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Virtual Solutions to Real Problems

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INTRODUCTION

Corporate and government decision makers in the world's only superpower have not been influenced by media coverage of starving populations in developing countries, United Nations resolutions, academic publications, or homilies from pulpits, and fundraisers to feed starving children for a few pennies a day. The bombing of the World Trade Center in New York in 2001 does not seem to have directed their attention to the root causes of poverty, inequality and disparity, in spite of threats to national security and corporate economic expansion. The response of the United States and its allies has focused chiefly on destroying symptoms (the 'enemy' in Afghanistan, the Philippines, Iraq, Iran or Somalia; and anti-globalisation protests), rather than attending to possible causes such as the present acceleration of international investments by industrial and financial capital without democratic regulation to benefit citizens, workers and consumers.

The globalisation of US-owned news and entertainment television media has enabled the world's population (approximately half of whom live on less than two US dollars a day) to see life with running water, homes with heat, clinics with antibiotics and schools with teachers. The expectation that humans have a right to food, clothing, shelter and communication has been globalised; constrained by purchasing power, economic demand has not followed. The expectation that all humans should enjoy the benefits offered by democracy has also been globalised; royal families and military dictatorships continue, with government support in some cases. Clearly, globalisation has not gone far enough beyond a specific form of economic expansion proposed by investors and bankers.

William Melody has questioned the recommendations of major international institutions on telecom policy recommendations for developing countries. This contribution focuses on what communication researchers who follow can do in the light of the material needs of people in developing countries. The essay presents some of the human development problems, reviews what communication researchers focusing on developing countries have done, and raises questions about future possibilities.

THE REALITIES OF LIFE AND DEATH IN DEVELOPING COUNTRIES

The 2001 UNDP Human Development Report describes significant gains in education, health and income over the last 30 years alongside continuing (and in some cases, worsening) levels of deprivation. The Arab states have made the most progress in education, health and income, while South Asia and Sub-Saharan Africa lag behind other regions. Gender inequality continues in every region, although the extent varies considerably between countries. Most countries have far to go to extend economic and political opportunities for women. Absolute gaps in income have increased between the richest 29 countries of the world (members of the OECD) and the rest of the world. Inequality between the rich and poor is very high: the richest 25 million in the United States had a combined income greater than the 2 billion poorest people in the world.

Of the 4.6 billion people in developing countries, 1.8 million live in extreme poverty on less than a dollar a day. More than 850 million are illiterate. Nearly a billion lack access to improved water resources. Some 826 million people are hungry and undernourished. Another 113 million primary school age children do not attend school. Girls account for less than two-thirds of boys' enrolment in secondary school in many countries. Poor people in low income countries have been the initial victims of HIV/AIDS, the virus spreads from them to all education and income groups.

Goals for poverty eradication set for 2015 by the United Nations General Assembly address these areas. Can research on expediting information access or on particular formats and interfaces for information provision play some part in addressing these basic problems? Under what conditions? Have they done so before?

THE CONTRIBUTIONS OF COMMUNICATION RESEARCHERS

The study of Communication as a formal discipline with its own university departments started in the United States in the 1950s. An early focus on media production skills (broadcasting and print journalism) training was supplemented by teaching and research on the psychology of persuasion and attitude change. Journalism, political propaganda and social psychology combined to staff Cold War initiatives to win friends for the United States from among developing country nationals, who were also being wooed by the Soviets. This was followed by UNESCO and USAID initiatives to use media to promote national modernisation attempts and sectoral improvements in education for agriculture, health, nutrition and family planning. Prominent players included American universities and their grantees supported by USAID money: Stanford University, Michigan State University, Wisconsin (Madison) and Iowa.

Everett M. Rogers and Wilbur Schramm evaluated a decade of their own work on the use of media for modernisation and development support to particular sectors and found it wanting. Since the constant drip of media programmes into homes in the United States continues to be financed by advertisers, the programmes must be succeeding in attracting audiences for their advertising. As part of a larger well thought out marketing plan, advertising works well. Is there a well thought-out development plan that communication interventions support?

Whether there are any lessons from the overall planning of consumption promotion and the role assigned to advertising-supported entertainment for the administration and design of distinct consciousness-raising empowerment initiatives has not been investigated. With the decline in funds for international development in the Reagan era, graduate programmes in Communication and Development closed down in the United States. Some opened in the United Kingdom and in other parts of Western Europe. Promotional research on particular formats and approaches, for example, entertainment, education and soap operas, continues with foundation support for Rogers and his former students. The World Bank and specialised agencies of the United Nations (for example, WHO, UNICEF, UNESCO) use like-minded consultants on an ad-hoc basis. Without the prescriptive focus of high-level funders, scholars with a disinterested critical agenda have begun to ask societal questions about the role of the state, the power of transnational corporations, development-support versus public participation, post-development goals, empowerment and, most recently, liberation theology and spirituality.

In the mid-1970s, USAID funded demonstrations of the power of telecommunication technology to bring about pro-social outcomes in developing countries as satellites were being introduced. These projects focused on how to use satellite technology and when. The US National Aeronautics and Space Agency also involved American universities in designing and evaluating national and regional pilot projects on satellite use for development. Policy-related telecom research came into its own with the deregulatory turn in the United States and the United Kingdom in the early 1980s. Research on the telecom industry in developing countries has included institutional analyses of funding agencies, analyses of who benefits and who loses from privatisation and deregulation, and studies of access expansion attempts through new technologies, tussles over regulatory models and the connectivity impacts of the Internet, for example, networking in virtual communities of low-income activists.

A new area of content research on manipulating information to teach, entertain and persuade focuses on virtual reality tools. Basic and applied research is taking

place on immersion, interactivity and information intensity through wearable computers and networked simulators (of educational experiences such as surgery, aircraft flying and gaming among others). With foundation support, the MIT Media Lab has been working in Costa Rica to create an economically sustainable Internet connectivity solution. Computer networks are forging global communities, for example non-governmental organisations at the World Social Forum in Brazil protesting the present intensification of world trade and investment rules. The MIT Media Lab has also received initial funding from the Government of India to explore cutting-edge applications for developing country contexts and underserved populations in sectors such as commerce, agriculture, health care and education. The Indianisation of Linux is a possible agenda item. A thousand neighbouring villages are being connected to investigate whether viable markets exist for information services in rural areas. Stanford University and the Reuters Foundation are hosting research sabbaticals for digital entrepreneurs from developing countries.

Departments of Communication (frequently focused on journalism or mass communication, and, more recently, on information studies) have followed the United States curricula in Africa and in parts of Asia, based on where the faculty member did her scholarly preparation in the communication field. US-produced texts of the 1950s' vintage reprinted in low-cost Third World editions for developing country markets have been found in some countries. The most innovative work in indigenising conceptualisations of communication for the region has taken place in Latin America.

IS THIS THE BEST THAT WE CAN OFFER?

In the 1960s, educational and entertainment media were seen as tools for development. Their impacts were not significant, for a variety of reasons, only some of which have been identified, for example, the lack of pre-production formative research for programme development to parallel similar research used in the successful design of advertising, and the lack of a financing mechanism for programme development in an era of advertising-free broadcasting. In the 1970s, it was satellites: their present day applications for telephony, data communication and remote sensing are substantial. In 2002, access to stand-alone unconverted media continues to be woeful in low-income countries that are home to the majority of the world's population.

Whether virtual tools will find financing and applications of significance in resource-strapped developing countries and whether virtual design will be preceded by task analysis and formative research that were lacking in the design

of broadcast programmes remains to be seen. The focus on cutting-edge research on virtual reality in academic departments brings to mind the economic growth versus redistribution conflict in development economics. Could it be that what this world of inequitably distributed food, clothing, shelter and communication resources needs is down-to-earth organisation of interactive media access policies and content carriage models to balance the emphasis on economic growth-oriented content design?

Communication research that focuses on economic growth *alongside* communication research on public access and public distribution is essential. We need both growth research *and* distribution research. It is the slow distribution of antibiotics through an inadequate public health infrastructure that contributes to vulnerability to AIDS (through lack of treatment of genital ulcers) among the poorest regions of the world. Public access to the Internet is crucial through appropriate hardware. Appropriate software applications are also essential: stories are rife about villagers who come to tele-centres and ask operators to conduct searches to identify what jobs are available for unskilled illiterate agricultural labourers. Surely, this identifies a prior deficit in national job creation policy rather than only a deficit in database development with graphic user interfaces and touch screens for the illiterate.

CONCLUSION

Mansell and Wehn (1998) have written extensively about the challenges of moving developing countries into the information age. Developing indigenous solutions (for example, the low-cost Simputer designed in India) and then finding venture capital and production capital to get them to market is a major hurdle. The needs of the other half of the world's population do not constitute market demand: they have limited purchasing power. There is no incentive for private sector research and development to focus on how to meet their food, clothing, shelter and communication needs. Depictions of how ideas, goods and services diffuse when there is a middle-class marketplace (as in Everett Rogers' diffusion of innovation model) show that to those that have education, income and youth, more is given. How much research in international organisations, industrialised country universities and in developing countries is focused on developing models of distribution for those who live on less than \$2 a day?

As historical hurt and contemporary grievances about the inequitable distribution of food, clothing, health and communication resources are harnessed by different global or local supporters of marginalised nations (for instance, Palestinians), workers, outcaste groups (for instance, the Dalits in India), religious splinter

groups (such as fundamentalist Hindu, Christian and Islam), or women's and gay rights groups, where will high-income populations of the West find safety from hungry, angry mobs armed with weapons supplied by manufacturers of Cold War vintage? In 'gated compounds', fortresses with dungeons and dragons, and nuclear-safe bomb shelters the size of a sub-continent? The basic question for researchers who work on information and communication technologies in the public interest will be: what did we do to clearly identify and address the pre-digital social, economic and communication divides that will continue to ground digitally converged text, data, voice and video?