

“Are we building a better world with ICTs?: Empirically examining this question in the domain of public health in developing countries”

IFIP 9.4 Plenary Talk, Jamaica, May, 2013

Sundeep Sahay, University of Oslo, Norway/HISP India

Introduction

“Are we building a better world with ICTs” is a question which Geoff Walsham, Professor Emeritus Cambridge University, has posed to information systems researchers to engage with. In this talk, I try to engage with this question, a complex task, not with the view to try and find answers, but more to emphasize the importance of the question and to situate it within the context of our ongoing efforts to contribute to development efforts. I will also try to argue how this question is central to the theme of this conference of “Into the Future: Themes, insights and agendas for ICT4D research and practice.” I specifically draw upon empirical examples from the domain of public health which is my primary area of work to interrogate the question. I strongly believe this is a question we cannot ignore and need to engage with it. This talk is an effort in this direction.

Before going into the talk, I will like to acknowledge that in developing this lecture, I have drawn my inspiration from Brian Easlea, who died in 2012 aged 76. As an internationalist, teacher and avid bird watcher, he was an influential advocate for a better world. His academic background was in theoretical physics, having studied under the Nobel prizewinner Niels Bohr as a postgraduate and later teaching in his Institute for Theoretical Physics in Copenhagen. He joined the University of Sussex in 1964 to lecture in theoretical physics but his life was transformed visiting colleagues in Brazil. He saw serious social and economic inequalities, and also the military regime's brutal repression. As a theoretical physicist, he was also aware of the grave ethical and political concerns of eminent scientists such as Bohr and Albert Einstein, and was haunted by the idea of nuclear warfare. Brian retired in 1987, devoting his life to watching birds.

I start with discussing who the “we” is in the question, and why it is important for us to engage with.

We are not “value free social scientists”!!

I take the “we” in this question to represent this working group and other like-minded people who are concerned with “social implications of computers with developing countries.” Maybe then, and a little crudely possibly, we can say we are practicing social scientists interested in understanding how ICTs are contributing to development, and their social implications. We are also, at least some of us, trying to steer these development efforts in directions which we feel are directed towards creating a “better” world. These endeavors are by definition not value free exercises. As we analyze these issues around ICTs and development, we will also tend to suggest possible solutions. Accepting or not of a particular solution will differ with social scientists, depending on their respective values and norms. As Brian Easlea has argued (page 274):

Values and goals inform all significant social activity. Without values and without goals, human enterprises, if they can be conceived of starting at all, must inevitably peter out into a wasteland of trivialities. Champions of “value free” enterprises are deceiving themselves. Nowhere, of course, is self-deception greater than in the social sciences. Value free social sciences does not and cannot exist.

Given that we as practicing social scientists have our particular values and norms, we will subscribe to different form of solutions to social problems, which will imply different futures. Even the theme of this conference “Into the future.....”, is inviting us social scientists to engage with the challenge of trying to sketch out this future, and in this what issues and agendas take priority. Here the implication of a new approach or perspective to the future for the social scientist would be quite fundamentally different from that in physical sciences, where the implication would largely be about seeing the same physical object or reality in different ways. Seeing a physical object in one way or another will not change how that object behaves, only it modifies our understanding of this behavior. Social sciences will be qualitatively different, if for example, as social scientists trying to sketch out a future of ICTs and development through these conference proceedings, these may shape processes of research, funding and job markets. As Brian Easlea has argued (pages 153-154), the implications for social scientists are quite different:

For the social scientist, the choice between competing social paradigms is not merely one between different images of the existing social reality but, very explicitly, a choice between mutually exclusively future societies. ...The fundamental choice confronting social scientists is essentially that between commitment to programmes of “social engineering” within the established structures of power and control or commitment to programmes of revolutionary political action with the intention of building societies significantly less exploitative and manipulative than existing ones

Another important aspect of the social scientist’s endeavor is the act of publishing. The publication of a physical scientist will not for example alter the behavior of elementary particles. Even when a “pure” (as contrasted with “applied”) social scientist publishes research results about the functioning of society, this can lead to altering of social behavior, since the results will carry inscribed values and norms representing a form of desired social future. Thus the publication of research results represents a form of social intervention, and the distinction between pure and applied social science is not as clear as maybe it is in the physical sciences.

Social Scientists like Marx and Keynes had very particular research-action programmes which they pursued through their writings. Marx loathed capitalist society and looked for possible agents of change who could overthrow the class structure and create a different social order. Keynes, born in the year in which Marx died, committed himself to the preservation of that social order which Marx had striven to destroy. He singled out Marx’s Capital for direct attack:

How can I accept the doctrine which sets up as its bible, above and beyond criticism, an obsolete textbook which I know not only to be scientifically erroneous but without interest or application to the modern world? It is hard for an educated, decent,

intelligent son of Western Europe to find his ideals here, unless he has first suffered some strange and horrid conversion which has changed all his values. (page 155)

Marx and Keynes are of course social scientists whose writings have had extreme implications on shaping society. In more recent times, the writings of Amartya Sen has helped to conceptualize the measurement of development based on a human development index as contrasted with primarily an economic measurement of growth. These of course have other large implications, including relating to classifications of development and possible influences on the flows of development aid. In our information systems field, Professor Walsham's writings have significantly helped to introduce the interpretive research paradigm as a challenge to the positivist orthodoxy developed primarily through North American business schools. Today, an IS researcher can get away by just saying he/she is doing "interpretive research" and quote Walsham 1993. Even a decade ago, this was not possible. I remember literally having to leave my Phd proposal defense in tears in the US, where my arguments for a social constructivist approach was seen by my examining faculty as not being "science." These examples are drawn upon to emphasize how the writing of social scientists, with their underlying values and norms serve as social interventions to provide the goals of different social futures.

As a summary to this section, I have here argued: we are practicing social scientists, not value free, interested in the implications of ICT for development, and are responsible for shaping social interventions with our writings and other forms of engagement. Next, I turn to the question itself, and its possible reformulation.

Reformulating the question of a "better world"

The question of "are ICTs creating a better world" has certain implications. Firstly, there is the question of better, which we will turn to later. Secondly, it assumes possibly that the world can only get better, maybe blinding us to the possibility of examining how technological interventions may make things worse. And thirdly, there is a technological determinism implied in the relationship between ICTs and a better world. In other words, the question needs to be contextualized more carefully.

In this reformulation, I was inspired very much by Brian Easlea's book, whom I have already referred to in the previous section, titled "Liberation and the aims of Science: An essay on the obstacles to the building of a beautiful world." Easlea argues such a question cannot be argued without trying to understand the state of world affairs. Writing in 1973, he says:

How can it be that after more than three hundred years of scientific progress, while over one half of the human race still lacks the basic necessities of life, the advanced industrial nations continue to destroy the environment while consuming so wastefully the earth's finite natural resources?...Why is that of all people, scientists, those people supposedly committed to *rational* thought and action, who pride themselves on being members of an international community of scholars, either stand by powerless or even participate in actions that are – to say the least, the very least – in no way conducive to the building of a world in which people can cooperate together to ensure that each individual is able to live a full and creative human life? (Introduction page xiv)

Four decades later, I think these questions have become even more pertinent for us social scientists to examine. Having recently participated in the evaluation of the national HMIS (Health Management Information Systems) in an East African country, in a casual talk with another member of the team, he told me “We get aid for health from United States, and in return we send for them our army to Somalia and other places in the region....they have really contributed to really strengthening our health system.” At the least, as a social scientist with particular values and norms around military interventions and what means improvements in HMIS and health, I need to be conscious about the material basis for development, including what supports my own time there. At the end of my mission, I wrote my assessment which will reflect my values and norms. Simultaneously, I needed to be sensitive to what can be, in Easley’s words, the “obstacles” to achieving it.

Key to trying to answer this question is to contextualize it in its history, politics, institutions, and the material basis of the technology intervention. Often we casually drift over the question by saying the “context is complex” or “the socio-technical context”. I do believe this is grossly inadequate and often misleading, and in the development arena, the material basis for the effort must be deeply questioned. In the current development context, the previous dominance of the World Bank, IMF and other such agencies has been deeply reorganized by the new philanthropists such as Bill Gates and Warren Buffet, the Chinese who are now providing more aid to Africa than the entire development sector, and also the other BRIC countries getting more active in this arena. Driving around in Liberia and Ethiopia one cannot help to see the tremendous improvements the Chinese have bought into infrastructure of roads, buildings, tunnels and the like. But they bring in their own form of capitalism and work ethic into development work, which many may not appreciate. Similarly, the significant aid from the philanthropists to developing countries is of course with many different strings attached, including relating to the technological choices the country is forced to make.

I believe examining the context, and especially its material basis can help us understand what may be some of the “distortions” or “obstacles” to achieving a better world. A similar analogy can be drawn from the dream of the Habermasian ideal speech situation, which will always be ideal and never ever be realized. Once having participated in a United Nations expert group meeting on “transfer of GIS technology to developing countries” which contained participants from the West and also various African countries. After 3 days of deliberations, a “consensus” was said to have been achieved and an agreement signed. I found this disturbing as 90% of the 3 day discussions was dominated by the Western scientists, and the other African participants had had a minimum say. While this meeting would be seen, at the face of it, to represent an “ideal speech situation” with equal opportunities for all to represent their arguments and countering others in defining the strategy to transfer GIS technology to developing countries. However, of course in practice, this was not the case, and there were inherent power asymmetries in the relations between the participants. For example, the African participants would not be too free to object to their Western counterparts in fear of losing future such opportunities for travel, and because of the historical hierarchies and gender divides involved. There were thus inherent distortions involved in achieving this ideal situation, which are interesting and valuable for us to understand, and how to direct our efforts in trying to improve the situation. After having lived about 25 years out of my home country in the West, engaged primarily in ICT and development, I am coming to a realization, sadly I would add, that there are certain power

asymmetries that I will never be able to transcend. Similarly, the idea of ICTs creating a better world will always be subject to various obstacles and distortions arising from the historical and material conditions that shape the relation. Trying to understand the nature and source of these distortions, then arguably provides us with a relevant road map to help guide our quests in understanding how to make the world better with ICTs.

The reformulation I attempt then of the question is in the following way:

“What distortions and obstacles are created by the historical, material and institutional conditions, and how these shape our efforts of ICTs creating a better world?”

I believe such a reformulation can:

- a. Allows the possibility of “none” and also “adverse” implications of ICTs in addition to the possible positive ones in our efforts on creating a better world.
- b. Allows us to think of a “better world” as a form of a normative ideal we should strive for, while being sensitive to the fact historical and institutional obstacles will prevent this ideal to be reached.
- c. The contextualization of the question, especially with its emphasis on the material basis, helps to try and understand why these obstacles exist, and why they may be difficult to transcend.

Maybe, on this slightly pessimistic note of “why not better” instead of “how better”, I next discuss the implications of what “better” means for different groups, and also what drives the quest for better.

Multiplicity of meanings and implications of “better”

Drawing from history, I discuss three sets of examples of scientists, from physics and social sciences, striving towards a better world. Following this, inductively, I try to draw upon some implications for us working in the domain of ICT and development.

Physics and a better world

Physicists have historically sought to find more beautiful explanations of nature. Brian Easlea writes “...and of Physics it may well be said that the way to Truth lies through the realm of the beautiful....If indeed the aim of human beings is to build a beautiful world, one giving pleasure and creative joy to its inhabitants, then science must be an integral component of such a quest.....(quoting Schrodinger) the chief and lofty aim of science today, as in every age lies in the fact that it enhances the joy of living” (page 86).

We could think similarly about the role of ICTs, and question if it enhances the joy of living, giving pleasure and creative joy to its inhabitants? This would need us to look at the implications of technology then in a much broader perspective than of it improving efficiencies and saving time and money, or doing things faster, but in relation to broader development aims such as of empowerment, realizing potentials, strengthening our trust in systems, supporting environment, improving access and quality of health care and education, enhancing human dignity, and many such more. As social scientists then we have

a broader agenda of challenging the orthodoxy of technology implying efficiency, or of it being considered as the end rather than the means of development. Of course, we can never be certain whether our own research programme is the most fruitful possible. Again to quote Easlea, who argues:

Scientists should encourage “responsible” dissenters, men who for aesthetic reasons cannot accept the fundamental principles of the community’s paradigm but who recognize its achievements and wish to see them preserved in any future paradigm.

Easlea describes Einstein as one such heretic who demonstrated understanding of the current orthodoxy, acknowledged its achievements but yet chose to pursue a different research programme which was yet to prove its worth. Such knowledgeable dogmatism may do little harm in the world of Physics, at the worst getting the scientists to lead lonely and maybe unsuccessful lives. And Easlea further argues:

It is necessary to stress that without personal commitment based on physical intuition and aesthetic criteria, the nature of which cannot be objectively justified, Physics would come to a halt. If harmony lies in the eyes of the beholder this is not to be regretted – at least not in Physics. For the existence of different views on what constitutes harmony ensures that many alternative paths will be explored, each path hopefully leading to harmony.

Easlea describes a conversation between Einstein and Heisenberg:

Einstein: How can you really have so much faith in your theory, when so many crucial problems remain unsolved?

Heisenberg: If nature leads us to mathematical forms of great simplicity and beauty..that no one has previously encountered, we cannot help thinking that they are true, that they reveal a genuine feature of nature...You may object that by speaking of simplicity and beauty I am introducing aesthetic criteria of truth, and I am strongly attracted by the simplicity and beauty of mathematical schemes which nature presents us.

While Einstein found beauty and simplicity elsewhere from quantum physics, scientists like Dirac worked to develop a marriage between special theory of relativity and quantum physics. Easlea quotes Dirac to say

It is more important to have beauty in one’s equations than to have them fit experiment...It seems that if one is working from the point of view of getting beauty in one’s equations, and one really has a sound insight, one is on a sure line of progress. If there is not complete agreement between the results of one’s work and experiment, one should not allow oneself to too discouraged, because the discrepancy may well be due to minor features that are not properly taken into account and that will get cleared up with further developments of theory (page 85).

Social sciences and a better world

The domain of social sciences has seen various examples over the years of scientists pursuing alternative societies based on ethical evaluation and social goals. For example, John Stuart Mill differed with the orthodoxy of the view that industrial society had improved the lot of mankind. Mill believed “the greater part of population remained confined to the same life of drudgery and imprisonment.” His alternative future was built on two conditions of “just institutions” and population growth to be placed “under the deliberate guidance of judicious foresight” so that world population can be brought to a stationary state. He went on to argue that stationary material states will not imply stationary intellectual states, and on the contrary the former would be more conducive to develop a diversity of tastes and talents. Mills emphasized a multiform human development, and thus did not promote communism which he believed would make eccentricity not merely a matter of reproach but an impossibility. Progress for Mill did not imply greater material wealth but more free time for the cultivation of mental life and improving the art of living. He tried to find a middle path between capitalism and socialism promoting socialists to experiment on a moderate scale. Probably this thinking was an inspiration for the “third way” promoted by Anthony Giddens and Tony Blair in the UK.

In contrast to Mill, Marx and Engels looking at the same social reality came to very different conclusions. They believed capitalism would lead to a universal crisis, which should be welcomed as it would make possible the cultivation of a qualitatively different society, where people could enjoy the benefits of the industrial society based on their needs, but also achieve the intellectual and spiritual diversity which Mill desired. While Mill saw communist society as endangering human freedom, Marx and Engels saw the same as the only means to guarantee human dignity and freedom to all. They argued better payment for the slave would not either better for the worker their human status and their dignity. Not only would capitalism degrade the worker, it would not allow the capitalist to be a human being. Every new product or opportunity provides a new possibility of “mutual swindling and mutual plundering”. The capitalist was thus equally exploited as the worker. There were thus inherent contradictions in the capitalist mode of production which would automatically generate these social conditions which would lead to capitalism’s negation and replacement.

Political action of scientists and a better world

Historically, scientists have engaged in political action towards trying to create a better world. Galbraith wrote “the future of what is called modern society depends on how willingly and effectively the intellectual community in general, and the educational and scientific estate in particular, assume responsibilities for political action and leadership.” (page 290). In the 1960s Galbraith saw the scientific community rather than the international community, fuelled by their skepticism towards the cold war and the arms race to have played a key role in creating the partial test ban. Galbraith promoted the idea of investments in space exploration, by virtue of it being a “equal playing field” as creating the substitute for the arms race. He described promoting of space exploration then to be the most important task facing the educational and scientific estate. Metaphorically, “development and developing countries” may represent a similar level playing field like space, which could be making it an important domain of research for the Western scientific community.

Heilbroner, in contrast to Galbraith, saw America as a capitalist society with no possibility of immediate radical change. Like Marx, Heilbroner believed that capitalist society is producing their own grave diggers, and these were the scientists. While scientists create inexhaustible sources of invention and innovation to ensure economic growth, these conceal long term conflicts between science and capitalism. He argues that technology will create side effects which will require market control, and some people will need to get a share of the outputs through state control, which is an infringement of the market. Science and technology raises the standard of living to an extent where high salaries also do not attract people to more unpleasant jobs. As a result, those jobs will need to be done by people who are directed by the state to do so, another infringement of the market mechanisms. A key point thus made by Heilbroner is that capitalism cannot exist without science and technology. However, the profit motive will allow little scope to control the results of innovation, ultimately leading to market forces having to give way to public control. Heilbroner writes this profound message:

Thus if the dawn of the new age of science opens larger possibilities for mankind than it has enjoyed heretofore, it does not promise a society whose overriding aim will be the cultivation and enrichment of all human beings, in their diversity, complexity and profundity (293).

In the turbulent times of the arms race of the sixties, Heilbroner's warning that the rule of the scientific elite will not necessarily be liberating was one the dissenting young took to heart. There was during this period, fuelled by the Vietnam war, the cold war, and many such social events a huge momentum of scientists engaging in political and social action. Interestingly, an academic index was constructed by disciplines to measure faculty protestors to the American policy in Vietnam. Physics was the discipline with the highest index of 2.53, followed by Social Sciences with 2.51, and not surprisingly Business was the lowest at 0.10. In 1969, 49 academics of MIT protested publicly against American policy stating "through its actions in Vietnam our government has shaken our confidence in its ability to make wise and humane decisions.....to explore the feasibility of organizing scientists and engineers so that their desire for a more humane and civilized world can be translated to effective political action."

If we flash forward 3-4 decades, the world has experienced some frightening wars including in Afghanistan, Iraq and others. The war in Iraq, now publicly acknowledged, was one constructed on misinformation of Iraq holding weapons of mass destruction. The interesting aspect of this war arguably has been the deadly silence of the academic and scientific community against it. We also heard much fewer anti-war protest songs by icons like Bob Dylan and Joan Baez which characterized the sixties. Talking to friends of mine who were faculty members in American universities, they said they feared to raise a dissenting voice against the military action, as they may be ostracized within the "you are with us or against us" discourse of George Bush. There were many who would benefit in the scenario of, as so aptly described in an article in the Guardian by Arundathi Roy of "first bomb and then rebuild." Arguably, the academic and scientific voices were silenced by the political discourses which were deeply intertwined with forces of capitalism, nationalism and strong underlying tones of religion. Is this the grim reality we face today and the future about the lack of possibilities and spaces for political action by us scientists? I sincerely hope not, as it will take the joy and creative energy out of doing social science.

What means “better” for us social scientists working with ICT and Development?

I have deliberately taken a relatively long and historical examples from physics and social sciences on how they thought of a more “beautiful world” and the actions they took to try and achieve that. Reflecting on this helps to understand some potential implications for us social scientists working with ICT and development. The above discussion emphasizes certain conditions which can be seen to characterize a better world:

- a. The capacity to engage with and respect responsible dissent.
- b. A recognition of the alternative paths that exist towards harmony.
- c. The importance of simplicity, aesthetics and beauty.
- d. Engaging in political action around possible misuse of science and technology by politicians.

The first three implications discussed above resonates with Professor Walsham’s (2012) three key dimensions to interrogate the question of better world. The first is the ethical dimension, or reflecting on the “right” or the “wrong” in the use of ICTs to make a better world. The second concerns the critical dimension, reflecting issues of who benefits and who is missed out in the use of ICTs. The third dimension is that of methodology concerning the openness to pluralism and inter-disciplinarity. Professor Walsham did not emphasize the political dimension explicitly, which has been an element of engagement for the scientists and educationists of the past, which possibly may be something being lost in our contemporary society. The political dimension is something which pervades the development domain, and is something which cannot not be directly engaged with in the ICT for development debate .

Development agencies like the Bank have long been criticized for pursuing a one track agenda towards development – one which follows the path of modernization based on technology which seeks to replicate systems and structures of the developed world in the hope of trickle down effects to the poor countries. Critiques of such thinking, scholars such as Amartya Sen have contributed to some alternative models of development, such as through the use of the Human Development Index. Bhutan pursues the measurement of the “Human Happiness Index” as an indicator of their development status. Despite these, we can argue the primary approaches taken by international agencies to development, drawing also from my experiences in the health sector, involves the applications of technology. Slogans like “write software save lives”, or attempts to automate civil registration systems with mobile phones reflect our approach of trying to position technology as the silver bullet to development, or even worse *as development*.

In general, development initiatives provide a site for the engagement of man with nature, with technology often unsuccessfully being drawn upon to try and overpower nature. Satish Puri describes beautifully how problems of wasteland farming in rural India are more effectively addressed based on the understanding that village elders have about the lay of the land and where historically water bodies have existed. The attempts of scientists to deploy GIS technology based on complex models involving soil types, rainfalls, land gradients, cropping patterns and other such parameters, without taking into account local knowledge about nature, have tended to end in failures of technology efforts. History provides us with various examples of how communities in both developed and developing countries seek to respect nature, its aesthetics and simplicity, and acknowledge that there are some aspects of it which cannot be overpowered and controlled by technology. The failure of GM cropping leading to

the suicide by hundreds of farmers in Western India is an example of the failure of technology to overpower nature with disastrous consequences.

In summary, we infer some characteristics of being able to understand what better means in the context of ICT and Development. The first is as social scientists to be capable of *dissenting responsibly* and to be able to respect fellow scientists doing the same. Our sound insights and responsible dissent should help point us to *alternative* paths to harmony. The path to harmony is not fundamentally about technology overpowering nature, but those paths which respect *simplicity and aesthetics*. Finally, as social scientists we need to have the capability to engage in *political action* against conditions which we normatively believe to be unjust, unfair or to the detriment of human or societal condition. The intention to carry out such engagement and the capacity to do it effectively will undoubtedly be challenged by the distortions discussed in the previous sections, but only through engaging with it, we create something better. In identifying these characteristics of better, the aim is not to dismiss the potential of technology, but to emphasize that “technology is not development” and alternative paths exist to harmony, which must be found and cultivated.

After discussing broadly, some characteristics of a better world as relevant to ICTs and Development, I draw upon an empirical example from the public health sector in India to interrogate the question.

ICT and Health: An empirical example from India

Health is development, as Amartya Sen has argued, and thus represents an appropriate empirical arena to examine the arguments made so far. The 1993 World Development Report states: “Because good health increases the economic productivity of individuals and the economic growth rate of countries, investing in health is one means of accelerating development. More important, good health is a goal in itself” (World Bank, 1993). Strengthening health care provision through improving the information systems in developing countries is accordingly intrinsically linked with promoting development in general, and contributing to make a better world. The health sector in developing countries is full of paradoxes. On one hand, we can see heart wrenching situations, of for example pregnant mothers giving birth to children in the compound of a clinic because the doctor is not available, to patients not receiving their ARV drugs for treatment because they can’t afford it, or pregnant mothers having to carry their own kerosene to the clinic for the child birth as the clinic does not have power supply or the resources to run the generator. On the other hand, we have international donor agencies supporting ICT consultants at exorbitant rates to “parachute” in and out of a country, giving often redundant and non-usable advice, or spending huge amounts of money for buying expensive technologies, with little thought on their usefulness in context. An east African country undertook a large exercise of building about 2000 outreach centres, but more than 50% of them did not have water. There is obviously the question here of are we putting the resources and efforts in the “right” place and to address the right problems in order to “make the world better.”

I take the example of efforts in India to apply large scale technologies and infrastructure to implement a “Mother and Child Tracking System (MCTS)” application to track pregnant mothers and new born children over the life cycle of their interaction with the health system

to receive antenatal care and immunization services respectively. If these systems are used effectively, and can contribute to improving maternal and child health, they will indeed support the creating of a better world. A starting point in this initiative was the Health Minister's view of lack of trust in the data reported by the outreach nurses. He said:

“Why is it that despite high [Routine Immunization] coverage, we are failing to eradicate diseases like polio? We have to start double checking immunization numbers being [reported] to us by states ... Once vaccination data becomes name based rather than number based, we will be able to account for the exact number of children actually vaccinated”^[1]

^[1] The Times of India, 15 September 2009. “Azad doubts data on child vaccination <http://timesofindia.indiatimes.com/india/Azad-doubts-data-on-child-vaccination/articleshow/5011257.cms>

Arguably, a starting point for this initiative was the control and surveillance logic of assessing the correctness of the numbers, rather than the programme logic of maternal and child health. Two years down the road, I run the presentation of Mr. Rakesh Kanwar, ex-Mission Director, State of Himachal Pradesh in northern India, and his reflections on the usefulness of the MCTS system in the state. Following this presentation, I discuss critically the specific relation of IT, Development and Better World as can be inferred from the example. Then brief conclusions from the talk are presented.

PRESENTATION BY RAKESH KANWAR

Reflecting on this example:

The aim of the MCTS is to track every pregnant woman from the time she is registered for Antenatal Care (ANC) to the time she delivers and then the post natal check-up. Similarly, the system is expected to track every child from the event of birth to the delivery of all required vaccination doses leading to the child to become fully immunized. The idea of tracking a pregnant mother or a new born child over the whole life cycle of the service delivery from the health system was to help the system be able to identify early high risk cases, deal with drop outs, and ensure adherence to service schedules. There was also the aim of the system to try and address the perceived “problem” of the nurses giving inflated numbers. The belief was if the system was changed from numbers to names, the ANMs (Auxiliary Nurse Midwife – the outreach nurse) out of fear of visibility would start to report correct numbers. This system of tracking was historically done through manual registers maintained by the ANMs in her facility. The MCTS was supposed to automate and even maybe in the future replace these registers.

This led to the process of a huge computerization effort, involving computers, servers, mobile phones and related infrastructures, and training efforts. Little effort spent on understanding the intricacies of care, as the system of tracking is indeed very complex and requires an intimate understanding of the work practices, including exceptions to the service schedule. For example, how does the system deal with the case of a woman who comes to register herself for her antenatal services in the third trimester? Does she get treated as ANC 1 or

ANC 3? There were various other intricacies involved, and in a top-down and non-participatory development methodology followed, these were often not well understood. There were various logistics issues to be dealt with, for example, the CHW gives the service in the field, records that in her diary, takes it into the register, and then how should this information be made available to the computer operator located at the sub-district level, often even 100 Kms away? The system had a different logic of reporting, as compared to the regular HIS, which was monthly-based. The logic of MCTS was case based, which could span different monthly reporting periods. Very high investments were required to develop the software, set up infrastructure. As data entry started, the existing servers started to slow down with the load, and new servers were bought for each state.

In these huge technology based investments, the ANM was completely ignored. The information which she already had in her registers, was transformed into digital form using a complex and expensive paraphernalia, sent up to the national level, and finally this information was returned to the ANM, almost always too late for her to take any action based on that. In all this effort, limited attention was given on how the ANM work could be improved for example by giving her new registers, enhancing her travelling allowance, or by strengthening supervision – all relatively low cost methods involving no technology. The point is of not arguing against technology, but about how the ANM's work and here capacities tend to be ignored, also to the detriment of the technology initiative.

Some of the features of this initiative include:

1. The driving motive is of surveillance and control of the health worker.
2. The public health programme logic of how name based tracking can support maternal and child health was largely lacking.
3. India still continues to have the most depressing public health indicators for maternal and child health. Ironic for a country boasting about its economic growth, and striving to become a “developed country.”
4. A huge expensive technological paraphernalia is applied to automate a process, which largely runs effectively based on a paper based reporting system of registers.
5. The working condition of the health workers, on the cutting edge of providing care, is largely ignored in these reform efforts.
6. Limited benefits achieved, and to the contrary it undermines the other ongoing efforts to strengthen the HMIS.

From my perspective as a social scientist, who has been working with ICT and Health, in Himachal and other states in India for more than a decade, this MCTS application is not contributing to creating a better world – it has not helped to improve the lot of the health workers and their working conditions, and neither has it contributed to improving the health indicators. It has come at a high cost and effort, resources which could have, in my view, been more effectively utilized elsewhere.

What would be my conceptualization of a better world in this example:

1. Improvement in working condition of health worker, reducing her work burden.

2. Giving her better, more reliable and timely information to be able to identify early high risk pregnancies, malnourished children, and other such conditions, so she could refer them to higher facility for treatment.
3. For health worker to see examples of how her actions have helped to bring improvements in the health of individuals
4. A more cost-effective and sustainable technological solution

What do I see as some of the distortions to the creation of my vision of a better world?

1. A vision from the top of a control and surveillance logic.
2. The increasing dominance of the mobile phone, being seen as the panacea for solving all kinds of public health problems.
3. Global alliances promote the emphasis on the mobile phone.
4. A technology provider who sees “more sophisticated solutions” to be better solutions.
5. Very limited focus placed on understanding the world of work of the health worker.
6. Many commercial interests behind the technological choices made.
7. The absence of data protection laws for ordinary citizens, which allows government to store for example pregnancy details of a woman on a national server, without her consent. Even worse, allow for the details to be given to an outsourcing agency who will phone and ask the money and provider, questions on service delivery – as a part of the control and surveillance logic.

As a non-value free social scientist, interested in shaping this better world, what are the choices open to me?

1. Wait and watch – the initiative may collapse under its own weight.
2. Engage in creating more “subversive” and “under the radar” solutions, building alliances with some states who are willing to challenge the centre diktat. For example, creating other local solutions, that can interact and interoperate with the national systems.
3. Write about the experience, talk about it, like in this public forum, and publish in relevant outlets.

Conclusions: ICTs, Development and a Better World

The example I chose is of course biased, as I wanted to emphasize certain form of distortions we are typically engaging with in the health and development areas. There are of course various contrary examples, which have had positive implications. The aim of this talk was not so much to argue one way or the other of the implications of technologies, but instead to emphasize:

1. We have a vision for ourselves of a better world.
2. While we are engaged in understanding through research and action the relation between ICT and development efforts, we are consciously aware of the distortions, especially coming from the material basis of the relationships, to the creation of this better world.

3. Through our publications and other forms of engagement, we try to engage with trying to address these distortions, given our capacities and constraints.

On the question of “by whose criteria we chose better?” it is appropriate, being in Jamaica, to close this talk with a quote from Frantz Fanon, a radical and powerful social scientist from Martinique, in the Caribbean:

“So, my brothers, how is it that we do not understand that we have better things to do than to follow that same Europe?.. Come, then, comrades, the European game has finally ended; we must find something different. We today can do everything, so long as we do not imitate Europe, so long as we are not obsessed by the desire to catch up with Europe.Yet it is very true that we need a model, and that we want blueprints and examples. For many among us the European model is the most inspiring. We have therefore seen in the preceding pages to what mortifying set-backs such an imitation has led us. European achievements, European techniques and the European style ought no longer to tempt us and to throw us off our balance....Let us decide not to imitate Europe; let us combine our muscles and our brains in a new direction. Let us try to create the whole man, whom Europe has been incapable of bringing to triumphant birth.” (from Conclusions, Wretched of the Earth)

Acknowledgements:

Geoff Walsham who set up the question around which this talk is based

Bob Jolliffe who introduced me to the texts which have been the inspiration of this talk

HISP India the site for my empirical engagement for more than a decade

