Information and Communication Technologies and e-Participation for the Empowerment of People and e-Governance

Concept paper by John Mathiason[1]

Empowerment

"Promoting empowerment of people in achieving poverty eradication, social integration and full employment and decent work for all" was decided by the Economic and Social Council in its resolution 2012/7 as the priority theme for the Commission for Social Development in 2013-2014. While empowerment has been a concern of the Commission since its establishment in 1947, the context in which it takes place has changed dramatically in the Twenty-first Century, at least in part because of advancements in information and communication technology.

For this reason, and taking advantage of the fact that the subject of the 2013 Annual Ministerial Review of the Council is "Science, technology and innovation -- as well as culture -- for sustainable development," the United Nations has organized an expert group meeting on Information and Communication Technologies and e-Participation for the Empowerment of People and e-Governance in Geneva from 23-24 July 2013. The results of this expert group meeting will inform the discussions at the Commission at its 52nd session in February 2014. This concept paper seeks to put the issues into context.

Priority theme background

As the concept paper for the 2012 Expert Group meeting on Promoting people's empowerment in achieving poverty eradication, social integration and productive and decent work for all pointed out:[2]

> "Empowerment and participation are old subjects in social development. Initially, the term empowerment was used less than participation, which, as will be shown, is how empowerment is measured. In the 1960's there was a concern with participation in the context of how to construct democratic cultures and achieve social mobilization."

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[2] Mathiason, John, (2012) "The imperatives of empowerment and participation," Concept Note for the Expert Group Meeting on the Priority Theme of the Commission for Social Development 2013-2014, September 2012.

The expert group examined the concept and made conclusions and recommendations that were presented to the Commission in 2013 in a report by the Secretary-General[3] which among other things noted that:

> 60. Good governance is of critical importance to poverty reduction and social integration, and empowerment reinforces good governance. Good governance is participatory, geared towards consensus-building, accountable, transparent, responsive, efficient, equitable and inclusive. Rule of law reforms are critical and should be responsive to the present and future needs of society. To empower individuals and local communities, it has become increasingly imperative to improve governance at all levels. Greater attention should focus on developing or improving mechanisms that increase citizen access to information, enable inclusion and participation, strengthen the accountability of Governments to citizens and invest in local organizational capacity.

The Commission's initial discussion of empowerment was reflected in the Commission Chair's summary. She stated:

> "Empowerment is a process with different components. Empowerment requires an enabling environment that supports policies and an attitude change to permit all people of all abilities across the lifecycle to participate in decision-making processes that affect their lives. Meaningful participation is one of the most observable aspects of empowerment. In fact, the process is interactive and mutually reinforcing: through active participation, people affect the achievement of objectives, and the achievement of objectives reinforces empowerment."

ICTs are a tool that helps to create an enabling environment. This was a point made in the Secretary-General's report and was a focus of discussion at the Commission. As the Chair's summary stated:

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>
> …

[3] Promoting people's empowerment in achieving poverty eradication, social integration and productive and decent work for all, (2012) Report of the Secretary-General, E/CN.5/2013/3, 28 November 2012.

> Information and communication technologies (ICTs) contribute to multiple dimensions of empowerment. Public policies on information and communication technologies should foster wider use of ICTs

The Definition of Empowerment and issues of how to achieve it

Empowerment was defined by the 2012 Expert Group meeting as "… effective participation by members of society, as individuals and groups, in decisions about their lives, that is conditioned by a supportive enabling environment, and leads to the solution of economic and social problems confronting them."[4]

This means that there are several dimensions in looking at empowerment. The first is the characteristics of the enabling environment. The 2012 Expert Group meeting noted that these included … having rights, the policies and practical arrangements to enjoy them, a favourable institutional environment and attitudes and behaviours that make participation effective." Specifically, it referred to key human rights including freedom of expression, as well as good, responsive and transparent government institutions, policies that encourage organized participation and organizations of citizens as well as a sense of personal empowerment, or political efficacy.

The Expert Group also observed that

> The increase in information availability through information and communication technology (ICTs), especially the Internet and new applications using it like social media, has made participation much easier, if sometimes problematic. The group noted many cases where the availability of information has made participation effective, but it also noted negative cases.

A major focus of the discussion at the 52nd session of the Commission will be on how to achieve this empowerment, especially by affecting these key factors in the enabling environment.

Role of ICTS in the enabling environment

Much of what is known about empowerment has been known for decades, if not longer. In 1975 the United Nations issued a sales publication on Popular

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[4] Department for Economic and Social Affairs, Division for Social Policy and Development, (2012) "Report of the Expert Group Meeting on "Promoting People's Empowerment in Achieving Poverty Eradication, Social Integration and Decent Work for All", 10-12 September 2012, p. 5.

Participation in Decision-Making for Development that summarized favorable conditions thusly:[5]

> Essential to such a strategy [for increasing popular participation] is a sincere commitment by national political leaders to promote popular participation. This means not merely a verbal commitment but rather a willingness to create the necessary institutional structure and other political conditions that make popular participation possible.
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> Chief among the institutional requirements for successful popular participation is decentralization of governmental institutions so as to bring public decision-making processes as close as possible to the people. To ensure that the public is informed about major issues and that the government is responsive to their preferences, it is necessary to create an effective communications system between the government and the people. There is also a need to establish representative institutions at the village and intermediate levels around which citizen participation can be organized. Whatever form this institutional structure may take, its effectiveness will ultimately depend on the public's perception of how efficiently and effectively it can resolve their problems.
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> A strategy of popular participation should pay careful attention to the way people are initially motivated for active participation in development. Not uncommonly, governments attempt to mobilize people through promises of immediate benefits. When these are slow in forthcoming, there is danger of a psychological let-down which could give way to public apathy or violence. There is a need, therefore, to offer the people realistic incentives for participation; emphasis should be placed on the benefits to be derived from the realization of medium- and long-term goals rather than on immediate gains that are unobtainable. To encourage the population at large to accept deferment of present benefits for even greater future gains, governments should reveal their goals and the methods they expect to use in achieving them and also indicate the burdens that the various groups in society can be expected to shoulder.

When that study was completed, communication institutions referred to such things as writing letters, newspapers, radios and physical participation in meetings. The communication revolution that characterizes the 21st Century was in the future. The study stated: [6]

> In sum, given their present limitations, individualized forms of transmitting public opinion play an auxiliary role in the achievement of popular

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[5] United Nations, Department of Economic and Social Affairs, (1975) *Popular Participation in Decision-making for Development*, United Nations sales no. E. 75.IV.10, p. 62.

[6] *Ibid*., p. 50.

> participation. In the future, applications of new communication technology may permit, in the most developed countries, individualized interaction between citizens and decision makers at all levels. For example, studies are under way on the utilization of such communication media as conference telephone calls, cable television with feedback, and normal television with telephone interaction, which would permit remote interaction among people at various levels. However, present costs are too high to make application of these media feasible and the earliest predicted date for even experimental implementation is 1985.

In the almost 40 years since that study was published, communication has changed with a speed that could not have been anticipated. Wireless telephony has removed many of the barriers to the use of the telephone. Television transmitted over cables and satellites has increased the amount and coverage of that medium. But most importantly, the Internet has been created.

The Internet dates from the adoption of the Transmission Control Protocol/Internet Protocol (TCP/IP) that was put into operation in 1983.[7] This permitted transfers of information by packet-switching rather than dedicated telephone lines. The development of the World-Wide Web, led by Sir Tim Berners-Lee, which was released to the public on 6 August 1991 was a key step. Over the next twenty years, the Internet has moved from a primarily academic and technical set of users to a much broader use.[8] Use of the Internet has grown dramatically in proportion to the population, from about 5% in 2000 to 33% in 2011 in developed countries, and from almost none to 24% in developing countries (although the proportion in least developed countries, 6%, is lower). A Study by UNCTAD states that "available data suggest a significant growth in broadband penetration generally, over the past decade, and a rapid increase in mobile broadband in particular since 2007.3 The combined aggregate penetration levels are now above 25 per cent of the world's population." [9]

In addition, the speed of transmission has increased, as broadband connections have been established through installation of fiber optic cables, called pipes, that link servers throughout the world. This has allowed the development of new services that can be used to communicate among persons connected to the Internet including through social media like Twitter or Facebook.[10] It has permitted the storage and access of large volumes of data that were previously difficult for the public to obtain and use. This wealth of data can itself be a problem, but is clearly transforming

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[7] Internet Society, *Brief History of the Internet*.
[8] For a study of the early development of the Internet, also see John Mathiason, (2008) *Internet Governance: the New Frontier of Global Institutions*, Routledge.
[9] Secretary-General of the United Nations, (2013) Internet broadband for an inclusive digital society, (E/CN.16/2013/3), 25 March. Figure 1 and para.11.
[10] See, for example, Carol Huang, (2011) "Facebook and Twitter key to Arab Spring uprisings: report," *The National*, 6 June 2011.

many economic and political processes, as noted by Mayer-Schonberger and Cukier's study *Big Data*.[11] The Internet has also begun to change the face of education, especially at the university level including innovations such as Massive Open On-line Courses (MOOCs) that are being offered by major universities in the United States. It has also permitted creation of on-line training programmes that are both asynchronic and synchronic.

Wireless telephony has permitted the creation of "smart" phones that can, among other things, take videos and pictures and transmit them. This has made it possible for political events, such as demonstrations or violence, to be quickly transmitted world-wide and be used immediately. It has also permitted the use of these technologies as part of business. Most of this has happened within the past five years, and the process of innovation has been increasing in speed.

While the pace of technological innovation has produced many changes, some things have not changed and it is these that need to be examined next.

Access

The first issue is access to the Internet. While access has been growing, the statistics presented by UNCTAD in the above-mentioned Secretary-General's report on Internet broadband still show that there are significant differences between types of countries. The UNCTAD study also shows that within countries there are significant differences between rural and urban populations, reflecting the differences in infrastructure development. ICTs can only affect participation if they are available. Typically forces of the market have governed access, where a profit motive determines whether the necessary investments will be made in ICTs. Existence of ICTs affect whether there is access to the Internet. Where investment is by governments, political factors have to be taken into account and that means that urban areas are more likely to obtain Internet connections than rural areas.

Whether people have access to broadband connections is a particularly important dimension. The size of bandwidth in the connection affects both the speed with which information can be up- and downloaded, as well as the quantity that can be transmitted. Broadband communication is a relative term, but it generally means telecommunication system that can transmit data very quickly. Broadband refers to a communication bandwidth of at least 256 kbit/s. The amount of broadband is determined by a number of factors including server and line capacity. Wireless connections (wi-fi) typically have less bandwidth than cable or fiber optical connections. To an extent, broadband availability in developing countries is determined by market concerns as well as public investment priorities.

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[11] Mayer-Schonberger, Viktor and Kenneth Cukier, (2013) *Big Data: A Revolution That Will Transform How We Live, Work, and Think,* Houghton Mifflin Harcourt, 2013.

A 2010 World Bank study[12] noted that there were over 1 billion broadband subscribers world-wide, although this was highly variable among countries (Table 1.1). This is shown also in Figure 1, drawn from the International Telecommunications Union (ITU)'s 2011 statistics.

As important, or more, is access to mobile communications technology. As a World Bank study of its use for agriculture and rural development, points out[13]

> Mobile communications technology has become the world's most common way of transmitting voice, data, and services, and no technology has ever spread faster. At the end of 2011 there were almost 6 billion cellular telephone subscriptions worldwide, and the number is expected to reach 8 million by 2016 (Figure 1.1).
>
> The mobile phenomenon is especially important for developing countries because that is where it is growing fastest, and in the next few years nearly all new mobile customers will come from developing countries because penetration has reached saturation levels in developed countries. Mobile phone technology has also been key to leapfrogging fixed-line Internet in developing countries and providing mobile broadband to a growing share of people.

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[12] Kim, Yonsoo, Tim Kelly and Siddhartha Raja, (2010) *Building Broadband: Strategies and Policies for the Developing World*, World Bank publication,. See also, World Bank, (2012) *ICT for Greater Development Impact: World Bank Group Strategy for Information and Communication Technology, 2012-2015*.

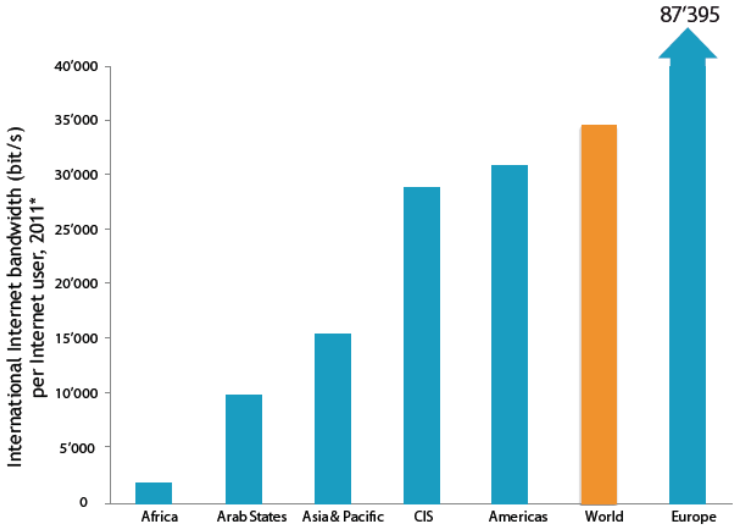
[13] Qiang , Christine Zhenwei, Siou Chew Kuek, Andrew Dymond and Steve Esselaar, (2012) *Mobile Applications for Agriculture and Rural Development*, World Bank, ICT Sector Unit, May 2012.

Table 1.1 Global Broadband Subscriptions: Wireline and Wireless, September 2009

Region	Broadband subscribers (million)	Market penetration (per 100 inhabitants)
East Asia and Pacific	381.4	17.8
Eastern Europe and Central Asia	49.2	12.4
European Union	294.1	60.5
Latin America and the Caribbean	52.4	9.2
Middle East and North Africa	27.8	7.6
North America	210.9	62.5
South Asia	9.1	0.6
Sub-Saharan Africa	15.6	1.9
World	1,040.5	15.6

Sources: World Bank analysis based on data from TeleGeography's GlobalComms database and from the Wireless Intelligence database.
Note: Table covers subscribers using fiber-optic, DSL (digital subscriber line), cable television, CDMA2000 (Code Division Multiple Access 2000) 1xEV-DO (Evolution Data Optimized), CDMA2000 1xEV-DO Rev. A, W-CDMA (Wideband Code Division Multiple Access), W-CDMA HSPA (high-speed packet access), WiMAX (worldwide interoperability for microwave access), and TD-SCDMA (Time Division–Synchronous Code Division Multiple Access) networks. The sum of subscribers includes multiple subscriptions by a single user.

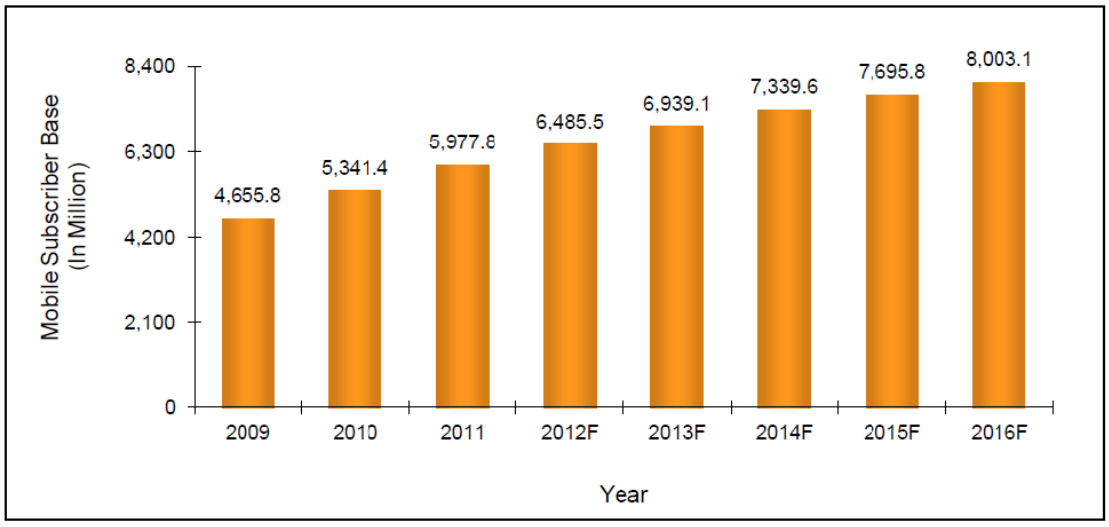
Figure 1. Regional Disparities in available Internet Bandwidth per Internet user, 2011



Note: * Estimate
Source: ITU World Telecommunication/ICT Indicators database

The study, however, notes that there are constraints, particularly because standard mobile phones far outnumber the smartphone, although the pattern is similar for both developed and developing countries as the study's figure 1.2 shows.

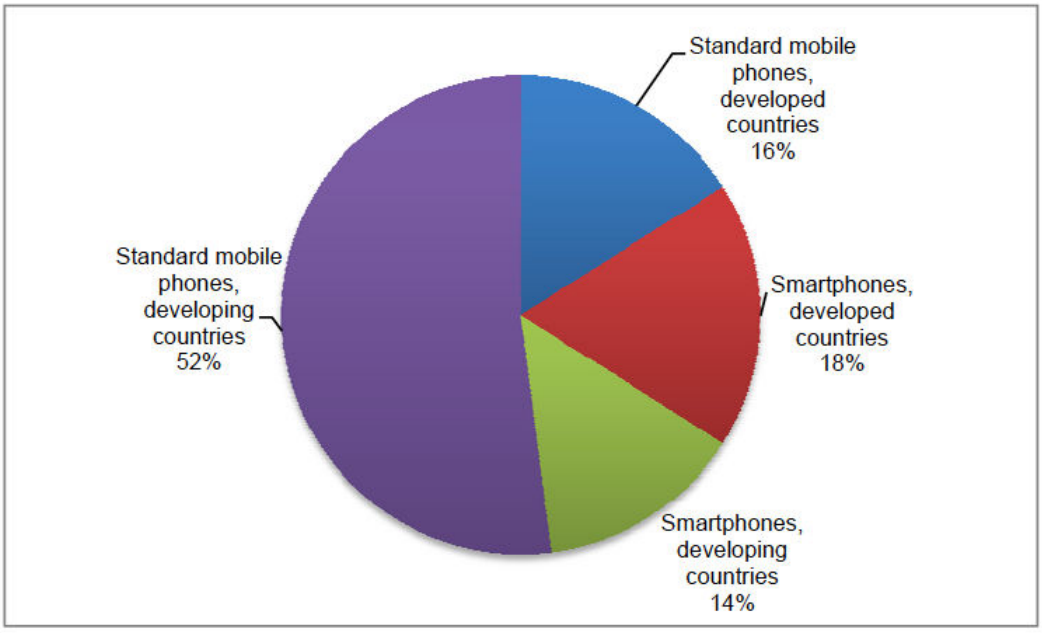
Figure 1.1: Global Mobile Subscriber Base (In Million, 2009-16)



Source: Portio Research 2012.
Note: Data for 2012-16 are projected.

Figure 1.2: Forecast of Global Mobile Phone Use by Type, 2015

Millions of units



Source: Strategy Analytics 2010.

Neutrality and openness

A second issue of ICTs has to do with the governance rules of the Internet, specifically whether the connections available over the Internet are neutral and open. The Internet has emerged by custom and there is no international agreement about the rules on the basis of which it is governed. The main place where these issues are being discussed is the Internet Governance Forum, in which a number of issues have been raised. Two are particularly important to keeping the Internet free and effective: net neutrality and openness.

The first is what is called "net neutrality". One website, Free Press, that advocates for the concept say that "Net Neutrality means that Internet service providers may not discriminate between different kinds of content and applications online. It guarantees a level playing field for all Web sites and Internet technologies." The issue is whether private sector owners of the pipes over which communications flow can charge users differently for content that they favor. It is a matter of public policy whether the owners of Internet distribution mechanisms can differentiate among content providers. This is also related, however, to the extent that Internet service providers are also responsible for the content that flows over their channels.

The second is more important: openness. In the Internet Governance Forum, this is seen in the context of both human rights and security, which are the two aspects in

which openness is discussed. In a book on the results of the 2011 IGF meeting in Nairobi, the issue was stated in this way:[14]

> We live today in an age of 'information egalitarianism' which in many areas of the world is helping level the playing field between the 'have and have not's'. The Internet clearly is giving individuals and States unprecedented opportunities. The economic growth, employment creation, advances in education and health and scientific developments that the Internet cross-border communication and information exchange are producing is staggering. It is clear that we need to sustain the openness and 'public-space' nature of the Internet that has allowed for this progress to take place. This opportunity and new power; however, requires a shared responsibility, a responsibility that all Internet users must take on to ensure that an open Internet is equally safe, secure and private and takes into consideration basic human rights.

The contest is between ensuring that information can flow seamlessly over the Internet, not subject to public control, and ensuring that the Internet does not become a place where national and personal security can be compromised, either by governments or by private groups. This is generally guaranteed by Articles 19 and 20 of the Universal Declaration on Human Rights. The security exception is found in the International Covenant on Civil and Political Rights, Article 4, which reads:

> 1 . In time of public emergency which threatens the life of the nation and the existence of which is officially proclaimed, the States Parties to the present Covenant may take measures derogating from their obligations under the present Covenant to the extent strictly required by the exigencies of the situation, provided that such measures are not inconsistent with their other obligations under international law and do not involve discrimination solely on the ground of race, colour, sex, language, religion or social origin.

It is further reflected in the Covenant's Article 19 that establishes the right for freedom of expression, but with the following caveats:

> 3. The exercise of the rights provided for in paragraph 2 of this article carries with it special duties and responsibilities. It may therefore be subject to certain restrictions, but these shall only be such as are provided by law and are necessary:
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> (a) For respect of the rights or reputations of others;
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> (b) For the protection of national security or of public order (ordre public), or of public health or morals.

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[14] Internet Governance Forum, (2011) *Internet as a catalyst for change: access, development, freedoms and innovation*, Brian Gutterman (ed), Sixth Meeting of the Internet Governance Forum, Nairobi, Kenya, 27-30 September 2011.

How these caveats should work out in terms of the Internet is still being considered, given the current openness and borderless nature of the medium, although there is a consensus on at least one issue, child pornography, which is prohibited under all circumstances by international conventions.

Content and new technologies

The issues raised by openness also carry over to the use of ICTs to provide information. The types of information that should be available, how to access them through such innovations as search engines, how to prevent their misuse by criminals (or a repressive State), and what is needed for people to use them effectively are current issues. They are connected with the development of new technologies which can either ease use or open up individual data for misuse. There have been studies of this tension, including those in a recent special issue of International Studies Review.[15]

The overall view, for now, is that the potential for use outweighs the danger of misuse, although this possibility needs to be kept always in mind.

Conditions for use of ICTS as an instrument of empowerment

Given the availability of the Internet's new technologies like social media and linked Data and mobile telephony as a new source of information and communication, the next question is whether it really improves empowerment and if so, what policies, programmes, investments and support are needed to make its use effective. If usefulness can be demonstrated, support for these enabling elements can be generated. In practice, entrepreneurs and people themselves orgainize in social networks using the existing technologies and, in turn, the demand gives a boost to developing new technologies.

Does access automatically lead to empowerment?

The evidence about whether access to the Internet leads to increased political participation is very mixed, although social interaction is clearly increased. A review of the literature in 2009 regarding whether Internet use affected off-line participation concluded:[16]

> We also find opposing views on the question of whether Internet use affects offline participation. Is there a significant effect of Internet use on offline participation controlling for other relevant variables? Does Internet use lead to a change in the levels of offline participation? If so, is the change positive

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[15] See, for example, Mueller, Milton, Andreas Schmidt and Brenden Kuerbis, (2013) "Internet Security and Networked Governance in International Relations," *International Studies Review* (2013) 15, 86-104.

[16] Anduiza ,Eva, Marta Cantijoch and Aina Gallego, (2009) "Political Participation and the Internet," *Information, Communication and Society*, 12 (6), pp. 872-873.

> or negative? Does Internet use disproportionately foster involvement in specific non-conventional activities? Does the Internet provide better information for participation purposes? Early debates offered contradictory theoretical expectations. Empirical research is beginning to offer some specific answers to these questions, but at this point it is premature to state that there is agreement on the conclusions.

A more recent (2012) study, based on an analysis of a late 2008 survey in the United States concluded that while there was a relationship between on-line political communication and on-line political participation, the relationship was not linear or strong and suggested that more research would be needed to determine causal effects.[17] The authors of both studies point out, however, that there is little real research that has been done that has taken into account the rapid technological changes noted earlier.

In the current state of debate, there are different perspectives, drawing from a relatively small number of studies, although even in these the role of the Internet in participation in decision-making, the central element in empowerment, is not clear. A very recent (2013) study by Fung, Gilman and Shkabatur proposed six alternative models for explaining the connection between Internet use and political participation. In doing so, however, they note that whether the scholar involved focuses on the technology or on the politics makes a difference:[18]

> … scholars who live on "technology street" tend to be optimists about the transformative possibilities of ICTs for democracy. Those living on "political science street" tend to be quite skeptical because they think technology optimists are inattentive to the mainsprings of politics: interests and institutions. As a result, the two sides talk past one another.

Three of the models focus on the use made of the Internet by organizations as a tool for mobilization. They conclude:[19]

> The result of the above analysis is that the most heady and revolutionary expectations for the transformative role of digital technology— an egalitarian and empowered public sphere, the displacement of traditional organizations by Internet-facilitated self-help through self-organization, and direct digital democracy— will be relatively uncommon (but not completely absent). We think that three more incremental contributions of ICTs to democratic governance— truth-based advocacy, constituent mobilization, and social monitoring— will become increasingly impactful because these

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[17] Hoffman, Lindsay H. (2012): Participation or Communication? An Explication of Political Activity in the Internet Age, *Journal of Information Technology & Politics*, 9:3, 217-233

[18] Fung, Archon, Hollie Russon Gilman and Jennifer Shkabatur, (2013) "Six Models for the Internet + Politics," *International Studies Review*, p. 31.

[19] *Ibid*. pp. 44-45.

> uses of digital technologies amplify the efforts of organizations and individuals to achieve the aims that they already have. That is, the last three models are compatible with existing incentives and institutional constraints.

This corresponds to an old finding in an early study of rural participation that the roles of mass media and education had a complex influence on creating a sense of political efficacy (the belief that the individual could affect government decisions) among Venezuelan peasants. Instead, it was participation in peasant unions that provided farmers with the skills necessary to be politically effective. The study, based on a number of surveys, was done in 1968, long before the Internet.[20] Two key independent variables were frequency of reading newspapers and frequency of listening to the radio, which were the mass communication channels of that time in Venezuela. The communication variables were secondary, in that their effect was through participation in the peasant unions. Persons in the peasant unions who had higher levels of media use, were more likely to be active participants and accordingly more efficacious. Media exposure was more determinative in another variable studied, national orientation or patriotism, where union participation was not related.

Fast forwarding forty-five years to the present, studies of major mass mobilizations like the Arab Spring in 2011 have begun to show similar results for ICTs in terms of participation. Hussain and Howard, in an analysis of the events, suggest that ICTs were critical in two of the countries, Tunisia and Egypt that "had the most tech-savvy civil society and large Internet-using populations in the region." The authors describe the process thusly:[21]

> Both cases exemplified a pattern that can be seen, with different degrees of strength, across the region: a preparation phase, involving activists' use of digital media across time to build solidarity networks and identification of collective identities and goals; an ignition phase, involving symbolically powerful moments which ruling elites and regimes intentionally or lazily ignored, but which galvanized the public; a protest phase, where, by employing offline networks and digital technologies, small groups strategically organized on large numbers; an international buy-in phase, where digital media networks extended the range of local coverage to international broadcast networks; a climax phase, where the regime maneuvered strategically or carelessly to appease public discontent through welfare packages or harsh repressive actions; and finally, a follow-on information warfare phase, where various actors, state-based and from

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[20] Mathiason, John, (1968) *The Political Mobilization of the Venezuelan* Campesino, Dissertation submitted in partial fulfillment of the degree of Doctor of Philosophy at the Massachusetts Institute of Technology, June 1968.

[21] Hussain, Muzammil M. and Philip N. Howard, (2013) "What Best Explains Successful Protest Cascades? ICTs and the Fuzzy Causes of the Arab Spring," *International Studies Review*, 15, p. 49.

> international civic advocacy networks, compete to shape the future of civil society and information infrastructure that made it possible.

The analysis, based on a comparison of variables in twenty Arab countries, showed that the connection between ICTs and the social movements was complex, but that the existence of the new communication technologies made existing and emerging movements function more effectively. The authors conclude that "Digital media had a causal role in the Arab Spring in that they provided the fundamental infrastructure of a social movement unlike the others that have emerged in recent years in these countries." However, another study suggested that "The important story about the 2011 Arab revolts in Tunisia, Egypt, and Libya is not how the globalization of the norms of civic engagement shaped the protesters' aspirations. Nor is it about how activists used technology to share ideas and tactics. Instead, the critical issue is how and why these ambitions and techniques resonated in their various local contexts."[22] The conclusion by Hussein and Howard, however, is sustained by a study based on interviews with persons who had been involved in the demonstrations at Tahrir Square. The study concluded that[23]

> The results of this study underscore the central role that social media, particularly Facebook and Twitter, played in the protests leading up to the resignation of Egyptian President Mubarak in February, 2011. Although it only became available in Arabic in 2009, more than a quarter of the protestors we sampled had first heard of the protests on Facebook and, in addition a quarter used Facebook to disseminate pictures and videos they had produced. Twitter, along with blogs, was used by protestors to communicate about the demonstrations as they unfolded.

A similar result was found in an empirical study of the connection between social media and protests of young people in Chile about education reforms and the environment. The study concluded that[24]

> Online tools such as Facebook are not so much creating new forms of protest as amplifying traditional forms of protest, such as street demonstrations. In otherwords, activism does not confine itself to separate online and offline spheres, but instead online interactions can aid offline forms of citizen participation. Governments and political parties, in turn, must take into account what is available on social network sites as they gauge public opinion and knowledge.

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[22] Anderson, Lisa, (2011) "Demystifying the Arab Spring: Parsing the Differences Between Tunisia, Egypt, and Libya," *Foreign Affairs*, May-June 2011.
[23] Tufekci, Z. and C. Wilson, (2012) "Social Media and the Decision to Participate in Political Protest – Tahrir Square," *Journal of Communications* 62, p. 374.
[24] Valenzuela, S. *et al.*, (2012) "The Social Media Basis of Youth Protest Behavior – the case of Chile," *Journal of Communications* 62, p. 311.

These findings were confirmed by a later study based on interviews with participants.[25]

The common thread of the analysis of peasant movements in 1967, the Arab Spring and the Chilean student protests in 2011 is that, given a solid organizational base, ICTs can make participation more effective. But, what else is necessary that can form the basis for recommendations?

Positive policies

Clearly, ICTs must be embedded in a policy framework that encourages their wide use. This can include policies encouraging expansion of access to ICTs. This is particularly true of rural areas, where incentives need to be put in place for investment. Policies that encourage openness of the Internet, while ensuring both security and privacy are also necessary.

Here, the use of governmental power to reduce types of communication that are criminal (such as hacking, spam and child pornography) need to be incorporated as an international norm, but in such a way that it does not reduce access or openness.

In fact, an international agreement on standards for freedom of expression on the Internet would be helpful in guiding governments about proper policies.

Infrastructure development

ICTs require a solid infrastructural base. Where it is lacking, it needs to be installed. Fortunately, the current technologies rely less, at the delivery point, on wires, whose extension can be more costly than wireless. New technologies are making wi-fi more competitive, and the improvement of mobile telephony based on "smart" phones, suggests that this can increase use dramatically.

How to develop this infrastructure raises interesting policy options. In many parts of the world, although on a declining basis, telecommunication infrastructure is a public responsibility. In others, telecommunications, including both transmission lines and software, are increasingly provided by the private sector.

There is a growing consensus that infrastructure development needs to be a public-private partnership, where efforts are made to motivate the private sector to invest in infrastructure. With this in mind, the previously noted World Bank broadband study recommended:[26]

> Use competition to promote market growth. The more successful countries in the survey used collaborative approaches between the public and private

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[25] Vargas-Leon, Patricia Adriana, (2013) " Monitoring social networks in the first nation-state that achieved a network neutrality law, a case-study in Chile," *Proceedings of the 7th ACORN-REDECOM Conference, Mexico D.F. (Mexico),* May 17-18th, 2013.

[26] Kim, Kelly and Raja (2010), p. xxiii.

> sectors to promote and later universalize broadband services. In some cases, public investments targeted specific gaps or triggered larger private investments. Furthermore, every country surveyed relied on competition to expand the broadband market. Some focused on facility-based competition, and others focused on service-based competition. The more successful countries generally also benefited from intermodal competition, notably between digital subscriber line (DSL), cable modem, and third-generation wireless technologies. Each country tried to create level playing fields and competitive markets to ensure fast private sector–led growth of broadband services.

At the same time, infrastructure itself is not a sufficient condition. It can be argued that no super modern broadband is required for true participation. There has to be a popular will to participate, If it exists then even old technologies can be used. If there is such will, people use whatever technology is available.

Provision of content

Governments, as well as other institutions seeking to influence the public, need to place information systematically on website and other data repositories where it can be accessed. This is a key ingredient of e-Government. A recent trend on proactive information sharing, open government data, portals such as data.gov can be mentioned here. The United Nations has prepared Guidelines on Open Government Data for Citizen Engagement. The focus is to ensure that the content is relevant and accessible.

If government documents are accessible, their content can be debated, consensuses can emerge, errors can be corrected, corruption combated and support generated. Multiple experiments at the country-level have demonstrated this.

Local organizational context

While the information provided over the Internet or by mobile telephony can be used by individuals, the evidence available suggests that its effective use for empowerment needs an organizational context. Clearly that is the lesson of the Arab Spring and the Chilean protests. There is an implication that the local organizations need to be able to use the Internet.

This, in turn, implies that the organizations understand the technologies and have access to it. Perhaps more importantly, it means that the members of the organization, especially their leaders, know how to seek and then use the information available on the Internet as well as networking with other organizations.

Training and support programs

At the level of the technology itself, in terms of issues like servers and installation of software and creation of website, ICTs can be complex. It can also be complex in terms of use. In technologically advanced societies much of this knowledge is

imparted in the education system, or by informal networks. In societies where the technologies have not been well-distributed, means will have to be found to provide necessary education to permit people to use the new technologies.

This can include incorporating ICTs training in the education system. There are some examples of use of mobile phones to do distance education of teachers, one of which is a study in Botswana. That study concluded:[27]

> The findings suggest 100% penetration of electronic mobile technologies from the sample drawn, but usages in learning and impressions were not significant enough to consider e-mobile learning as an alternative strategy for the rural communities at this time. Many barriers (e.g., lack of wireless access and computer technology in rural regions, lack of skills, and course designs using traditional methods that marginalize participation of rural learners) existed. Thus, the study recommends developing partnerships with local wireless providers and elementary schools, constructing centers for learning support at a sample of rural elementary schools, and piloting e-mobile learning projects at these centers in and for these rural communities. Electronic mobile technologies may be an equaling agent in the future, however the first step is to equal the access and design instructional materials that benefit the flexible needs of a rural community.

Examples of use

The most dramatic examples of use of ICTs for empowerment are seen in the political realm including by youth, but there is a growing body of evidence that ICTs can be used to improve the economic situation of persons living in poverty as well as the living conditions of older persons, persons with disabilities. Examples of these are found in a variety of cases.

Economic – Rural Development

To a large extent, knowledge of markets as well as of new technology is critical for economic success. One factor that maintains poverty is the lack of access to either of these by persons who are poor, especially in rural areas. There is evidence that having access to and use of the Internet can help overcome these problems.

One example was presented to the 2012 Expert Group Meeting by Norman Uphoff, who presented a case of use of ICTs to extend the use of a technique of rice cultivation originally developed in Madagascar.[28] In this case, a website at Cornell

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[27] Ntloedibe-Kuswani, Gomang Seratwa, (2013) *Exploring the Use of Electronic Mobile Technologies among Distance Learners in Rural Communities for Safe and Disruptive Learning*, Syracuse University: Instructional Design, Development and Evaluation - Dissertations, 1 May 2013.

[28] Uphoff, Norman, (2012) "Empowerment of Farmers through ICT," Paper presented to the Expert Group Meeting on Promoting people's empowerment in

University has been a hub but has been supplemented by other ICT tools. While there has been a general focus on production techniques, there is an emerging concern with supply chains and marketing using ICTs tools.

Another example is the previously noted World Bank's work on the use of mobile applications for agricultural and rural development, which concludes that these applications "…offer innovative, dynamic, interdisciplinary services. These new services could raise incomes and create more opportunities for people in rural and underserved communities in developing countries as well as stakeholders throughout the ecosystem for m-ARD apps."[29] The study's findings include that enabling platforms are likely the most important factor to move from the pilot stage to more permanent use; other mechanisms like incubators and central hubs could support the systems; local nature of the apps may make scaling up difficult; government, donor or corporate funding will be needed for start-up costs; and enabling regulations and policies are crucial.

Another approach is to use ICTS to provide digital financial services in rural areas, as a report at the 2012 Brookings Institution Blum Roundtable shows.[30] While there is evidence that, on a pilot scale, results are positive, the analysis by Peake concludes as next steps:

> Interest is high and experimentation is ripe for expanding digital financial services to rural areas. The challenges associated with operating in rural areas parallel those with traditional services—regulatory limitations, ensuring that transaction volumes are sufficient, developing a service that has a strong value proposition—but several additional questions remain that are particularly pertinent to this subgroup: How can we develop scalable financial and digital literacy programs? What is the appropriate ecosystem of services to drive a valuable user experience on the phone? Who are the best partners to share costs and develop meaningful "bundled" content? As these questions are better understood, there will be greater efficiency to serve these markets.

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achieving poverty eradication, social integration and productive and decent work for all, 10-12 September 2012,

[29] Qiang, Christine Zhenwei , *et al*., (2012) *Mobile Applications for Agriculture and Rural Development*, ICT Sector Unit, World Bank, May 2012, p. 58.

[30] Peake, Cameron, (2012) "New Frontiers: Launching Digital Financial Services in Rural Areas," *Old Problems, New Solutions: Harnessing Technology and Innovation in the Fight Against Global Poverty – the 2012 Blum Roundtable Policy Briefs*, Brookings Institution, 2012.

Another article in the Brookings Institution study, by Slaughter and Meegoda suggests that progress is both rapid and as yet too fluid to draw firm conclusions about what works on a scalable basis.[31]

There are a number of country experiences that show the potential and the limitations of ICTS in rural development. One, by Yanuar Nugroho, studied the use by Indonesian NGOs to influence national rural development policy. The study concluded that:[32]

> Evidence here suggests that not only does Internet use impact upon NGO's performance in terms of internal management, but more importantly, that such a use has contributed to the widening of organizational perspectives, expansion of organizational networks and thus the increase of organizational influences in the society, including in the furtherance of rural sector reform and development.

Social – Aging, Disability

In a global population of nearly seven billion people, the number of Internet users worldwide has reached more than two billion people and the number of mobile phone subscriptions is approaching 7 billion according to the United Nations International Telecommunications Union (ITU)[33]. With the increasing availability of mobile broadband, we have an opportunity to use the reach of mobile connectivity to empower older people (OP) and persons with disabilities (PWDs) with information and knowledge.

Despite these achievements, approximately one billion people worldwide live with some form of disability[34] and in Europe, the average life expectancy is over 80, and by 2020 around 25% of the population will be over 65[35]. They are still at risk of being excluded from essential services, social interaction and information sources delivered through ICTs. The importance of extending ICTs to OP and PWDs has become more critical than ever.

The United Nations Madrid International Plan of Action (MIPA) adopted in 2002 stated that "lack of access to technology that promotes independence and other socioeconomic changes can marginalize older persons from the mainstream of development, taking away their purposeful economic and social roles and weakening their traditional sources of support"[36]. The MIPA has recognized that

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[31] Slaughter, Anne-Marie and Eleanor Meegoda, (2012) "Harnessing Connection Technologies for Development," *Old Problems, New Solutions*, pp. 19-30.
[32] Nugroho, Yanuar, (2010) "NGOs, the Internet and Sustainable Rural Development," *Information, Communication & Society*, 13:1, 2010, p. 111.
[33] ITU Facts and Figures: *The World in 2013*
[34] *World Report on Disability*, (2011) developed by the World Health Organization (WHO) and the World Bank
[35] Europe's Information Society: Thematic Portal
[36] Madrid International Plan of Action on Ageing, p.19, para.17

"Technology can be used to bring persons together and thereby contribute to the reduction of marginalization, loneliness and segregation between the ages"[37].

The Internet has increased the possibility for persons separated by distance to maintain contact with relatives. This is especially true for older persons in an epoch in which younger people are likely to leave their original rural homes through urbanization or where the need for employment has meant moving to new areas. There is evidence that social media and other communications tools have made it easier to maintain real-time conversations. While this has not be extensively studied, it is clearly a possibility that needs to be encouraged.

The United Nations Convention on the Rights of Persons with Disabilities (CRPD), adopted in 2006[38] called for a universal legal and policy framework for ICT accessibility and stated that measures should be put in place to include the identification and elimination of obstacles and barriers to accessibility, and shall apply to information, communications and other services, including electronic services and emergency services. Assistive technologies should also be promoted to pursuing all forms of ICT accessibility.

New ICTs can make information more readily available for persons with disabilities, especially those with sight or hearing issues. Software technologies that provide reading can make books, articles and newspapers available to persons with vision disabilities or provide subtitling of visual presentations for persons with hearing disabilities to make that content available.

ICTs and e-Participation offer solutions for the needs of OP and PWDs, such as easier access to online government services and contributing to their communities and society. They have the potential for improving the lives, allowing them to enhance their social and economic integration, enabling them to become more independent and fully enabled citizens in today's society, helping them to communicate, to navigate from one place to another and gaining employment opportunities.

One of the most innovative ICT and e-Participation tools is social media, which empowers OP and PWDs to be active participants in our world. With the use of social media, they are becoming more familiar with global issues and educating themselves; they can connect, keep up with the current events and find opportunities to raise their voices and share their ideas.

Promoting e-Inclusion

The European Union has developed a programme called e-inclusion, that "aims to achieve that 'no one is left behind' in enjoying the benefits of ICT." It focuses

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[37] Madrid International Plan of Action on Ageing, p.26, para.38
http://social.un.org/index/Ageing/Resources/MadridInternationalPlanofActiononAgeing.aspx

[38] Convention on the Rights of Persons with Disabilities
http://www.un.org/disabilities/default.asp?id=150

primarily on ageing and disability. Another programme focuses on enhancing digistal literacy, skills and inclusion.

For e-Inclusion to realize its full potential, governments in partnership with civil society, academic institutions and the private sector need to:

> 1) Invest in broadband by ensuring that information infrastructure, including telephony, mobile phones, emergency services and the internet are all accessible in order to empower OP and PWDs to participate more actively in understanding and managing their own wellness, and thus improving the quality of their lives;
>
> 2) Harness the power of ICTs and e-Participation to find innovative strategies and solutions for OP and PWDs to build a sustainable future;
>
> 3) Ensure that the use of ICTs and e-Participation should not be seen as an end goal by itself, but rather as an important means of empowerment of OP and PWDs, and a way to achieve international goals and commitments.

International – lobbying

A major beneficiary of ICTs is the constituency groups seeking to influence national policy through the adoption of international norms and standards. The importance of this was highlighted in the report of the 2012 Expert Group Meeting that

> At the international level, engaging civil society in the formulation of policies has become increasingly important and new institutions like the Intergovernmental Panel on Climate Change and the Internet Governance Forum are multi-stakeholder bodies that engage different groups. In some respects, the environmentalist concept of "think globally, act locally" appears to becoming more effective.

Civil society has been using the international level as a way of reaching the national level since the United Nations was formed, but this was always constrained by difficulties in obtaining information as well as to providing input to deliberations. ICTS, in which organizations of the United Nations system have developed thorough and sophisticated World-Wide Web presences have made it possible for civil society groups to participate actively. As a consequence, new governance models are beginning to evolve that involve governments, international secretariats and civil society. One of these is the previously noted Internet Governance Forum but a similar situation applies in the Intergovernmental Panel on Climate Change, where a variety of actors, both academic and governmental, reach a consensus on the facts surrounding climate change.[39]

[39] For an analysis of the IPCC history and composition, see Mathiason, John and Medani Bhandari, (2010) "Getting the Facts Right: the Intergovernmental Panel on

An increasing number of international organizations have opened up their processes for broader input. A recent example is the United Nations Convention to Combat Desertification that is undertaking a mid-term evaluation of its 10-Year Strategy and made the draft evaluation text available for comment by anyone. The amount of commentary, however, was limited, suggesting that the issue is more than making information available and that efforts to recruit participation need to be made.

Issues to discuss

The relationship between the new opportunities arising from the rapidly evolving information and communication technologies and empowerment of people deserves a careful review. The evidence relating to the connection between use of the ICTs and participation in political decision-making is somewhat ambiguous. At the same time, the rapidity in the development and dissemination of information over ICTs means that the normal lag in research result presentation means that new results may not have been reported. The expert group meeting, drawing on the experience of the participants, should be able to answer a number of key questions.

1. To what extent and in what ways does use of ICTs make political and economic participation more effective or more difficult?
2. What types of infrastructure and software should be created and by whom?
3. How best can organizations of civil society use ICTs to become more effective?
4. How best can users of ICTs participate effectively in e-governance?
5. How can E-Participation by Social Groups serve as a means for social inclusion, especially persons with disabilities and older persons?
6. What types of training and outreach programmes are most effective in enabling people to use ICTs for empowerment?

Climate Change and the New Climate Change Regime," *Journal of International Organizations Studies*, 1, 1, 2010,