracy make little or no sense, however, if one does not at first analyse whether the modern societies that promote and fund ICT developments represent democracies. In countries where systems of governance can be more adequately described as bureaucratic, "the question is not whether the use of ICTs can reinforce democracy, but whether uses of ICTs can support a fundamental process of change from a bureaucratic structure to a democratic arrangement. In spite of all the participatory potential ICTs may have, this will not be an easy process".[9]

Inclusion

There seems to be strong consensus on the proposal that the information society should be inclusive and accessible to all. Apart from the fact that the notion of inclusion is neither defined nor elaborated in the WSIS documentation, this presumes without further questioning that everyone wants to be included.

Yet Hamelink poses the question: "What does 'inclusion' mean?" Is this analogous to proposing that everyone should be included in the free-market economy? The notion is presented as inherently benign. Without explanation about the entity within which everyone should be included, it is unclear as to whether one should welcome or mistrust inclusion.

How far is being included a free choice? Is it possible to consider that there may be people who would prefer not to live in whatever the information society might be? If, for example, an information society implies a societal dependence upon fallible, unreliable or ill-understood technologies which imply great social risks, could it make sense for sensible people to let the opportunity pass by? If an information society means that all included people get more information, but if that information consists mainly of commercial messages and disinformation, propaganda or hate speech, could some people say they would rather be excluded?

What are the real motives behind the drive toward inclusion? Is the anxiety about digital illiteracy fed by the same motive as earlier literacy campaigns in European history? These were often not motivated by a strong desire to empower ordinary people but served to facilitate the functioning of a system that, with too many people unable to read or write, would not operate efficiently.

Moreover, a puzzling question is why the proponents of the inclusion thesis expect—if information is a key resource and if access to such resources has historically always been skewed—that it could be any different today. Are there any socioeconomic and political conditions that, in the early twenty-first century, make universal accessibility to essential resources such as water, for example, a realistic claim?

> *Realistic thinking about future technological impact will have to accept both benefits and risks. ICTs may have some benign effects; they are equally likely to have effects that are not so benign. It seems that the information society euphoria blinds policy makers in both politics and industry to the undesirable effects, such as loss of privacy, digital dependence or cyberwarfare.*

ICT potential

In his background paper, Hamelink also identifies a common assumption in much of the WSIS discourse that ICTs have a power that can advance human development, and that human potential can be achieved through ICTs and access to knowledge. Such statements are puzzling because of their generality, he asserts, seeming to assume that ICTs, under whatever conditions

[9] Cees J. Hamelink. 2003. *An Analysis of the WSIS Discourse [in the WSIS Draft Declaration* and Supporting Documentation*] in View of Social Development*. Workshop background paper, mimeo, UNRISD, Geneva, p. 3.

and in whatever environment, have this constructive power. This represents technological determinism in its crudest sense.

From a social development perspective this is important, as the assumption raises the basic issues of whether, how and when advanced technologies, such as ICTs, can promote the improvements and values as aspired. Hamelink argues that the current WSIS discourse is not helpful in this regard, because it states the equation and raises no further questions.

The following might figure among such questions. What is precisely meant by a phrase like "ICTs have a power"? What kind of power does this refer to and where does this come from? Is this a power inscribed in the technology design, or a power operationalized in certain (and which) forms of application? What is meant by the phrase "advance human development"? Without further explanation this may have myriad meanings. The same holds for a phrase like "human potential", because human beings have an impressive potential for destruction, for example.

Distribution of effects

Another fairly common assumption in the WSIS discourse, according to Hamelink, is that ICTs have mainly benign effects and that these will be equally distributed.

Informational developments and their supporting technologies obviously have a certain societal impact. In the business and political community, references to "social effects of technology" are usually made with great ease. Yet from the academic literature, it is clear that the issue of impact is far from unequivocal and indeed very complex. In a conventional reading of social sciences, "effects" may be conceived of as measurable variables because it is accepted that there are regularities in social processes, cause-effect chains, and identifiable causes of effects. In a more advanced understanding of social realities—such as inspired by chaos theory conceptions—this has all fundamentally changed. We know far less about effects than we may want to admit. In this view, it is not possible to anticipate with any degree of reliability and validity the future impact of technological developments. The complexity of social reality implies that technology assessment for the purpose of forecasting is pretentious and misleading. We can and should think in the future sense—but in terms of possible futures (always in the plural), both negative and positive ones. Realistic thinking about future technological impact will have to accept both benefits and risks. ICTs may have some benign effects; they are equally likely to have effects that are not so benign. It seems that the information society euphoria blinds policy makers in both politics and industry to the undesirable effects, such as loss of privacy, digital dependence or cyberwarfare.

Hamelink also argues that the assumption that effects would be equally distributed betrays a considerable lack of historical insight. Whatever societal effects technological developments—such as industrial machinery in the eighteenth century or automation in the twentieth century—had, there was always an unequal distribution. Those on top of the social hierarchy usually had more benefits than those lower down in the system, who often had to live with most of the risks.

Quality of life

Another important assumption examined in Hamelink's paper suggests that improvement in quality of life has to be achieved through productivity and economic growth. But, Hamelink argues, there is no reference to the observation that development problems are primarily political problems—or, rather, problems of lack of political will.

> *The WSIS discourse steers away from politics and looks primarily at technical tools to achieve development. In Hamelink's opinion, this ignores the main obstacle to worldwide development: lack of political will. Related to the apolitical nature of the WSIS discourse is the absence of attention to questions of power and control. But the question of distribution and use of political, economic and military power, and the control exercised by them, is essential to a discussion about informational developments and social development.*

Here again the overriding problem is that the discourse is apolitical. Apart from the lack of empirical evidence about the causal connection between increased

economic productivity and quality of human life (the achievement of a decent livelihood), one could equally well question the assumption that economic growth improves quality of life. This depends entirely upon how one defines quality of life. It makes a fundamental difference, for example, if one chooses a material versus a spiritual definition of quality. The key issue is probably that development is conceived primarily in the economic sense, despite the UNDP *Human Development Reports*.

The WSIS discourse steers away from politics and looks primarily at technical tools to achieve development. In Hamelink's opinion, this ignores the main obstacle to worldwide development: lack of political will. Related to the apolitical nature of the WSIS discourse is the absence of attention to questions of power and control. But the question of distribution and use of political, economic and military power, and the control exercised by them, is essential to a discussion about informational developments and social development.

A tremendous amount of financial and military power is invested in the design, development and application of ICTs, as well as in data, information and knowledge resources. Hamelink asserts that these are among the key instruments of worldwide control over the quality and destiny of human lives.

International agreements

Hamelink's background paper goes on to consider the 1998 Agreement on Basic Telecommunications Services, negotiated under the auspices of the World Trade Organization (WTO), the 1995 WTO Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS Agreement), and changes to the "settlement system" used to administer payments for international telecommunications. He also considers why the United Nations has not pursued detailed implementation of the recommendations of its 1979 Conference on Science and Technology for Development. Without such an examination of past initiatives, he argues, new statements about bridging the digital divide have little substance.

Hamelink notes the absence in the current WSIS discourse of reference to these and other existing international agreements, while recognizing that these agreements themselves may place constraints on individual countries (particularly developing countries) in devising locally oriented political and economic choices.

Furthermore, the WSIS discourse refers to cultural and linguistic diversity but makes no clear statement about pressures to incorporate cultural goods under the current international trade law regime, and to disallow the exemption of cultural exchanges from such principles as open markets, national treatment and most-favoured-nation treatment.

In Hamelink's view, there is sufficient evidence that current WTO agreements and the lack of human rights–inspired conventions on intellectual property, access to technology and the trading of culture contribute to the worsening of social relations and social welfare and do little to promote decent livelihoods or participatory models of public choice. He asserts that, for the WSIS discourse to be meaningful, it must build change on an analysis of existing regimes and an explanation of how these can be reformed to address WSIS goals.

Hamelink's paper concludes by considering a number of academic and research priorities that are discussed in more detail below. In particular, he argues that a research agenda should be purposefully designed to provide policy makers in developing countries with analytical perspectives and empirical data that create a better match between technological potential and their "preferred futures".

Discussion Theme One: The Poverty of Research

Many of the shortcomings of the WSIS process raised in the background papers are symptomatic of a wider malaise affecting discourse about the information society. However, the problem does not lie only at the level of international policy. Much research is also open to criticism. This applies to questions of structure—a disconnect between disciplines, and between realities on the ground, researchers and policy making communities. It also relates to content. As Antti Kasvio put it, "Do we nowadays have any adequate social scientific interpretation about the current stage of the 'IT revolution'? If not, then we should not be surprised at the state of the WSIS documentation or the absence of a strong welcome for social science involvement". According to Robin Mansell, shortcomings of the research in this area stem in part from the inadequate theorization of the subject, but also from the

approaches to and motivation behind much of the research:

> The vast majority of research is within the 'administrative' rather than 'critical' tradition. Research that is within the critical tradition tends to be non-cumulative, and non-comparative. With some notable exceptions, research tends to be either 'technology-driven' or 'constructionist', resulting in a one-sided view in both cases. A further critique is that much of the available research is a-historical in nature and/or oriented towards a search for 'success stories' with little attention to the way in which the so-called information society is embedded in everyday life. An additional problem is the tendency of research to focus either on 'structure' (of networks, markets, etc.) or on 'process' (the processes of consumption of content, media, etc.). There are few illustrations of research that aims to combine both perspectives and to understand how meaning is created through the many ways in which people engage with an intensely mediated environment. Finally, most large-scale survey research is under-theorized, while many theories about the information society are not grounded in any form of empirical research.

This final point mirrors the main conclusions of Inkinen's background paper, the discussion of which brought out a number of other problems relating to the development and use of information society research. The first was that the sheer volume of work from such a disparate array of sources makes a full assessment of research in this area extremely difficult. Yet at the same time, there are serious gaps such as research on the value and use of knowledge as a tool in and a factor of development and change. Participants argued that this served to illustrate one of the problems facing anyone trying to use existing research to come to an adequate overall understanding of informational developments and society. People are coming at the issues from so many theoretical perspectives, from so many possible starting points, that, according to Mansell, "we just can't expect to water it down to one set of common denominators". We cannot and should not work from "one set of ideas"—defining issues and then challenging and debating them is fundamental to any productive intellectual process. The challenge, particularly when researching a new and fast-moving area, is conducting the process in a way that has meaning and that both informs and stimulates those who may wish to act upon it.

Critical research is neither visible nor easily accessible. Inkinen used a number of obvious points of entry, such as well-known specialist institutes, information-related journals and other serial publications, and the United Nations system, to identify information society research with a development orientation. It is instructive to consider, apart from issues related to the type and quality of the research, the salient features of what he found.

- A strong developed-country orientation for information society research in most specialist institutes and publications, with no centre identified as specializing in issues of information society and development.
- An uncritical certainty, emanating from some United Nations and other multilateral development agencies, of the development benefits of investing in ICT, combined with an implicit and unexplained assumption that intractable development problems (such as energy and communication infrastructure, and universal literacy) will be magically overcome as a prelude to the information age.
- A strong quantitative bias toward the importance of the "digital divide" as the key development issue. This diverts attention from issues such as intellectual property and trade agreements, which may have equal, if not greater, development significance.

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Participants voiced concern that alternative views are less visible. And two participants in particular, whose job involved trying to use research to develop clear policy directions for their institutions, expressed frustration.

Henk Molenaar pointed out that

> the amount of literature, including all the non-governmental organization [NGO] and grey literature, is huge. But it is difficult to find some bottom ground in this, and I also find many assumptions which are not properly justified in this discussion. This is not just in documents leading up to WSIS, but in the wider publications of bilateral and NGO donors. There seems to be a feeling that ICTs can be the answer for everything—even critical thinkers, NGOs and others which usually have a critical, people-oriented approach, a human rights approach … when it comes to ICTs they seem to lose their critical capabilities. Research could be a way out of this. I have a feeling that a lot of empirical research will be necessary, but what will also be necessary is to de-mystify a lot of these concepts.

In Ichiro Tambo's opinion, donor agencies confront organizational inertia in the face of yet another set of initiatives, and a scepticism of technology. To assist his work, he said, he needed:

- an explanation of the economic benefits of investing in ICTs, based on a simple economic model and a few good examples;
- background on the social impact of ICTs, both positive and negative; and
- a glossary of technology that would provide all parties involved with a clear understanding of what any technology is and does.

The failure of research efforts to produce well-founded and comprehensible summaries that meet such needs (or provide clear explanation of any conceptual difficulties in meeting them) is a concern for anyone who believes that intellectual effort should contribute to the resolution of real-world problems.

Discussion Theme Two: Informational Development and Economics

A common assumption of those promoting ICT for development is that there are direct links between investment in ICTs, global competitiveness and accelerated economic development. This message can be identified in the reports of the United Nations and other multilateral organizations surveyed in Inkinen's paper.

It is important to be clear about what investment is being considered. Inkinen characterized the "new economy" broadly, in relation to the plethora of ICT–enabled organizational change, supply chain re-engineering, as well as internal and external business communications that allow companies to trade in new ways. Inkinen also reported, as did Thandika Mkandawire in his own work, that levels of ICT usage in diverse societies virtually match other indicators of investment and consumption such as transport, energy use and education. While ICT may therefore be an indicator of the size, complexity and competitiveness of an economy, it is far from straightforward to assume that it is significant on its own or that its importance is greater than any other area of investment. This conclusion is also borne out by research, commissioned by UNRISD and carried out by Philippe Barry and Hamidou Diop, on the use of ICT by large and medium-sized enterprises in Senegal.[10] They identified constraints of cost, skills shortage and unreliability of technical support, in addition to risk factors which, with the exception of a few Internet-specific risks, could just as well apply to any other "modernization" investment enterprises might consider making.

This conclusion does not undermine the potential value of investment in ICTs as *enabling* technologies. As such, for example, they are as essential to full participation in the global financial services industry as the existence of a functioning port may be to the extraction of minerals. These technologies are also fundamental in the growing economic significance of networks, be they of a corporate or social nature. However, this still begs the question of whether being enabled in such areas is a strategic economic priority for any region or country, which will depend on local analyses of comparative advantages, and of how such enabling may come about. Another area of investment, which is also promoted as having development value, is that in industries linked to the production and development of ICTs themselves. This is problematic in a different way. Govindan Parayil argued that there are some fundamental problems, from a development perspective, with the idea of investing in ICT industries. He described a coexistence, globally and within some individual countries, of two modes of

[10] Philippe Barry and Hamidou Diop. 2002. "L'impact d'Internet sur le fonctionnement des moyennes et grandes entreprises industrielles." In Momar-Coumba Diop (ed.), *Le Sénégal à l'heure de l'information*. UNRISD and Karthala, Paris.

production and the failure of markets to offer any balance between them.

> There is an asymmetric relation between traditional means of production (dominated by primary, bulk processing and manufacturing industries) and the innovation and knowledge industries of a 'post-industrial, weightless economy'. While the production functions of the former are characterized by constant or decreasing returns, the latter enjoys the benefits of increasing returns. … The distributional inequities of these dual modes of production are manifested as the digital divide and the extreme dispersion of income between the so-called knowledge workers and unskilled workers the world over.[11]

This asymmetry has numerous implications for policies of development economics. Its immediate effect is to increase disparities of income both within countries and internationally, with potentially negative consequences for political and social development. This is particularly evidenced by experience in those more economically developed nations, such as the United States, where the new mode is most established. It also raises serious questions about the economic logic of attempting to direct investment to local ICT sectors, as the very nature of increasing returns is to offer greater economic opportunity to existing poles of technology and market leaders than to less advanced competitors.

Commenting on the alleged significance of the ICT revolution in India, Parayil stressed its limited size both in terms of workforce engaged and economic significance (estimated at 1.4 per cent of gross domestic product in the 2000–2001 fiscal year). He also queried whether India would succeed in climbing on the digital bandwagon or whether it would remain at an intermediate stage of a global system, carrying out basic software services and business process outsourcing that resemble a new form of primary service exports.

Parayil suggested that a better policy direction would be to avoid the uncertain outcome of "late" investment in sectors where others have already established a pattern of increasing returns, and to concentrate instead on using ICTs effectively to increase the efficiency and competitiveness of the rest of the local or national economy. Yet the lure of the digital economy undermines this. What, he asked, would be the comparable social and economic impacts of similar levels of ICT–oriented investment dedicated to providing solutions to the internal functioning of the rest of the Indian economy? In reality, an ever-increasing proportion of qualified graduates and engineers are being drawn away from other sectors to a handful of Indian cities with decreasing links to and knowledge of the rest of the country. More generally, the very possibility of investment for high employment and more balanced expansion across a territory is denied by the huge market-based imbalance between old and new modes of production. Unless public policies and regulation aim to mitigate this imbalance, there is only the remotest prospect of investment in ICTs—either within the ICT sector or more broadly—delivering wider economic development with its attendant social benefits. In this context Parayil mentioned "ICT literacy" programmes in Kerala, India, a state that has achieved high levels of social development relative to economic growth. He suggested that the impact of such programmes, and the uses to which grassroots ICT literacy were put, could be an illuminating area for further research.

Thus participants were either dubious about the existence of any ICT–specific economics (the consistency of ICT indicators with other evidence of economic "progress") or alarmed by the economic and social stratification ICTs may engender. There was little support for the oversimplified and underspecified exhortations to invest in ICT that are often found in mainstream economic development advice. The OECD, which, in keeping with other multilateral development agencies, does believe that continuing investment in ICT is likely to produce development benefits, qualifies its advice significantly. It recognizes that the evidence comes squarely from experience in OECD countries. As research carried out on its behalf has concluded:

> There is little or no clear evidence that the same outcome is yet being achieved in developing countries, largely because little or no relevant research has been undertaken. However, developing countries in general, and the least developed countries (LDCs) in particular, are less well-equipped to take advantage of the potential of ICTs to stimulate growth, and so

[11] Govindan Parayil. 2003. *The Political Economy of Informational Development: A Normative Appraisal*. Draft paper presented at the UNRISD workshop, p. 4.

(to the extent that ICTs do stimulate growth) are likely to fall further behind OECD countries in relative terms.[12]

Discussion Theme Three: The Political Potential

If there is consensus about any aspect of the information society having a political character, it is the digital divide. Although sometimes seen as simply a supply-side problem, a number of states, United Nations agencies and civil society organizations regard activities aimed at reducing the digital divide as political in that they seek to promote justice and inclusivity. As Inkinen reports, concern about the digital divide—usually defined as a lack of access to the predominantly Northern-oriented sources of knowledge on the Internet, although importance is sometimes accorded to local content—predominates in discussions of the international features of the global information society.

Workshop participants questioned the usefulness of the concept. Parayil's view—that the issue was not one of access, but of equity in the distribution of resources—was widely shared. There was wide agreement with the argument in earlier UNRISD work that there is nothing specifically digital about the digital divide.[13] In terms of resources and power relationships, its inequity resembles all the other divides that exist within and between societies. It exists not as the result of some deliberate act, but as a reflection of the multitude of inequities of the world in which we live. Likewise, its resolution can only be foreseen in the context of much wider changes. In this sense, it is in many ways less political than the very deliberate decisions—such as those relating to trade, intellectual property and technology transfer—with a direct (and sometimes negative) impact on poorer countries.

> *There is nothing specifically digital about the digital divide. In terms of resources and power relationships, its inequity resembles all the other divides that exist within and between societies.*

Another perspective was elaborated by Cheikh Guèye, starting from the French expression for the digital divide, *la fracture numérique*. The implication of the word "fracture" is that there was previously some "whole" that has now been broken. Not only does this convey the fundamentally inaccurate picture of some previous technological equality, but it also implies that there is some global whole toward which we should aspire. Guèye criticized the current discourse and its implied vision of a single information society, "the result of a linear trajectory that affects all people to the same degree, linked with the same tools, the same values, the same information, the same knowledge". He argued that such a vision bears no relation to reality and reinforces the simplistic categories and divisions that form the basis for existing relationships between different parts of the world, especially in relation to aid and development. Would it not be better, he asked, if "each society sought its own direction and appropriate responses in line with the contexts and needs based on its own founding principles"? This echoed comments by Ursula Maier-Rabler on the centrality of culture in how the notions of information and of access to it are formed. Workshop participants strongly supported the view that the term information society only makes any sense in the context of a diversity of information *societies*, rather than as a single global monolith.

Guèye developed his argument for the localization of issues within specific social contexts by considering the potential role of ICTs in the fight against poverty in Senegal. He adopted a wide understanding of poverty, including lack of basic resources but also other unmet needs and unequal relationships, of which information is one. He described how marginalized people living on the edges of Dakar simply lacked the information that might enable their social integration: "if people cannot read or cannot understand the official language, if they cannot access those nuggets of indispensable knowledge, they can only be powerless". Arguing that financial poverty is often but a symptom of political weakness and a lack of family or lineage links, he quoted a Senegalese proverb "*Ki raflé ki amul yeeré wayé moy ki amul nit*" (the poor person is not someone without clothes, but someone without anyone). Thus, he argued, "access to networks is access to information, and access to

[12] D. Souter. 2003. *ICT and Economic Growth in Developing Countries. Executive Summary*. OECD-DAC Network on Poverty Reduction. Paris.

[13] See, for example, Cynthia Hewitt de Alcántara. 2001. *The Development Divide in a Digital Age. An Issues Paper*. Programme on Technology, Business and Society, Paper No. 4, UNRISD, Geneva.

information is access to power". ICT—and in this he included all digital communication technologies, not just the Internet—has an important role to play in addressing information gaps and moving on from a horizontal structure of information provision at different levels to one in which multidirectional vertical information exchanges create a new political dialogue.

> *ICT has an important role to play in addressing information gaps and moving on from a horizontal structure of information provision at different levels to one in which multidirectional vertical information exchanges create a new political dialogue.*

The key here is not simply to address issues of information supply and demand, but to exploit the opportunities offered by technology for "the multiplication of opportunities for interrelation. … The complexity of reality can only be managed through a functioning network encompassing a broad palette of actors and interests". How such communication is achieved is also crucial. Too often, Guèye said, development information projects seek to deliver solutions that objectify the poor rather than build from their existing information practices and resources to empower them.

This led to a consideration of agency. As Hamelink had already observed, mainstream discourse accords incongruous powers to ICT. "ICTs can", "ICTs will", "ICTs have the power to" are expressions that can be found in many information society documents and speeches. In such discourse the role of human beings is to respond in some way to what ICTs do to, for or against them. This is at odds with other approaches to development that envisage a process in which active citizens are enabled to take concrete steps to improve their own lives and those of their communities.

Thus Kemly Camacho explained a more people-centred conceptualization of the Internet:

> We do not see the network of networks (the Internet) only as a technological platform. Rather we consider it as a new space of interaction between human beings which we have created for our own benefit. … We who study, investigate, evaluate and prompt actions related to the Internet with a social vision explicitly claim that we mean to use the technology as a tool aiming at the transformation of societies. We then want to discover and promote ways…to contribute to building novel societies led by common values, such as fairer relations, resulting in less discrimination and more equal opportunities.[14]

In discussing this approach, Camacho made it clear she was talking about a highly social process focused on practical outcomes. She envisaged a process whereby people from different sectors would come together to discuss issues, such as WSIS or the knowledge society, and existing research from a critical perspective. In such forums people would be free to ask, "What does this mean for our country? What does it mean for us? What do we need to do?"

While Camacho focused on the social processes involved, Mansell raised the issue of individuals' capacities and rights in making use of the Internet. She said that much discussion about the Internet is not about how or even whether this new medium might increase people's capabilities to change their lives. In fact, she argued, it is often completely divorced from any consideration of the conditions of their lives, or of their freedom to create positive changes therein. Thus, she said, the development of new cognitive approaches allowing people to "actualize" their capacity to act in the new media age is of social and political as well as economic importance, but how this can be done is rooted in existing real-world inequalities. She suggested that the issue be considered in the context of the work of Amartya Sen—on functionings (what people value doing

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[14] Mistica Virtual Community. 2002. "Working the Internet with a social vision." In *Other Side of the Divide: Latin American and Caribbean Perspectives on the WSIS*. Posted online by Network on the Social Impact of the Information and Communication Technologies (RedISTIC) in 2003 at www.redistic.org/indexj.htm?body=proyectosjen.

or being) and capabilities (the combination of functionings that an individual is able to achieve). Applying this approach to the new media, she posed the question of what sets of capabilities are available to people, and what sets could or should represent an entitlement to a citizen in the digital age. As such, Mansell opened the question of the (lack of) policy in this area, and its links to the achievement of capabilities and to new concepts of human rights.[15]

Molenaar noted the observations made about the a-historical nature of most information society discourse and its lack of a political dimension, and commented that, given these, it was perhaps not surprising that a third feature of the discourse is that it is also gender blind. Thus ensued a discussion that graphically illustrated the need to base analysis on the study of concrete realities in specific contexts. Mansell observed that the proportion of women active within ICT industries appeared higher in other countries, notably China, than in the North. Camacho commented that research on local knowledge systems in Central America shows that what types of knowledge are held by whom is highly mediated by gender. Shahra Razavi illustrated the dangers of making generalizations about the needs of women, contrasting the billions who lack access to the most basic technologies, such as clean water, to the pioneering use of ICTs by global feminist networks. What is clear is that both information exchange and access to resources are highly gendered processes. Powell added that what people did with resources—the uses they put them to—could also be mediated by needs and outlooks rooted in culture and gender. He noted that the choice and application of technologies often varied significantly from what their inventors expected, and that the adoption of a technology usually involved its adaptation. However, the outcomes of such processes depend on their ownership. The selection of a particular ICT by a group of women, clear about what information they want to exchange in which context, is an entirely different process than the top-down provision of a technology according to assumptions of need which may or may not be accurate. The "politics" are not limited to the specific question under consideration—in this case gender—but include the process by which people's needs are identified, researched and addressed.

The selection of a particular ICT by a group of women, clear about what information they want to exchange in which context, is an entirely different process than the top-down provision of a technology according to assumptions of need which may or may not be accurate.

Toward Research with Meaning

Research mapping

Two themes ran through the workshop. One was a desire to better understand informational developments and their relation to societies. The other was a critique of and frustration with existing research—not aimed at individual pieces of work, but at the collective achievement of research in this area to date. Some aspects of this relate to gaps in the research and to failures of approach, which will be considered further below. Others relate to the extent to which research in this area does or does not function as a resource—as a body of knowledge—that people can use to develop policy or to make practical decisions affecting their lives or their societies.

The problems stem from the sheer number of questions relating to ICT and society that *are* the subjects of research, and the myriad of starting points that direct the approaches used. As discussed above, it is unrealistic to expect researchers with a variety of interests in different disciplines to share the same starting points. What, then, are the options for users seeking information they can use from all possible research sources, including some that were, perhaps, developed with other end-users in mind?

Research on informational developments, or on "ICT and the modern world", can cover anything and everything. A research agenda for all potentially relevant areas of inquiry could produce a list as long as a phone book, hence the need for it to be given some shape, some topography, some means of relating one piece of the puzzle to another.

[15] See Robin Mansell, *New Media and the Power of Networks*, paper presented at the First Dixons Public Lecture, Department of Media and Communications, London School of Economics and Political Science, 2001; and "From digital divides to digital entitlements in knowledge societies." *Current Sociology*, Vol. 50, No. 3, 2002.

In his background paper, Powell argued the value of some outline or framework within which any research could be situated. He proposed one possible approach that would describe a number of connected dimensions, each interacting with the others, but each also providing sets of boundaries within which it may be easier to conduct meaningful exchanges. A very crude illustration of such a framework, and of what types of work might fall within each level, is presented below. Their listing is not meant to imply a hierarchical relationship between them.

- ***Dimension 1: Comprehending***
  - *Overarching themes*
  - *Philosophical and conceptual approaches*

- ***Dimension 2: Policy making, decision making***
  - *Global regulatory and technical standards*
  - *Trade and intellectual property issues*
  - *Human rights legislation*
  - *Policy making by global institutions, multilaterals and bilaterals*
  - *Regional policy making*
  - *National policy making*

- ***Dimension 3: Study and action***
  - *Empirical research at societal level*
  - *Observed changes in daily life*
  - *Social activism*
  - *Project and programme experience of information-related development work*

Dimension 1

Without at least some shared understandings of what more profound processes related to informational developments may be taking shape, which should include some understanding of competing points of view, it is hard to locate decision making within any clear set of objectives or to formulate effective research questions to guide empirical research. It is doubtful if such shared understandings currently exist. Other issues that may belong at this level include general definitions (of, for example, development, knowledge or culture) and any conceptual boundaries being set on the subjects under discussion.

Dimension 2

The creation of policy and agreements on regulation, rights and standardization should clearly be informed by research from dimensions 1 and 3. There is, however, often also a need for substantial specialist research input to this dimension if an effective decision is to be taken. Consider, for example, the regulation of telecommunication networks in a country. A process of research and debate may lead to the conclusion that such regulation should have, as its main objective, maximizing the potential for popular access to the infrastructure. Once that decision is taken, there will be a substantial need for more detailed research around issues of implementation—perhaps around technical options, financial models, potential suppliers, compatibility with international regulations and standards. Each such area of research is likely to be based on highly specialized knowledge. At the same time, the choices inherent within such specialization may have significant impact on the social objectives that have been set—in this example, maximum popular access to telecommunication infrastructure. For that reason, this multitude of research specialities, too numerous to list here, need to be part of the overall research landscape, so that embedded social implications can be identified and debated.

Dimension 3

As Hamelink observed, identifying practical or philosophical options, and perhaps developing strong preferences between them, is, in a sense, neither here nor there. Fundamental economic and social changes do not come about as the result of the decisions of a limited group of people but through the interaction of millions of people and organizations—as economic, social and political actors. This interaction needs to be studied. This may involve empirical research, action research or simply the sifting of evidence which emerges from the mass of project and programme literature relating to work by governments, multilateral agencies, NGOs, schools and community groups in the field of ICT and social development.

Furthermore, ICT tools could be developed to aid users to navigate the framework and to explore links between its different dimensions.

Research areas and questions

On the second day of the workshop, participants participated in a brainstorming session that aimed to identify basic areas of and questions for further research, examples of which are listed below.

General

- What is the goal of informational develop-

ments? How do we measure the progress to the goal?

- Create alternative set of indicators to assess social effects of informational developments.
- What are knowledge/network economics? How do we account for knowledge? How do we apportion/locate profit?

Social processes

- Develop models and theories (based on empirical research) to understand the role of information and communication in social development.
- Information development →Social appropriation of information → Knowledge. Study this process.
- What role does (what kind of) information play in promoting (sustainable) decent livelihoods in poor communities?
- Does connectivity/access help the socially/economically disadvantaged? Design empirical investigations/case studies from different developing countries.
- How are new technologies impacting on local research and articulation in the South and, in turn, on North-South relationships?
- What are culturally appropriate strategies to acquire capabilities (in Sen's sense) in order to make decisions about usage/non-usage, inclusion/exclusion of/from ICTs?

Complexity

- How do we identify and understand the interaction of billions of people and organizations making continuous small changes in their informational behaviour?

Action

- How should we change predominantly one-way information traffic into social dialogue?
- How can inclusive design processes of ICTs—across users, genders, North-South—be facilitated?
- What are examples of culturally biased designs of participation/inclusion, and how are they represented and replicated by means of ICTs?
- Network society is a reality. Which ICTs, specifically, stimulate and lubricate the networks?
- How do we develop tools to better navigate the maze of research perspectives in this area?

Policy

- If mainstream international discourse and policy may be criticized for their basis in oversimplified assumptions, then one role for research is to reveal the complexities and relationships involved; for example, the relationship between knowledge, politics and policy making.

The first comment that could be made about the areas and questions for research is how basic many of them are. It seems that, despite the mass of existing research, there remain fundamental questions about the links between information, technology and society.

> *There is a need for more empirical research to improve understanding of the processes by which information is used to contribute to social and economic development, especially in the South. Many indicators exist, but it was felt they had an excessively technical character and did not evidence how well and to what purpose informational developments and related ICTs were being applied.*

Particular attention was focused during the brainstorming on the need for more empirical research to improve understanding of the processes by which information is used to contribute to social and economic development, especially in the South. As Camacho put it, "many of the information society books are made in the North. We may have most of the same questions, but we do not have the same answers". This raised the question of the absence of satisfactory indicators to track the acquisition and application of information in a development context. Many indicators exist, but it was felt they had an excessively technical character and

did not evidence how well and to what purpose informational developments and related ICTs were being applied. Indeed, without offering an explicit definition of what an "information society" is assumed to consist, it is hard to imagine how progress toward it can be sensibly assessed.

Another feature of the results of the brainstorming on research areas and questions was the number of participants who suggested active engagement in making things happen. One aspect of this was the perceived need, felt both by civil society actors and by donors, for more effective vertical communication and, in particular, for ways of enabling the opinions and analysis of "the poor" to be expressed and heard effectively. This may open up new roles for researchers as intermediaries and facilitators. A second aspect was the development and use by researchers of new ICT-based tools. This could both build capacity to conduct and communicate appropriate research, and contribute to the development of information exchanges and tools that may benefit other social actors. It is not surprising, on a practical level, that people who use ICTs to research the social use of ICTs have ideas as to how such tools could evolve, but there is an underlying theoretical point. In a process reminiscent of the early years of gender research, there is recognition that what is researched and how it is researched contributes to the evolution of the reality that is being researched.

There is a perceived need, felt both by civil society actors and by donors, for more effective vertical communication and, in particular, for ways of enabling the opinions and analysis of "the poor" to be expressed and heard effectively.

Research approach

Although it is understood that there are many justifiable reasons for approaching research from a range of starting points, there was a certain agreement among workshop participants that the approach to research in this area is of more importance than a specific research agenda. Too often, research that claims to be about social and development issues takes technology itself as the starting point. There are two problems with this. The first is one of focus. Topics like "ICT and health" or "ICT and education" tend to focus attention on ICT rather than on the problems—be they of health or education—that are supposed to be addressed. Second, and more fundamentally, research that essentially looks at how ICT is being applied may neglect to pose more fundamental questions about the impact of informational developments on the development agenda. One participant raised the example of research on the use of ICT in "development communication", which raised ideas about how producers of radio services involved in development communication could improve their product. Nowhere, however, were the information needs or environment of the intended listeners reassessed to consider how they may have been affected by new informational developments. The research and analysis, despite its "development" title, was directed at the needs of the intermediary rather than of society more broadly.

Workshop participants did not consider such specific focus necessarily wrong. Rather, they argued that any research on social or development perspectives of informational developments, whatever its focus, needs first to ground itself in the realities of what is being studied. Participants thus began to outline an approach that, if applied consistently, would help situate research within its wider context. The essential features of this approach are the following.

The need for diagnosis

- What are the existing information and communication environments of that which is being studied? What are the cultural and gender issues embedded within such environments?
- What are their characteristics in terms of place (global or local) and level of action (global, national, local)?
- What are the specificities of decision making and change processes within the social context being studied, and what are their implications for the timing and pace of change?

Consideration of the politics of the subject

- What mainstream political agendas or economic interests are involved?
- What power relationships are involved within the environment being studied?

- To what extent are people participating in/ being consulted about the processes under investigation?
- How and through what relationships are the use of new technologies and the emergence of new discourses mediated?

The perception of risk

- What risks are involved?
- How clear are the choices available to participants and how does this relate to the complexity of their environments?
- What are the politics and the psychology of risk in these contexts?
- Who takes the risk and who feels the repercussions?

Consideration of alternatives

- Which discourse is being engaged?
- Upon what historical and political analysis is it based?
- What other perspectives are possible?

Consideration of the practical applications of research (as appropriate)

- What channels exist for developing practical responses where research cannot offer linearity or coherence?
- What is the relationship of the research to decision-making processes?
- What is its potential contribution to the design of new activities?

Workshop participants placed great emphasis on how important it is for analysis of the social impact of a process to "start with society"; they agreed that while this might seem obvious, such focus has been lacking in most work on the information society. The need to understand the politics, likewise, was crucial.

Conclusions

The workshop did not seek to create a neat research agenda, the implementation of which would answer the many questions about the relationship between informational developments, societies and development. Nor did it make strong claims for the study of informational developments as a separate discipline.

Indeed, it argued strongly for such issues to be considered more actively within existing disciplines be they academic, such as economics and sociology, or practical, such as those working with people within their daily reality to achieve progress in social development. Participants did, however, develop evidence and arguments in favour of sustained work in three areas.

Engaging with the information society bandwagon

There is clearly significant momentum toward prioritizing investment in ICT and "e-readiness" within development plans and aid budgets. Simultaneously, attention is directed to an inevitable digital divide, while new international law and standards more in favour of the rich than equitable development are enacted. Such momentum seems to derive from a consensus about the inevitability and benign nature of technological progress. Yet critical research and hard evidence are notably lacking. It is legitimate to ask in whose interest is the development of an information-based future in which existing economic, political and technological power relationships are not open to debate.

Acting on the limitations of the body of information society research

Research in most academic disciplines has evolved in some relation to those who apply such research in government, politics, industry or development. Such links are not apparent between information society research and communities of research users. This is a particularly important issue for those working on the political, social and economic aspects of an information society. Indeed, research into the purpose, methodology and value of research in this area is itself a justifiable research activity. Unless intellectuals working on informational developments can engage with and meet the needs of social forces engaged with and affected by such developments, they are condemned to charges of irrelevance and parasitism, if not of deliberate obscurantism. To achieve such engagement requires a collective effort to reorient, reshape and make accessible their work.

Promoting and conducting empirical research

The greatest requirement is undoubtedly for empirical research, especially on the social aspects of informational developments, and on experiences within developing countries (using and increasing local research capacity in the process). As Antti Kasvio put it:

> Purchasing a mobile phone is just the very first step toward the information society. The real story begins when people start using these information technology devices in order to solve different kinds of everyday problems. This is a story about social innovations or about the development of new social uses of technologies that, in themselves, are pretty standard all over the world. Focusing on developing countries, we have to confess that most of these developments are a terra incognita for today's academic social science.

In 1997, UNRISD commissioned Cees Hamelink to write a paper on the research priorities linked to new information technologies, social development and cultural change. His conclusions describe, in large measure, the key research priorities we can still see today.[16]

> The main purpose of further study and debate would be to provide policy makers in developing countries with analytical perspectives and empirical data that create a better match between technological potential and preferred futures.
>
> The first area could be concerned with **the design of democratic and pro-active policies and programmes that make it possible to realize the social development potential of digital technologies**. Among other things, this entails studying
>
> - the roles that public and private sectors should play in the design and execution of these policies and programmes;
> - the forms of public intervention that are conducive to shaping technological change in accordance with desirable social goals; and
> - the establishment of new and more democratic relations between producers and consumers of ICTs, so that technological progress becomes much more responsive to social needs.

A second area of concern is centred around **the definition of those social and institutional changes that are required to maximize the social benefits and to minimize the social risks associated with the adoption and deployment of digital technologies**. This entails considering

- various ways of adjusting the organizational structures that are relevant for economic productivity, political participation, and cultural diversity in line with preferred social scenarios; and
- the (cultural) appropriateness of educational methods and training materials required for the realization of the technological potential.

Third, it is important to discuss **the design and adoption of digital technologies that strengthen sustainable processes of social development**. This involves creating digital technologies that reduce the use of energy-intensive resources and encouraging environmentally sustainable application of digital technologies.

Since conditions in different countries vary, no global solutions can be proposed in any of these issue areas. Country studies are needed in order to explore the specific policies, programmes and technological solutions likely to be effective in specific social and economic conditions.

A final area of research and action-oriented debate should no doubt involve the 'social shaping of technology' in concrete situations. It is essential for those who want to use ICT development to further social goals to understand what forces shape technological changes and how these forces interact. This understanding would allow policy makers to anticipate social consequences better and to construct those institutional arrangements that orient technological change towards socially desirable ends. Here one must look at

- relationships among variables affecting technological development, be they socio-economic, political, cultural or gender variables, geographical locations or market forces. Too little is known about how these factors interact at micro, meso and macro levels;
- the strategies through which those affected by technological development can (re)shape this development in socially beneficial ways.

[16] The remainder of this section is excerpted from Cees J. Hamelink. 1997. *New Information Technologies, Social Development and Cultural Change*. Discussion Paper No. 86, UNRISD, Geneva, pp. 33–34.

Agenda

Friday 26 September

10:00–11:00 Introductory Session
Chair: Mike Powell

Welcome — Thandika Mkandawire

Participant introductions and summaries of notes

Resource: "Two-pagers" — Participants' notes on key conceptual issues and research priorities

11:20–12:40 Session 2
Chair: Thandika Mkandawire

Critical analysis and evaluation of current research on information, society and development

Resource: Workshop background paper by Tommi Inkinen: *Overviewing Information Society Research: Some Recent Trends and Future Prospects*

Discussion

14:00–15:30 Session 3
Chair: Peter Utting

Critical analysis and evaluation of the conceptual and empirical basis for the WSIS discourse and other "global information" initiatives

Resource: Workshop background paper by Cees J. Hamelink: *An Analysis of the WSIS Discourse [in the WSIS Draft Declaration* and Supporting Documentation*] in View of Social Development*.

Discussion

15:50–17:30 Session 4
Facilitator: Mike Powell

Toward a subject analysis and a research agenda (1)

Brainstorming: Elements of a socially alert approach to research

Discussion

Saturday 27 September

9:30–10:45 Session 5
Facilitator: Cees Hamelink

Toward a subject analysis and a research agenda (2)

Brainstorming: Basic research questions

11:10–12:30 Session 6
Chair: Cees Hamelink

Realizing the agenda: User needs and possible forms of collaboration

Discussion

14:00–15:30 Closing Session
Chair: Robin Mansell

Have we met our objectives? Critical review of the process to date

Discussion

Participants

Ms. Kemly **Camacho**
Fundación Acceso
San José, Costa Rica

Mr. Cheikh **Guèye**
Enda Prospectives-Dialogues Politiques
Dakar, Senegal

Mr. Cees J. **Hamelink**
Department of Communications and Human Rights
University of Amsterdam, Netherlands

Mr. Antti **Kasvio**
Information Society Institute
University of Tampere, Finland

Ms. Ursula **Maier-Rabler**
Center for Advanced Studies and Research in Information and
Communication Technologies and Society
University of Salzburg, Austria

Ms. Robin **Mansell**
Department of Media and Communications
London School of Economics and Political Science, United Kingdom

Mr. Thandika **Mkandawire**
Director, UNRISD
Geneva, Switzerland

Mr. Henk A. **Molenaar**
Research and Communication Division
Directorate General International Co-operation
Netherlands Ministry of Foreign Affairs
The Hague, Netherlands

Mr. Govindan **Parayil**
Information and Communications Management Programme
Faculty of Arts and Social Sciences
National University of Singapore, Singapore

Mr. Mike **Powell**
Research Coordinator, UNRISD
Geneva, Switzerland

Ms. Shahra **Razavi**
Research Coordinator, UNRISD
Geneva, Switzerland

Mr. Ichiro **Tambo**
Development Co-operation Directorate
Organisation for Economic Co-operation and Development
Paris, France

Mr. Peter **Utting**
Deputy Director, UNRISD
Geneva, Switzerland

The **United Nations Research Institute for Social Development** (**UNRISD**) is an autonomous agency engaging in multidisciplinary research on the social dimensions of contemporary problems affecting development. Its work is guided by the conviction that, for effective development policies to be formulated, an understanding of the social and political context is crucial. The Institute attempts to provide governments, development agencies, grassroots organizations and scholars with a better understanding of how development policies and processes of economic, social and environmental change affect different social groups. Working through an extensive network of national research centres, UNRISD aims to promote original research and strengthen research capacity in developing countries.

Current research programmes include: Civil Society and Social Movements; Democracy, Governance and Human Rights; Identities, Conflict and Cohesion; Social Policy and Development; and Technology, Business and Society.

A list of the Institute's free and priced publications can be obtained by contacting the UNRISD Reference Centre, Palais des Nations, 1211 Geneva 10, Switzerland; phone 41 (0)22 9173020; fax 41 (0)22 9170650; info@unrisd.org; www.unrisd.org.

UNRISD thanks the governments of Denmark, Finland, Mexico, Norway, Sweden, Switzerland and the United Kingdom for their core funding.

This **UNRISD Conference News** was written by Mike Powell.

United Nations Research Institute
for Social Development (UNRISD)
Palais des Nations
1211 Geneva 10, Switzerland

Phone 41 (0)22 9173020
Fax 41 (0)22 9170650
info@unrisd.org
www.unrisd.org

Printed in Switzerland GE.05-03049-November 2005-2,000 UNRISD/CN15/05/1 ISSN 1020-8054