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ITfC seeks to interpret the context and the opportunity of the new ICTs, and broadly, the emerging information society, through the lens of the global South. Our approach is guided by the ethical cornerstones of development – equity, social justice and empowerment.

We strongly believe in the need to emphasise the political narratives that are often sidelined in debates on the information society, which is largely being shaped by neo-liberal ideologies.

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This collection of papers is a part of IT for Change's Information Society for the South series. The series is an attempt to build a body of critical work that offers analytical and conceptual tools to understand and engage with the structural changes that information and communication technologies (ICTs) are bringing about in society.

An Empowerment Approach to Gender Equality in the Information Society

Regional Analyses from Asia

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IT for Change



Information Society for the South Series
Volume 2

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Gender Equality in the Information Society

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Volume 2

**An Empowerment Approach to Gender Equality in the Information Society:
Regional Analyses from Asia**

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Introduction

About This Collection

This document is the second in the series of publications from IT for Change under the 'Information Society for the South' research umbrella. The series is an attempt to build a body of critical work that offers analytical and conceptual tools to understand and engage with the structural changes that information and communication technologies (ICTs) are bringing about in society.

This collection of papers comes out of a project undertaken as part of the regional activities of the Gender Caucus¹ of the World Summit on the Information Society (WSIS). Advocacy on gender issues in the WSIS Phase One deliberations focused on women's equal participation in the information society and the mainstreaming of gender perspectives, which found reflection in the 'Geneva Declaration of Principles 2003'.² Towards Phase Two of the WSIS held in 2005, the need for concepts to make the connections between the local and global emerged as an important gap required to be filled. Contextualising gender and making the case for gender equality in relation to the emerging information society as a global public policy issue were two sides of the gender advocacy coin.

This collaborative research project, conceived in the build-up to the second phase of the WSIS, sought to address this policy advocacy imperative. It offers an analytical framework for women's empowerment in the information society that is grounded in the particularities of the Asian region, capturing the question of the 'opportunity structure' for gender equality in the information society and also problematising the notion of 'access to ICTs'.

The fact that women's 'access' to information and communication technologies is mediated by various factors – caste, religion, ethnicity, income, education, age, etc. – has been well established. However, it was felt that 'access' needs to be unpacked further and located in the context of the Asian experience. There was a need to analyse whether and how ICTs do, and can potentially, bring about structural transformation in gender relations and therefore, the conditions framing such access needed to be explored. IT for Change coordinated this effort, and also provided the broad conceptual framework. The research also fed into a wider consultation process to shape the directions for policy advocacy in the second phase of WSIS.

The diverse contexts of Asia were sought to be captured through sub-regional analysis. The specific objectives of the research were defined as follows:

- To attempt a systematic mapping of women and ICTs in Asia, looking at the individual and structural aspects influencing women's agency and choices.
- To provide a gendered analysis of the key individual and structural-institutional dimensions of women's empowerment vis-à-vis information society possibilities.

It was decided that for the purposes of the research, four thematic areas that are key to understanding women's empowerment in relation to the information society context would be useful entry points to

examine ‘empowerment’: identity, control and ownership of technology within emerging knowledge paradigms, collective action, and ICTs-induced institutional transformation.

Through these thematic areas, the papers examine both individual and structural dimensions of social change in the emerging information society. Broad indicators to unpack each were evolved, even though some did overlap between the themes. The indicators, outlined below, were meant to serve as exploratory pegs:

Identity in the information society:

- How do ICTs enable/constrain women’s ability to maintain control over their bodies and sexuality?
- How can ICTs enable/constrain women’s ability to challenge stereotypes and social and religious norms that confine their choices?
- How are new technologies redefining, if indeed they are, women’s identities (self-perception and social status)?
- How do ICTs perpetuate/challenge existing stereotypes of ‘women’s work’ and in the process restrict/enhance opportunities available to them?
- How can women be enabled to feel more comfortable in availing and optimising opportunities that become available through ICTs in widening spaces of engagement and for individual agency?

Control and ownership of technology within emerging knowledge paradigms:

- Do new technologies in their very design alienate women? How can women shape the design and nature of ICTs (and create new technologies) to suit their needs?
- How can ICTs enable/constrain women’s ability to impart and secure knowledge?
- Do existing technology paradigms allow for an equitable information society? How do alternate paradigms – Creative Commons licenses, open content and open access paradigms – further women’s interests?

Collective action in the information society:

- What role do ICTs play in women’s ability to organise and engage in collective action towards the realisation of their rights?
- How do ICTs enable/constrain women’s ability to be represented/participate in decision making bodies and influence decisions that affect their lives?

ICT-induced institutional transformation:

- What are the gender dimensions of ICT-induced institutional transformation around us – in work and business as well as in governance, health, education, media, social organisation, etc?

For instance, why and how do citizen's media allow for more equitable inputs from women, how and under what circumstances do ICTs contribute to the productive potential of women in their work spaces?.

- How can such change be directed towards engendering institutions in ways that empower women? For instance, how can e-governance bring the interface between public authorities and the community closer to the community?

Insights from the Papers about ICTs and Women's Empowerment in Asia

The three papers in this collection have been contributed by Angela Kuga Thas, Deborah Wheeler and Mridula Swamy, who examine the South East Asian, West Asian and South Asian contexts respectively. The papers are based on primary and secondary data. Kuga Thas and Swamy have used statistical data and some case studies, while also engaging in policy analysis; Wheeler, in addition to analysing statistics, has employed personal interviews to look at the interdependencies between individual choice and structural change, exploring the role of macro dimensions in defining micro outcomes as well as the place of policy in inducing transformatory change for women's empowerment. The papers collectively speak to some key insights summarised as follows:

The Empowerment Potential

The research papers show how ICTs create new social spaces for women and open up avenues for women's expression, expanding their social networks and economic opportunities. Virtual freedoms translate into 'real' life gains in terms of enhanced confidence and by ending isolation. Cyberspace thus become a space for the creation of new identities – where the transgression of traditional boundaries creates a flux that redefines gender norms. This may happen through avenues for discovering, interacting with, learning about, and changing attitudes toward, the opposite sex in certain cultures, like in Islamic societies. Inside-outside divides significant to women's realities in the Asian context seem to get destabilised in the spatial reconfiguration of the information society. The information society thus presents new ontological possibilities for emancipation.

The research opens up the connections between 'collective appropriation' (as against 'individual consumption') of ICTs and collective action. Women's control over technology seems to strengthen their identity, stimulate individual and collective action and transform their status and roles in the community. The emerging public sphere has the potential to foster new sub-cultures or counter-publics through various means like professional and solidarity networks, subaltern media etc., and thus opens up spaces for feminist consciousness. By shaping the content that is shared through technology, grassroots movements and collectives can challenge negative stereotypes in mass media and violence against women in virtual spaces.

Through greater networking, ICTs seem to enhance women's capabilities to assert political claims. ICTs also seem to enable women to capture and share the realities of their lives, represent their issues to decision makers and thus lend legitimacy to their struggles. New possibilities for representation also mean the evolution of new 'truths'. In a context where violations against rights of women are widespread, yet invisible, new media become a means to secure justice.

The papers open up some interesting questions about ‘market models’. For the longest time, mainstream approaches have pushed for access as if it were a commodity to be delivered, with concomitant prescriptions for ‘revenue models’. Invariably this implies that ICTs just need to be made available and somehow made to work through commercial, entrepreneurial models into which women are to be fitted. However, the papers show how ICT interventions that begin from a market paradigm to address governance and development issues can have a disempowering effect, exacerbating structural exclusion.

E-governance therefore emerges as a significant arena for institutional change – not only meaning the application of ICTs to government service delivery, but also the very transformation of governance processes. The information society redefines not just participation in governance through inclusion of marginalised women and new spaces for their voice, but also reshapes democratic processes. The emerging public sphere in the emerging information society can thus potentially redefine women’s citizenship. There are also new possibilities for local development in the systems reform potential of ICTs. Thus, while they provide platforms that enlist citizen participation, ICTs also comprise the building blocks for institutional leapfrogging.

Feminist Appropriation of ICTs: Challenges and Enabling Conditions

The differences in contexts notwithstanding, gender emerges as a striking signifier of the struggle between the subversive and totalising potential of new ICTs, and a marker of how societies negotiate, and states mediate, change in the information society. Social and cultural norms regarding women’s status, local patriarchies, conceptions of honour and family consent have a profound influence over women’s engagement with ICTs. At another level, access – defined by policy – is a function of national imaginations, aspirations and fears. Gender stereotypes and norms get recast in policy constructions that define what kind of access is appropriate for women. With the subversive potential of ICTs threatening the state, the latter is likely in fact to use technology to curtail rights, rather than secure them for women.

The discourse and practice of access are both located within a dominant paradigm of economic globalisation and digital capitalism. ICT access frameworks collude with the ‘marketisation of development’ paradigm through privatised software and content regimes, and thus limit the empowering potential of ICTs for development.

Given these challenges, a strong role for public policy and clear mechanisms for programmatic intervention are advocated. Often, information society policy structures are unable to keep pace with the rapid advances of technology and so, the opportunities for transformation get interlocked with governance deficits. Such deficits characterise not only national policy spaces, but also global arenas.

The research points to the need to recast ‘ICT for development’ beyond the IT jobs angle, in terms of a broader citizenship and development framework that emphasises a ‘capabilities’ approach. Access to information and communication technologies needs to be seen as a public good, to be developed and governed in public interest. Such a capabilities approach would imply mediation at different levels, to secure women’s empowerment and equal participation in the emerging public sphere.

What the research also highlights is the need to move beyond the ‘provisioning of access’ towards the notion of ‘appropriation’, which requires feminist frames that challenge both technological and social

determinisms. The embeddedness of ICTs in the contexts that shape them and their proclivities to effect certain types of change are both true. Therefore, expanding spaces for women through ICTs depends on new institutional mechanisms and options, requiring innovations invariably around social processes. While public policy is a significant enabler, intermediary organisations that work towards social justice and which scaffold the process of ICT appropriation, play a leading role in shaping empowering outcomes.

It is clear from this research that although effective access is a precondition for the empowerment process, the latter is a function of a more complex technosocial architecture and its dialectic with gender relationships in the local ecology. The relationships between women's ICT access and changes to structural gender inequities is not linear; the contextual conditions, including policy directions shaping access, and the transformatory impacts within the local context emanating from women's appropriation co-determine the nature of empowerment outcomes. These need to be studied more deeply.

IT for Change
Bangalore, December 2008

Endnotes

- 1 <http://www.genderwsis.org/aboutus.0.html>
- 2 <http://www.itu.int/wsis/docs/geneva/official/dop.html>

An Empowerment Approach to Gender Equality in the Information Society: Perspectives from East Asia*

Angela M. Kuga Thas

Adopting an empowerment framework, this paper reviews both available statistical data and a range of case studies in the East Asian context, to illustrate how the empowerment approach is critical for achieving gender equality in the information society in the region. The paper focuses on the use of ICTs and its implications for women in the areas of work and governance, in particular. Case studies are deployed to bring out the issues in analysing the dynamics of gender inequality and women's agency and how these interact at various institutional levels – the household, community, state, and market – to empower or (intentionally or unintentionally) disempower women. The case studies particularly highlight questions of identity, control and ownership, and illustrate how issues overlap from one institutional level to another, reflecting that the perpetuation of gender inequality through women's disempowerment is quite systemic. The paper also links and contextualises the local within the global and the gendered context of the information society, and concludes with some broad policy recommendations.

Introduction

Socioeconomic and political power in the global society today is increasingly defined by control over, access to and use of information. In such a society, 'information' (and products and services related to it) has become a significant tradeable and very profitable good, tipping the scales even further against and negatively impacting the traditionally important comparative economic advantage of countries which own natural and agricultural resources.¹ According to Govindan Parayil (quoted in Roy 2003) from the National University of Singapore, although the increasing returns from informational or digital capitalism are not an anomaly, they have created an instability marked by the most unequal distributions of income and wealth in human history. Just as one can be enriched financially or otherwise when one has access to, control of, and ownership over material resources, one can also be enriched by having 'the right information at the right time and at the right place'. Likewise, one can be impoverished without access to, control of and ownership over these resources. But because of the increasing profitability of informational capitalism, this impact – positive or negative – of enrichment or impoverishment is exponential,² and this has serious implications for the 'utopic' information society in terms of communication rights³ and freedom of

information, which in turn impacts the ease and extent of knowledge-sharing.⁴ In the utopic information society, information and access to information and communication technologies (ICTs) are ideally global public goods to be developed and governed in the public interest.⁵ This vision is shared by a number of civil society organisations which have actively advocated, during the two-phase World Summit on the Information Society (WSIS),⁶ the right of access to knowledge and free exchange of ideas and cultural assets, among other issues. However, the information society is propagated against a backdrop where the status quo global systemic powers determine what kind of information society the world will get and 'should' embrace. In this dominant paradigm, instead of material production, it is the actual capacity and speed in harnessing the potential of information and the expansibility and proliferation of knowledge – as we consume information, we generate knowledge – that are becoming critical differentiating factors which separate the developing from the developed. This has resulted in the rejection of problematic concepts like 'digital divide', 'information society', 'knowledge economy' and 'multistakeholderism'⁷ by some civil society actors, including groups advocating for communication rights. This is because the disparities in access to ICTs are a symptom of broader social and economic divides between and within countries rather than a specific 'digital divide' which can easily be demarcated. The term 'knowledge economy' implies that information and knowledge are commodities to be traded, protected, and marketed to those with the capacity to buy them, rather than be made accessible to all. 'Multistakeholderism' in an ideal world would not be problematic; however, in the real world as it exists today, it glosses over the important goals of making processes more inclusive and transparent, which would then allow and consider a diversity of voices and perspectives. Control over 'who harnesses what information to benefit from certain knowledge' and 'to what extent that knowledge is further shared and with whom' has also become a politically volatile issue between the state and its citizens since the 11 September 2001 attacks.⁸ Hence, the information societies in the various sub-regions are not free from the existing and very gendered global frameworks of governance, ownership and control over resources – particularly in the areas of technology, finance and trade and, now, information. As countries start to lose their traditional and historical economic comparative advantage in international trade, they are quick to turn to the potentials of information and knowledge as tradeable goods. However, because developing countries own little protected information, the enforcement of Intellectual Property Rights (IPR) has become a tacit taxation of the developing countries, who have to 'import' information in order to develop their economy and society further (Gerster and Zimmermann 2003). IPR has effectively infiltrated the domain of food and medicine, threatening the sustainability of indigenous knowledge and biodiversity.⁹ Women as traditional bearers of local and indigenous knowledge find themselves further obscured from today's wired information, communication, and knowledge systems. Access to ICTs is spoken of in terms that are devoid from the socially and culturally constructed gender roles and relationships which often limit the capacity of women and men to participate on equal terms in the information society. It was within the negotiation arena of the WSIS, particularly Phase One in Geneva in 2003,¹⁰ that these substantial issues could have been addressed. However IPRs, rules and barriers imposed by trade agreements, external debt and interconnection costs were completely left out.

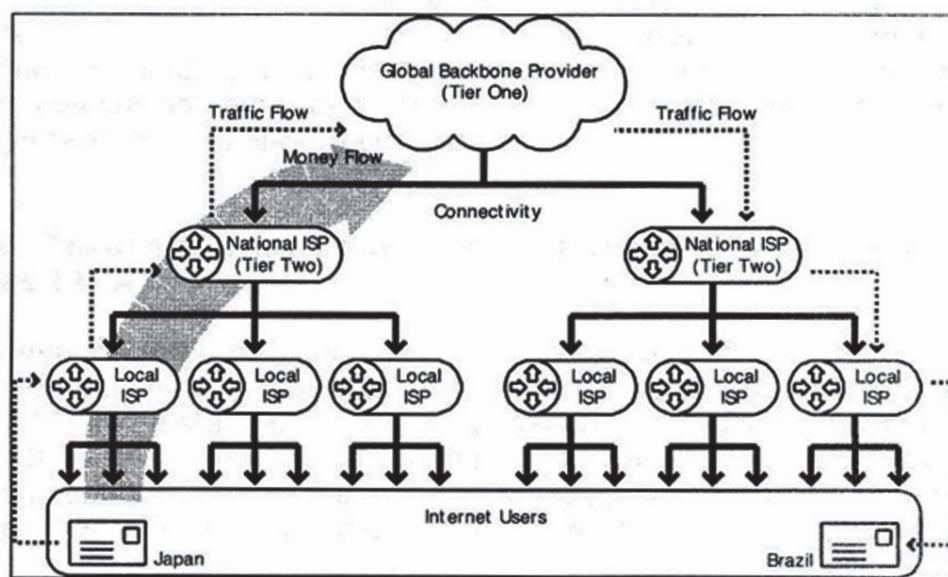
Information Society, Tell Me Thy Name¹¹

In East Asia, it is difficult to speak about 'the' information society in general terms. In an ideal world, the term inherently implies an informed society. This means that information must be made accessible in a

timely manner and be considered a public good, so that everyone, rich or poor, can be kept equally informed on matters and issues that can affect and obstruct their overall well-being. This includes educating the public on how to decide for themselves whether a piece of information has sufficient credibility. However, in the information society, being informed and keeping informed is dependent not just on access to ICTs – with its economic, social, cultural and political aspects – but also on the accessibility of information, including issues of availability and transparency of that information. Therefore, issues of access to ICTs must include an analysis of power, including the politics of inclusion and exclusion, which has strong gender dimensions. Who wields power and how it is wielded, at local, national as well as global levels, cannot be ignored in conceptualising the contours of the emerging information society.¹²

Access to ICTs in East Asia corresponds strongly with levels of human development indices and in-country telecommunications infrastructure. Telecommunications infrastructures differ quite significantly among countries in the region, with those primarily in the Mekong region lagging far behind the rest. Moreover, telecommunications infrastructure development may be unevenly distributed within countries as well. Unfortunately, the extent and level of infrastructure plays a significant role in determining whether costs are kept at a reasonable level, if not at the lowest level possible. Hence, it is common to find scenarios where making telephone calls *to* someone in a country different from one's own is cheaper than someone in that country making the same call *out*. Similarly, Internet connectivity is re-sold by top-level providers to lower-level providers, allowing those on top to financially benefit from those below at considerable high costs (see Figure 1. Traffic and Payment Flows across the Internet).

Figure 1. Traffic and Payment Flows across the Internet



Source: Peake (2004, 17)

As is illustrated by Figure 1, the regulation of the Internet is also linked to its physical structure, which is under the proprietary and legal control of the United States, although since 1996 the American administration has attempted to reorganise the Internet infrastructure management system. The Internet is based upon a system of root servers which coordinate the information flow on the network and thereby

ensure that all the information sitting on the Internet is available. There are also mirror servers which are updated daily and are replications of the root servers. They help alleviate the heavy traffic of data flow which in the past was solely hosted by root servers. However, original information is stored in the servers controlled by the United States (Pazello 2005, 7–8). In the Tunis Agenda for the Information Society (WSIS Phase Two), governments endorsed the findings of the Task Force on Financial Mechanisms and made proposals for improvements in existing financial mechanisms, which included enhancing regional cooperation and creating multistakeholder partnerships, especially for building regional backbone infrastructure and providing affordable access to ICTs by reducing international Internet costs charged by backbone providers, among others.¹³

In addition to the above, language is a significant issue constraining access, since over 85 percent of online content is in English.¹⁴ Except for Singapore and the Philippines, and to some extent Malaysia and Brunei Darussalam, the other East Asian countries do not use English predominantly. Although Thailand has a significant volume of online content in Thai, the fact that the society does not use English widely renders it quite segregated from the global exchange of communication and information. Countries that have complicated language scripts, like Cambodia, for example, face an uphill task in ensuring that software applications for day-to-day use in businesses and offices – such as word processing, spreadsheets and database management – are developed and made widely accessible to their citizens.

In the meantime, while populations or segments of societies grow increasingly isolated from global communication and information tools and content, there is a definite increase in urgency in countries like the Republic of Korea, Malaysia, the Philippines, Singapore and Thailand to more actively engage in e-business. Attention, however, has been paid mostly to issues of technology and the application of security standards, without being matched by suitably designed supporting policies and substantive programmes which would encourage women's active participation, ownership and decision-making in such processes.¹⁵

Accessibility of information per se, on the other hand, unlike access to ICTs, does not directly correlate with a country's Human Development Index. Access to information is a very political issue, and it is problematic to go by the simple assumption that all countries in the subregion equally uphold the values and principles of human rights, gender equality and justice. The political systems within the region are not necessarily democratic, transparent or accountable. Some countries are known to have purchased filtering systems to block access to information available on the Internet. Only a nominal few have made efforts towards being transparent and accountable in the provision and accessibility of information — specifically Japan, Thailand and Hong Kong SAR (China). These countries have some form of freedom of information laws.¹⁶ In Japan, there is the Information Disclosure Law (2001), while in Thailand, there is the Official Information Act of 1997.¹⁷ Hong Kong SAR (China) has a Code on Access to Information.¹⁸ Non-governmental organisations (NGOs) in Malaysia are just beginning to campaign and lobby for Malaysia's Freedom of Information Act.¹⁹ Seen in the above contexts and also taking into account the varying stages of e-readiness²⁰ of these countries, it becomes difficult to speak about the diversities and complexities of East Asia in general terms. From a gender perspective, too, the distinct experiences of each country take on greater validity.

Scope of Study

Adopting an empowerment framework, this paper attempts to give a brief overview of the ICT context in East Asia by reviewing both available statistical data and selected case studies, to further illustrate how the empowerment approach is indeed critical for achieving gender equality. This study is not exhaustive, since secondary data is usually not available for countries that are less e-ready, and not all countries in East Asia collect and disaggregate data by sex. Even if they do, data collection may not be consistent or regular.²¹ Rather, the paper has a special focus on the use of ICTs and its implications for women in the areas of work and governance. Case studies are provided to help further illustrate the issues in analysing the dynamics of gender inequality and women's agency and how these interact at various institutional²² levels – household, community, state, and market – to empower or (intentionally or unintentionally) disempower women. The case studies particularly highlight questions of identity, control, and ownership. Issues of collective action and institutional transformation are also touched upon, albeit briefly. The case studies illustrate how these issues overlap from one institutional level to another, reflecting how the perpetuation of gender inequality through women's disempowerment is quite systemic. The paper also attempts to link and contextualise the local within the global and gendered context of the information society, and concludes with some broad policy recommendations.

Gender Equality in East Asia

In most existing efforts in gender mainstreaming around the world, gender equality is limited to the misconception of equal numbers of women and men benefiting from a project or programme. This perspective is also the dominant one in East Asia. If at all there are attempts to address gender inequality, women are categorised as a marginalised group and in order to correct the equilibrium, it is arranged that women as beneficiaries, at least in numbers, must at a minimum equal the number of male beneficiaries. This is too simplistic an approach, as it does not critically look at processes of socialisation and the resulting power imbalances and how these gender inequalities have manifested through history and in the present – in disempowerment and impoverishment. It does not take into account distribution of resources and opportunities.

Moving towards gender equality demands an honest examination of how masculinity and femininity become and remain borders and restrictions on people's being and well-being. Addressing gender inequality is difficult because it demands of each individual to look at himself or herself critically and question the values and beliefs he/she has been imbibed with and continues to carry for years. Gender, after all, is a primary field within or by means of which power is articulated (Scott 1991). Power is identified with equity and equality for women and men in access to resources, participation in decision-making and control over distribution of resources and benefits. Gender inequality is implicated at these different levels and must be addressed if equality between men and women is to be achieved. Access to resources refers to both *the right* and *the means* to obtain services, products or commodities. Gender gaps in access to resources and services are a major obstacle to women's development. The process of empowerment includes mobilising women to eliminate these gaps. This is why, if gender equality is at all to be achieved, policies, programmes and legislation must be designed from a gender perspective with women's empowerment as the pivotal core. Such policies, programmes, and legislation, though, may only

prove to be successful if pushed from within the institutional framework of the State, guided by human rights principles.²³ If we understand the unbalanced power dynamics that arise from gender inequality in its full context, its implications and the consequence of those implications, it becomes clearer that gender equality cannot be achieved if we do not centre our efforts on empowering women.

Asia, as a whole, is far behind in achieving gender equality. This becomes obvious when we peruse the World Economic Forum's (WEF) report on 'Women's Empowerment: Measuring the Global Gender Gap' (Lopez-Claros and Zahidi 2005)²⁴ and find that none of the Asian countries surveyed even came close to the top twenty. Of the 58 countries studied by the WEF, six were East Asian countries. These were China (33), Japan (38), Malaysia (40), Thailand (44), Indonesia (46) and Korea (54), with overall scores between 3.18 (Korea) and 4.01 (China), with 7 representing maximum gender equality (Lopez-Claros and Zahidi 2005, 9). Of these, according to the World Bank's national income-level classifications, Japan is a high-income country, Malaysia and Korea are upper middle-income countries and Thailand is a lower middle-income country, while both Indonesia and China are low-income countries. Table 1, below, shows how these countries fare in relation to the five critical areas of economic participation, economic opportunity, political empowerment, educational attainment and health and well-being, as determined and assessed by WEF for the study.

Table 1. The Gender Gap in Selected East Asian Countries

Country	Overall Rank	Overall Score	Economic Participation	Economic Opportunity	Political Empowerment	Educational Attainment	Health and Well-being
China	33	4.01	9	23	40	46	36
Japan	38	3.75	33	52	54	26	3
Malaysia	40	3.7	40	36	51	32	15
Thailand	44	3.61	1	39	49	54	32
Indonesia	46	3.50	29	24	46	53	29
Korea	54	3.18	34	55	56	48	27

Source: Lopez-Claros and Zahidi (2005)

The WEF report shows that overall, Asia as a region ranked second lowest in achieving gender equality, after the Middle East and Africa, and the lowest in the specific critical areas of political empowerment and educational attainment (Lopez-Claros and Zahidi 2005). These are two key areas that have the potential to contribute substantively to addressing women's strategic gender needs. It is not surprising to see Asia ranking a little higher in women's economic participation, as women are well-recognised as a nation's human resource (though most often at a lower level of skills and largely at a lower level of income than men), but lower in women's economic opportunity, which measures the quality of women's economic involvement beyond their mere presence as workers.²⁵ This indicates that gender equality is not seen as a strategic development priority, and if gender equality is pursued, this is usually for practical purposes of contributing towards national productivity. Even when Asia is the third highest in rank for health and

well-being (as per the WEF report), whether healthcare services are provided from a women's rights-based perspective is suspect. While some may argue that this WEF study is not very comprehensive in showing the true picture of gender equality for Asia,²⁶ there are other trends that confirm the glum picture painted by the WEF report — that achieving gender equality is still a long way off. These are primarily: 1) the prevalence and pervasiveness of violence against women; 2) the increasing rate of HIV infection among women;²⁷ and 3) the feminisation of poverty²⁸ (see Table 2, below, and 3, on p. 19, for snapshots of gender gaps. Table 3 in particular shows how the countries of East Asia rank in terms of their respective Human Development Index, Gender-related Development Index, and Gender Empowerment Measure).

According to Rao and Kelleher (2002), even when there is a political acknowledgment of the importance of addressing gender inequality, efforts get bogged down in technical questions and 'bureaucratic mire'. In Cambodia, for example, putting a gender infrastructure in place – by mainstreaming a gender perspective and analysis within existing policies, programmes, and laws,²⁹ – is just beginning, as the focus so far has been on developing policies, building capacity, and capturing more resources from the traditional development perspective. In comparison, the Philippines, which has a more established bureaucratic context, has been concentrating more on developing specialised expertise on, for example, gender and economic globalisation and on addressing deep-seated cultural barriers to gender equality within bureaucratic structures. The value of women in the not-so-ideal information society, as in the past, continues to correlate very strongly with their economic value and their reproductive abilities.³⁰

Table 2. Some Sex-Disaggregated Data towards Measuring Gender (In) Equality

Country	GNP Per Capita (US\$)	Female Population (% of Total)	Life Expectancy at Birth (years) M : F	Adult Illiteracy Rate (% of people aged 15+) M : F	Female Labour Force Participation (% of total labour force)	Female Education Access and Attainment Net Primary School Enrolment Rate : Progression to grade 5	Maternal Mortality Ratio (per 100,000 live births)	HIV Prevalence Rate (% of people aged 15-24) M : F	Female Internet Users as % of Total Internet Users, 2002*
High Income									
Brunei Darussalam	n/a	47.3	74 : 79	5.4 : 11.9	n/a	n/a : 93	37	n/a	n/a
Hong Kong SAR (China)	26,830	50.8	77 : 82	3.1 : 10.8	37	n/a	n/a	0.1 : 0	49
Japan	35,400	51.1	78 : 85	n/a	41	100 : n/a	10	0 : 0	41
Singapore	22,780	48.7	76 : 80	3.8 : 11.7	39	n/a	30	0.2 : 0.2	47

Upper Middle Income									
Republic of Korea	9,010	49.6	70 : 77	0.9 : 3.6	41	99 : 100	20	0 : 0	45
Malaysia	3,390	49.4	70 : 75	8.6 : 16.6	38	97 : 96	41	0.6 : 0.1	36
Lower Middle Income									
Dem. Rep. Korea	n/a	49.8	60 : 63	n/a	43	n/a	67	n/a	n/a
Philippines	1,030	49.6	67 : 71	4.9 : 5.2	38	93 : 83	200	0 : 0.1	41
Thailand	2,010	50.8	67 : 71	2.9 : 6.1	46	85 : 96	44	1.2 : 2.3	49
Low Income									
Cambodia	290	51.3	52 : 55	19.8 : 42.8	52	81 : 70	450	2.4 : 3.5	n/a
China	840	48.4	69 : 72	7.9 : 22.1	45	93 : n/a	56	0.1 : 0	39
Indonesia	570	50.1	64 : 68	8.2 : 18.1	41	91 : 92	230	0 : 0	35
Lao PDR	290	50.1	53 : 55	23.8 : 46.6	n/a	78 : 63	650	0 : 0.1	n/a
Mongolia	390	50.4	64 : 67	1.4 : 1.7	47	92 : n/a	110	n/a	n/a
Myanmar	n/a	50.3	54 : 99	11.1 : 19.5	n/a	83 : 61	360	1 : 1.7	n/a
Timor-Leste	420	n/a	n/a	n/a	45	n/a	660	n/a	n/a
Vietnam	380	50.6	67:72	5.5 : 9.3	49	92 : 88	130	0.3 : 0.1	n/a

Notes:

i. * http://www.itu.int/ITU-D/ict/statistics/at_glance/f_inet.html

ii. n/a = not available

iii. According to the UNDP Human Development Report 2005, maternal mortality ratios are notoriously difficult to measure accurately. Nationally reported data on maternal deaths often suffer from underreporting and misclassification. The UNDP Human Development Report 2005 uses international estimates produced by the World Health Organization (WHO), the United Nations Children's Fund (UNICEF) and the United Nations Population Fund (UNFPA) which have been produced separately for 1990, 1995 and 2000. Because of large ranges of uncertainty and lack of comparability due to changes in methodology, these estimates can be used only to indicate the scope of the problem and offer little insight about the trends over time.

Sources:

i. Figures used from the World Bank's Gender Statistics Database are for the year 2000, unless otherwise indicated. Taiwan (China) was not listed in the World Bank's Gender Statistics database.

ii. According to the ITU ICT statistics, female Internet users in Taiwan comprise 44% of total Internet users in 2002.

iii. <http://genderstats.worldbank.org/home.asp> for all other data.

Table 3. GDI, HDI and GEM Ranks of East Asian Countries

Country	HDI rank	GDI rank	GEM rank
High-Income			
Brunei Darrussalam	33	31 (2001 data)	n/a
Hong Kong SAR (China)	22	22	n/a
Japan	11	14	43
Singapore	25	28 (2001 data)	22
Upper Middle-Income			
Republic of Korea	28	27	59
Malaysia	61	50	51
Lower Middle-Income			
Dem. Rep. Korea	n/a	n/a	n/a
Philippines	84	63	46
Thailand	73	57	63
Low-Income			
Cambodia	130	99	73
China	85	64	n/a
Indonesia	110	87	n/a
Lao PDR	133	102	n/a
Mongolia	114	90	n/a
Myanmar	129	n/a	n/a
Timor-Leste	140	n/a	n/a
Vietnam	108	83	n/a

Notes:

i. n/a = not available

ii. Figures in *italics* indicate deterioration in rank that country held from the year 2001.

Sources:

i. HDI data is 2003 data. Sourced from UNDP, Human Development Report 2005. Available online at: <http://hdr.undp.org/reports/global/2005/>.

ii. GDI data is 2003 data, unless otherwise stated. Sourced from UNDP, Human Development Report 2005. Available online at: <http://hdr.undp.org/reports/global/2005/>. 2001 data sourced from UNDP, Human Development Report 2003, available online at: http://www.undp.org/hdr2003/indicator/indic_196_1_1.html.

iii. GEM data is 2003 data, unless otherwise data. Source from UNDP, Human Development Report 2005. Available online at: <http://hdr.undp.org/reports/global/2005/>. 2001 data sourced from UNDP, Human Development Report 2003, available online at: http://www.undp.org/hdr2003/indicator/indic_207_1_1.html.

Unpacking Women's Empowerment in East Asia

At the core of the concept of empowerment is the idea of power. The possibility of empowerment depends on two things. First, that power can change and that it is not inherent in positions or people. Second, that power can expand. For many who are in power, they feel that correcting power imbalances means 'giving up' their power. This is not always so. In fact, there is considerable strengthening within any institution — household, community, state and market — when power expands and is distributed more widely. If we aim to empower women, however, there is one prerequisite, as UNIFEM's 'Progress of the World's Women 2002', points out:

Choices for women, especially poor women, cannot be enlarged without a change in relations between women and men as well as in the ideologies and institutions that preserve and reproduce gender inequality. This does not mean reversing positions, so that men become subordinate and women dominant. Rather, it means negotiating new kinds of relationships that are based not on power over others but on a mutual development of creative human energy (power that is based on power within and power with). It also means negotiating new kinds of institutions, incorporating new norms and rules that support egalitarian and just relations between women and men.

Addressing gender equality therefore requires us to address power dynamics and power imbalances. Empowerment refers to enabling people towards self-determination. Empowerment can be and most often is a process that challenges some of our fundamental assumptions about the way things are and can be. For women, empowerment emphasises the importance of increasing their power and having control over resources, decisions and other issues that shape their lives. In the information society, this is not limited to just physical access to ICTs, but includes having full access to complete information and being free to self-discern the quality and credibility of such information in making these decisions. This is when information becomes knowledge and enables the individual to form her or his own opinion, and to act and transform conditions that would help lead to a better quality of life.³¹ While generally knowledge is empowering, for women knowledge alone — without the ability and opportunity to test its validity and apply it usefully — does not empower them.³² Having said that though, access and control over some kinds of resources are able to bestow, if not some level of empowerment, at least some level of immediate respect to women who gain access to these resources — finance/credit³³ and ICTs.³⁴ Research has shown, though, that when women's self-help groups are established around these, especially ICTs, these new spaces alone can become quite empowering. This was the experience of some Women's Electronic Network Training (WENT) participants (see case study below). An evaluation of WENT noted that the skills-building was a plus, but what made the training a vibrant and conducive space for women was that they were among like-minded women, who shared the same experiences and issues, and that they had the chance to share their own experiences and issues.

Case Study of the Women's Electronic Network Training (WENT)

WENT began in 1999 as a project-based initiative, jointly managed by the Asia Pacific regional members of the Association for Progressive Communications Women's Networking Support Programme (APC WNSP) and the Asian-Pacific Women's Information Networking Centre (APWINC), Republic of Korea, on behalf of AWORC until 2004³⁵. WENT began by training women on basic website development tools and other Internet-based group communications in 1999. WENT sought to promote greater networking among women's organisations in the region and to enhance their capabilities to use ICTs to advance their social and policy advocacy. The first WENT workshop trained twenty three women from eleven countries in using email and web-based services to promote and enhance their participation in the review process for the Beijing Platform for Action (popularly known as the Beijing Plus Five review). In response to various information and communication needs of women in Asia and the Pacific, WENT then diversified its training. Since 2000, WENT has run parallel instructional tracks on web-based information management, local area networking, using ICT for advocacy, and database management. In 2004, instructional tracks focused on e-commerce, content development and training for ICT trainers. From a workshop designed for women's organisations in the Asian region by women ICT practitioners, WENT has opened its doors to women and their organisations in the Pacific. Women coming from relatively under-represented countries like Bangladesh, Cambodia, East Timor, Kyrgyzstan, Russia, Lao PDR, and Uzbekistan have also graduated from WENT. By 2003, women from 23 countries have been trained under WENT's methodology. Since then, WENT has been successfully replicated in Africa and nationally in Korea (1999), the Philippines (2002), Malaysia (2002) and India (2003). WENT was echoed in the Pacific by the Pacific Women's Bureau of the Secretariat of the South Pacific Community (SPC) in March 2005.

The experience of WENT tells us that in enabling women's social empowerment, access to ICTs alone is insufficient. Content must match women's needs in order for ICTs to remain relevant in women's lives. As needs change, so must content. With WENT, year after year, content evolved to match women's capacity-building needs as women in the region gained more opportunities and exposure in using ICTs. What WENT did was to provide 'safe spaces' of communication and exchange that forged women's solidarity within these spaces. As a result, women strengthened each other in their learning and sharing, knowing that they were no longer alone, no longer isolated. On the other end of the scale, participants learned about what exactly lies behind the technology, demystifying it for themselves. Women who participated understood the technology, and they could determine which technology would be most suitable, and make choices and propose solutions. Some participants, depending on the organisation they were coming from and how they were placed in the management hierarchy, were given the freedom to decide on how the organisation's technological needs would be met. In the

case of others, their additional knowledge was not put to optimum use as they were in no position to challenge the status quo. This reality is echoed in the research conducted by AWORC in the year 2000, and documented in 'I on the Mouse'. By only emphasising 'access' to ICTs as the key factor to consider in women's empowerment through ICTs, there is a danger that issues of power and marginalisation within organisations, including women's organisations, may go unacknowledged.

What should be mentioned here, too, is that one of the key pivotal and influential factors that enabled WENT to be as successfully implemented was the encouraging role of the President of Sookmyung Women's University in the Republic of Korea. President Dr. Kyungsook Lee is known for her forward-looking strategies and is much respected for the work that she has managed to carry out for the advancement of Sookmyung Women's University. When WENT was first organised in 1999, it was on university grounds that had wireless Internet access. Women could sit under a tree and go online. Even though participants had little access to such forward-looking infrastructure in their own countries at the time, being in such a technology-abled women-centred environment gave them an insight into possibilities. The example of Dr. Kyungsook Lee embodies what can happen if women have decision-making authority and control over ICTs — enabling not only the application of ICTs but also insights into the possibilities and potentials of ICTs.

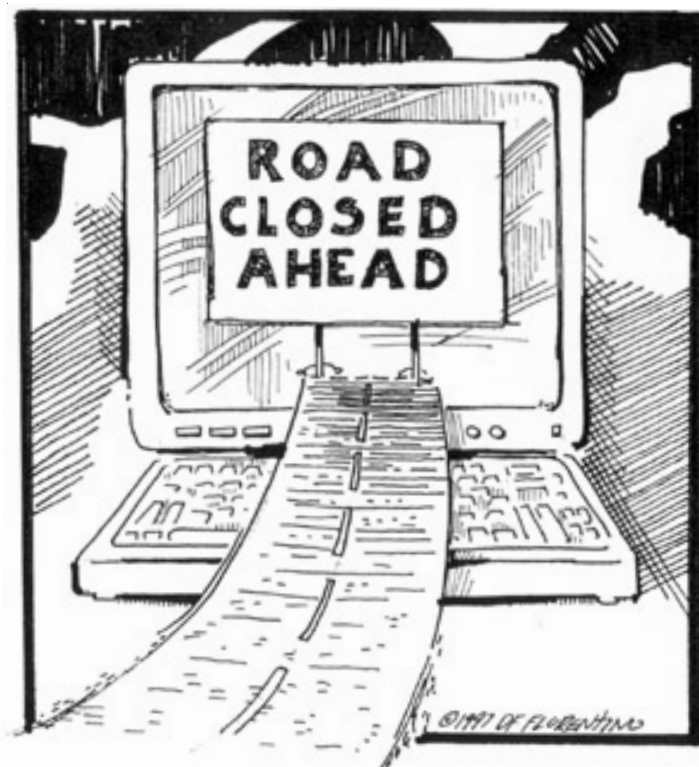
Source: Kuga Thas et al. (2007)

The individual and collective experiences of WENT participants during the training and after, show that to empower women requires each of us to understand and address the various dynamics of power and relationships in a particular society, which are intertwined with issues of gender, class, ethnicity, age, sexuality, culture and history. It is these dynamics that greatly influence and can adversely impact upon women's individual and collective agency. Ann Ferguson, in her paper, 'Can Development Create Empowerment and Women's Liberation?' concludes that:

Individuals and groups divided by gender, race, ethnicity, class, sexuality and nationality can only be empowered by a participatory democratic culture which strives for solidarity in a coalition of oppressed groups, while working out a democratic procedure to negotiate possible conflicts of interests among its members as one of the ends of a developmental process towards social justice. (Ferguson 2004)

She, however, stresses that 'without a multi-system analysis of social dominations, women may be empowered as individuals in relation to particular men, but still disempowered in relation to other relevant hegemonic forces, such as racism, capitalism and imperialism' and so 'the situation of women from a privileged class and privileged race may be improved, but the bulk of women will simply be controlled in the interests of dominant groups' (Ferguson 2004). So, the question that faces us is: where are women in the information society, if there are roadblocks to information and knowledge such as illustrated in Figure 2?

Figure 2. Information Society: an Exclusive Club



Source: <http://www.vermontguardian.com/global/0904/BlockingTheNet.shtml>

Hopefully, the case studies in the following sections will provide at least a snapshot of where women are.

In East Asia, women's empowerment through governmental interventions has largely been pursued to meet functional development objectives which are very closely linked to women's traditional gendered roles and responsibilities.³⁶ These serve the lowest levels of empowerment (including zero level when a purely welfaristic approach is used) where policy and programme benefits are 'given' to women beneficiaries as and when deemed appropriate, rather than designed to bring about an internalisation of power within them so as to enable them to arrive at a higher consciousness and to stimulate the will to mobilise and take control. An example of this is the 'T-Center for Teleworking and Telecommuting', which was designed to guide 200 participants, mainly women and youths, to learn and acquire teleworking skills and to enable them to adopt teleworking as a new mode of work. This was a project supported by Malaysia's Demonstrator Application Grant Scheme (DAGS) and one of the project's specific objectives was to 'empower' women, youth and pensioners to become important economic factors in the family, community and the nation. Because of such conceptually flawed design trends, women have benefited from policies and programmes more often as members of the family and the larger community – sometimes as pregnant women and mothers, but most often as potential members of the nation's workforce. Table 4 (see p. 24) gives some examples of government-initiated ICT-based programmes and projects that have been undertaken, which have women as beneficiaries.³⁷

Table 4. Some Examples of ICT-based Government-led Programmes and Projects in East Asia

Govt Agency, Country	Programme/Project	Year	Beneficiary Group	Overall Aim
SIGMA, Mimos Berhad, Malaysia	Demonstrator Application Grant Scheme (DAGS)	1998 to current	Communities in general, women are included as part of the larger community.	A platform to build human capacity and capability through ICT applications.
Ministry of Information and Communication, South Korea	One Million Housewives	2001–2002	Housewives/home-makers	One million housewives trained in computer and Internet use
Ministry of Labour, South Korea			Unemployed women, especially those who are heads of households	Computer training for unemployed women
Ministry of Education and Human Resource Development, South Korea			Girl students	Enhance ICT skills of girl students from elementary through high school
Ministry of Gender Equality, South Korea	Programmes at 12 Korean universities		Female university students	Women who want to work in an e-business or to start Small Office-Home Office (SOHO) businesses
Ministry of Agriculture and Forestry, South Korea	Onsite and mobile computer education and technical support services.		Women farmers	Real-time information on market prices is posted on the web. The web site also operates a shopping mall for agricultural products. Technical assistance is available to farmers in building personal web sites.
South Korea	The Kyonggi Province Program for women IT professionals (http://www.womenspro.org) provides training in business incubation and capacity building (including gender training) and lifelong education for women, tailored to the different stages of women's lives.		Unemployed women, women heads of households and handicapped women who want to enter the work force	Women are trained for 10 to 12 months as IT specialists, and at the end of it, they either seek employment or start their own businesses.

In order to better measure the achievement of gender equality, we need to consider qualitative indicators just as much as we do quantitative ones. We need to, in particular, allocate resources towards measuring opportunity costs and replacement cost borne by women, specifically indicators that measure change in traditionally accepted roles and responsibilities and changes in power. Table 5 suggests some examples of indicators.

Table 5. Suggestions for Indicators to Measure Women's Empowerment

Traditional Indicator	Reflections on Indicator	Proposed Indicator
Length of time women spend on the computer/Internet	This is not a suitable indicator as it does not take into account issues of connectivity and download time.	Who does the work the woman would usually do during this time spent online? Is it another woman? Her daughter? Her son? Or her husband? If it is her daughter who does the work in her absence, there is no shift in gendered roles and responsibilities. It shows that there is no real support from the male members of the family, and so no change in power. Does she still have to complete her work duties after she leaves the computer/Internet i.e. her usual duties are put on hold till then? What does she give up in order to be there in front of the computer? Work, rest time or pleasure?
Number of computers within a household/number of households with a computer (note: this also applies to similar indicators in relation to number of radios, television sets within each household)	This does not tell us who within the household uses the computer, how this particular resource is distributed.	Who owns the computer (with ownership to mean who decides who can use it and when and how, and so not necessarily the original purchaser)? Who uses the computer? Where exactly is the computer located? In the son's room? Daughter's room? Mother's study?
Number of women trained in ICT skills	This does not tell us the extent to which skills are actually acquired and put into practice.	Are women able to display these new skills independently without further support? Were better jobs obtained as a result of acquiring these new skills? Are these women involved in making decisions around technology/ICT use? Do these women continue to stay in the workforce? If they choose to opt out, what are their reasons: to meet practical, or strategic gender needs?

Traditional Indicator	Reflections on Indicator	Proposed Indicator
Number of women teleworking and/or telecommuting	This does not tell us if there is adequate support provided by the family at the household level in terms of balancing responsibilities.	Are women still the caregivers and doing the cooking and other household responsibilities? Is a domestic helper hired even though the woman is working from home? Number of househusbands who consciously choose to become househusbands (and not because they are jobless or underemployed).
Number of women in politics/ women in parliament	This is a useful indicator for achieving critical mass. However, while women are encouraged to enter politics, we have to remember that it is a field which is strongly gendered in its culture, and this gendered culture is even more prominent if we examine the sectors more closely. Women politicians are very seldom given the portfolio of science and technology. And even if they were, the additional challenge is that women themselves are imbibed with traditional notions of gender roles and responsibilities, and so may not necessarily be the best champions for women's rights and empowerment unless they are successfully sensitised to the issues and supported institutionally and with adequate resources.	Policies, programmes and laws that in practice challenge traditional notions of gender roles and responsibilities: e.g. equal citizenship rights irrespective of marital status, ethnicity lineage (is ethnicity only from the patriarchal lineage?), equal custodial rights, equal land/property rights, etc. Number of male politicians who champion women's rights with concrete results that materialise in the smooth implementation of women's rights-based policies and programmes. Number of religious authorities who champion women's rights and empowerment towards gender equality.

Women's Agency and the Dimensions of Power

ICTs are increasingly individualising the spaces of information exchange and communication. For women, however, access to these individualised spaces is dependent on their current social, political and economic status, and the extent to which these prevent them from challenging existing institutions.

According to Rao and Kelleher (2002), women are prevented from challenging institutions by four interrelated factors:

- *Political access:* While there is a push towards women's political representation in government, there exist neither systems nor powerful actors who can bring women's perspectives and interests to the table. The field of ICTs is dominated by men, both as developers and as decision-makers. Ministries and divisions for women's affairs and other similar agencies have been slow to understand the relevance and importance for them to be more involved in the formulation of national ICT policies and programmes. One exception may be South Korea, which has a Ministry of Gender Equality and inter-linkages with other ministries that have resulted in a variety of ICT-related programmes (see Table 4).
- *Accountability systems:* How resources are utilised to achieve positive development outcomes is still very much steered by quantitative targets, which from year to year or plan to plan are replaced with a new set of equally quantitative targets, without any consideration for qualitative ones. These are often distantly related to institutional change for gender equality. A typical example is the number of women trained in ICTs vis-à-vis that of men, without looking at level of technical skills imparted nor how these technical skills are used and how having such skills confers 'power' and increased levels of respect to women in the household, the work place and beyond. Singapore, however, has moved beyond this minimal step of 'equal numbers equals gender equality'. Women's representation in ICTs is strong in Singapore because of the government's concerted state-directed ICT training: 58 percent of analyst programmers and 52 percent of analyst designers in as early as 1987 were women (Dholakia et al. 2003). Women educated in such fields are likely to have the skills and propensity to adopt modern ICTs. Women's enrollments in such disciplines would have doubly greater social benefits since women trained in ICTs are likely to be the future designers and incorporate features that are likely to favour women's adoption. But the emphasis on building up women's capacities in the area of ICTs must be accompanied by new ways of imparting ICT type of education while considering issues of intention and power dynamics as earlier described (Dholakia et al. 2003). Most countries build up the ICT capacities of women because they are a source of cheaper labour, and are quite satisfied with only providing them training to acquire lower level ICT technical skills. This is because women are seen as practical solutions from the narrow development perspective, rather than self-determining agents of change.
- *Cultural systems:* Women are sometimes obstructed from becoming full participants in programmes that can benefit them due to either clear and vocal objections from family or due to lack of support from family, their community and their work place. Typical examples are seen when women try to participate in community telecentre activities. The establishment of community telecentres is sometimes assumed to impact and serve women and men equally. In the planning and design of telecentres and their services, usually little consideration is given to women's heavy workloads and multiple roles that limit their available time to use the telecentre. Male attitudes within the telecentres towards women's use of technology can also severely affect women's self-esteem and discourage more active participation. Other factors like the lower educational levels of women compared to those of men, and therefore their lack of literacy skills; the lack of relevant content for women in

their local languages; and their lack of disposable income for fee-paying centres are all gender-based factors that constrain women's use of telecentres. Some women tend to resort to sending their daughters rather than themselves for training, with the belief that 'it's too late for them' and that their daughters might stand a better chance of finding a good job and pulling themselves out of poverty after getting some ICT-based training. On a parallel note, access to ICTs alone does not take into account who controls these resources. If women need permission from their husbands on exactly when they can turn on/use the radio and the types of radio programmes they can listen to, having a radio in the household as an indicator of successful ICT distribution (extent of usage) or penetration is extremely misleading. Likewise, if households have computers but women are only allowed to clean them, then the number of computers per household brings no meaning for gender equality. In order to avoid the collection of misleading data, such as where a woman purchases a computer only for her son's use, the best indicator would be to see the distribution of resources within the household, e.g. the number of computers vs. who uses them.

- *Cognitive structures:* Where women's work is concerned, this is often seen only within existing gender-biased norms and understandings. For example, the belief that 'women are good at detailed, nitty-gritty repetitive work because their hands are small and dainty' means they are largely employed to handle microelectronic chips and to work in electronic assembly lines. Or the belief that 'women don't have a head for technology' leads to computers and technical toys being primarily bought for boys rather than girls.

Having discussed briefly these factors and how they can prevent women from being empowered and from challenging institutions that perpetuate gender inequalities, we can now turn to examining how ICTs have affected women in the area of work and governance.

ICTs, Women and Work

ICTs have changed the terrain of many fields. One such field that stands out for women in East Asia is the area of work and employment and so affects women as labour (whether they are paid, underpaid or unpaid). To understand the implications of ICTs for women and work, the first question we need to ask is: where do women work?

The case of e-Homemakers in Malaysia speaks of women who have made the choice to work from home in order to balance their household responsibilities, and hence, practical gender needs.

Case Study of e-Homemakers, Malaysia

A project that was funded under the DAGS scheme is the e-Homemakers project, the only trilingual local portal that promotes the concept of working from home by providing resources and a platform for homemakers and homeworkers to tele-trade and tele-exchange. A WENT (Women's Electronic Networking Training) Award³⁸ winner in 2003 and a Gender and ICT Award winner³⁹ in 2005, this project provides basic ICT skills training to disadvantaged and special women to enable them to participate effectively

in the knowledge-based economy. The project prepares them to work at home through other soft skills trainings and empowerment exercises.

While the system provides women with the possibility of managing their homes and earning a living, there is a danger that their contributions to society will remain invisible. It would not change their existing gender inequity in the home or the prevailing stereotypes that domestic work is essentially women's work. E-Homemakers in Malaysia is one group whose work since 1998 is aimed to support women who choose or want to work from home to balance their gender roles and responsibilities,⁴⁰ and is currently working in tandem with a similar policy thrust and emphasis of Malaysia's Ministry of Women, Family and Community Development.⁴¹ The growing interest in teleworking for women in Malaysia, though, is also motivated by the fact that women's labour force participation is low. In 2003, e-Homemakers conducted an evaluation plan called 'A Study on How Gender Dynamics Affect Teleworkers' Performance in Malaysia' to test APC WNSP's Gender Evaluation Methodology (GEM) tool. The main objective of the evaluation was to explore how women's family lives and home situations affect teleworking and their job performance. The study found that introducing ICTs in the home as an alternative work solution, without addressing the gender-power dynamics within households, leaves the burden of negotiating these usually conflicting intricacies on women who are often already in a disempowered position. Hence, an indicator of the number of women teleworking may not provide an accurate picture of closing the gender inequality gap compared to, say, the number of househusbands – data which governments have not thought about collecting.⁴²

Source: Kuga Thas et al. (2007)

The e-Homemakers, Malaysia, case study reminds us that the family can be a constant arena of contestations of power. In the household, power is exercised through a complex fabric of social interaction that is more often than not rooted in existing gender inequalities. The family is seldom a venue for distribution of resources that is either equal or equitable. However, many policies and programmes are centred on the family, identifying potential beneficiaries by comparing size vs. total household income, without giving due attention to what are the prevailing gender-biased norms in the distribution of household resources.

Outside of the household, the introduction of ICTs in the market has, in effect, often intensified the vulnerability and temporariness of women's employment (self-employed or otherwise). In the 1990s, during the wave of industrialisation and manufacturing in East Asia, women were only able to secure employment during rapid expansions, and most times, under harsh conditions.⁴³ It is very likely that there will be a similar scenario for women in ICT-related fields, particularly if these are very much dependent on foreign capital investments since these have proven to be volatile when the economy is unstable or in recession (either at the global level or in the home country or host country). Foreign capital-based growth has also very often compromised on progressive labour regulations since host countries give up the little power they have to enforce these in exchange for the injection of capital and the promise of jobs.

The employability status of many women has definitely weakened considerably as women who have lost manufacturing jobs find themselves generally not qualified or unskilled to enter into the new service

industry. Only women who have been able to avail of ICT skills training are able to move up in the new information economy, and this upward mobility is also dependent on whether they can understand and speak English. Most of these women are also younger, as it is the younger generation that is growing up with ICTs more than their parents, and to this fact is added pressure for young women, especially of disadvantaged classes, who grow up with little exposure to ICTs. The service jobs show a preference for young women, familiar with English, single and better-educated than those who had worked in manufacturing. In call centres in the Philippines, employees — both women and men — commonly recount that they are trained to speak in an American accent, and they are often expected to handle emergency calls which get redirected to these call centres outside of the country concerned.⁴⁴

The increased opportunities for ICT-related work are no doubt welcomed in the South, irrespective of whether there are sufficient labour laws protecting labour rights of workers or if there are sufficient opportunities for labour organising. The outsourcing of work and increasing trends of teleworking and telecommuting have no doubt placed women into more individualised work spaces, but such work spaces may also provide smaller opportunities for collective action at the local and national levels. Women who are privileged to be networked to groups like e-Homemakers may be able to engage to a certain extent at the policy level, but may find that they lack the collective muscle to ensure implementation and enforcement on the ground.

Globalisation has no doubt facilitated greater opportunities for labour in developing countries but in a paradoxical manner, with higher educated labourers doing more menial type work. Globalisation has also facilitated opportunities for local producers and entrepreneurs to reach international markets, but even among these the gains are concentrated in the hands of those with higher education and/or who own resources and have access to capital, which a lot of women entrepreneurs do not. Women entrepreneurs are primarily necessity-based entrepreneurs and they are largely represented by small and medium-sized enterprises. For women-owned businesses, it may be difficult to handle the pressure to be IT-savvy and literate and to invest in technology that requires a much higher capital outlay, which many women entrepreneurs can ill-afford since many women-owned businesses are either small or medium-scale. The issue of upward mobility not only affects women as workers but also affects women as employers/entrepreneurs.

Along with the increasing lack of employment security and labour rights protection with the increasing trends of outsourcing work, wages earned, too, remain an issue. Worldwide, outside of the agricultural sector, in both developed and developing countries, women are still averaging slightly less than 78 percent of the wages given to men for the same work, a gap which refuses to close in even the most developed countries. Figures of women's earnings for every US\$1 earned by men, in both the industrial and services and manufacturing sectors, are almost identical, and range from a low of US\$0.53 in Azerbaijan to US\$0.90 in Australia, but with very poor correlation between developed and developing countries (UNIFEM 2000, quoted in Lopez-Claros and Zahidi 2005).

ICTs, Women and Governance

As citizens, women have varying levels of rights, depending on the constitution of each country as well as the laws that have been put in place,⁴⁵ but largely more dependent on existing practices and the values

assigned to these practices in governance. It is within the constitutional and legal framework that women can become politically empowered, seeking equitable representation in decision-making structures, both formal and informal, and having a strong, influential voice in the formulation of policies affecting their societies. Unfortunately, as stated in UNIFEM's 'Progress of the World's Women 2002',

Although there were definite signs of progress in all regions between 2000 and 2002 towards meeting the target (of increasing women's political participation), Progress 2002 indicates that women are still on the whole largely absent from parliaments. They account for about 14 per cent of members in 2002 overall. Only 11 countries had reached the 30 per cent benchmark in 2002 – Sweden, Denmark, Germany, Finland, Norway, Iceland, the Netherlands, South Africa, Costa Rica, Argentina and Mozambique. All of these countries have used quotas.

UNIFEM's 'Progress of the World's Women 2002' describes a global scenario of women's political participation where all of Asia figures poorly, let alone East Asia. Statistics from Progress 2002 show that correlation between a country's development status and women's political representation is weak.⁴⁶ Even when there is women's political representation, those who were elected are not necessarily familiar with the issues faced by women in ICT-related areas, nor with how ICTs can, in particular, further exacerbate gender inequality if planning and implementation is gender blind. For example, in Malaysia, the Ministry of Women, Family, and Community Development attempts to address women's needs and concerns very much within the 'family' and 'community' framework. Its linkages with the Ministry of Energy, Communications and Multimedia are very weak. Nor does the Ministry of Women, Family and Community Development have strong links with the e-Business Department of the Multimedia Development Corporation (MDC) for issues faced by women-owned SMEs. If ICT-type of projects are adopted, their selection is based on how they complement and support women in meeting their traditional roles and responsibilities and practical gender needs.

With the growing proliferation of ICTs, a number of governments in East Asia are keen to be e-savvy and e-equipped. However, these efforts centre more on the delivery of government services to the public using electronic means. This is known as e-government. E-governance, although much talked about in the region, is very different from the concept of e-government. E-governance not only covers the implementation of various programmes that apply ICT in delivering government services; the more critical aspect is in the promotion of transparency and accountability. E-governance, therefore, is the transformation of governance processes resulting from the continual and exponential introduction into society of more advanced digital technologies. E-governance should strongly focus on how these new technologies can be used to strengthen the public's voice as a force to reshape the democratic processes and refocus the management, structure and oversight of government to better serve the public interest. Defined in this way, e-governance becomes significant in the exercise of citizenship and direct public participation in government activities. Both are key elements in women's empowerment and the achievement of gender equality. It can potentially bring forth new concepts of citizenship, both in terms of needs and responsibilities.⁴⁷ For many governments in East Asia however, allowing e-governance to make it possible for their citizens (and non-citizens) to truly communicate with government, participate in policy-making and strengthen democratic processes remains a huge challenge. There are three main

barriers to e-governance, none of which are given serious consideration in e-government discourse, including at the WSIS. These are:

- 1) The serious gaps in universal access to ICT as a means of participation;
- 2) The complete absence of gender equality considerations in e-governance plans of governments and;
- 3) The restrictions on civil liberties and freedom of expression imposed by undemocratic and fundamentalist states that seriously put into question citizens' access to information and participation in political processes.

In truth, even where there are constitutional guarantees for women's rights and non-discrimination based on gender, these more often than not are insufficient to ensure gender equality, particularly when women have been denied their rights on the basis of culture and tradition, and hence, within these contexts, the denial of women's rights has traditionally not been seen as discrimination. The following four case studies exemplify the issues described above.

The case study of the Philippine government's Government Information System Plan (GISP) below shows how ICTs are still considered an area devoid of gender implications. ICTs are deemed to have the same and equal impact on members of the community, whether they are men or women, young or old, fully body-abled or not.

Case Study of the Philippines' e-Governance

In July 2000, the Philippine government adopted the Government Information System Plan (GISP) as the country's master plan for reforming governance through ICTs. The GISP sets the enabling policy, institutional infrastructure and environment, direction, priorities and benchmarks for computerisation of key government operations and activities over the next five to ten years. It is envisioned as the blueprint for an electronic bureaucracy that is widely and readily accessible to its constituency. The plan fails to deliver on two fronts. First, it is gender blind and totally devoid of any provisions that address gender gaps in access, education, government services and political processes. Interviews conducted with the main government agencies responsible for the country's national ICT programmes and key government departments delivering public services reveal that policy makers have not thought of factoring in gender in their e-governance projects at all. In fact, the first question that was invariably asked in these interviews was 'What does gender have to do with ICT or with e-governance projects?' Personnel in IT units, management information systems divisions, women's bureaus and gender and development technical working groups equally shared this same puzzlement.*

Even when the basic elements of gender mainstreaming are in place, none of those responsible for gender mainstreaming in these departments had any awareness about gender issues in relation to ICT programmes or projects within their department. Most of the personnel were familiar with ICT mainly through the use of email in their work, their information work for their department's website and the use of their department's

intranet. None of the gender and development programmes or projects were related to ICT directly. Awareness about the differences in perspectives, roles, needs and interests of women and men in relation to ICT was absent. At the same time, there was very little understanding that e-services may entail specific planning requirements that take into consideration women's and men's access, know-how and control over ICT.

Second, the GISP sets an unrealistic target of ensuring that every citizen has online access by 2010 in a country where formidable economic and connectivity problems remain. Available data about access to the Internet indicates that the digital divide is very real with figures ranging from a low 2 percent to a high 6 percent of the population having Internet connection. While teledensity is higher at 9.05 per 100 persons, majority of Filipino homes do not have a phone because they cannot afford it or the infrastructure is not available. The most positive development in telecommunications access in the country is the phenomenal growth in mobile telephony and the popularity of SMS or text messages as a source of information. While sex-disaggregated data is almost impossible to find, general access information indicates that women's access to the Internet is marginal, concentrated in the main urban centres and skewed towards the educated and the middle as well as upper classes.

Notes:

* Chat Ramilo conducted a gender assessment of the Philippines government's gender capacity in e-governance. The gender assessment was commissioned by the Canadian International Development Agency's for its 'e-Governance for Efficiency and Effectiveness Programme' which will provide US\$8 million in bilateral cooperation funding to support the Philippine government's e-governance programme.

Source: Ramilo (2002)

Why does the question 'What does gender have to do with ICT or with e-governance projects?' still persist? The Philippine case study above shows exactly how gender is still considered an issue apart from other issues. Gender equality as an issue has not been mainstreamed at all, despite the rhetoric. Cross-sectoral cooperation on gender equality issues is negligible if it at all exists. This facilitates a policy environment that can work against or negate any positive effects from gender equality measures that are initiated by women's affairs committees, divisions and ministries, assuming they are well-designed. How, then, can gender equality concerns and women's empowerment issues manifest in these governance structures if the attitude is going to be that gender equality has no place in science and technology, and worse, in governance, when half of a country's citizens are women?

We have noted from the Philippine case study that for e-governance to be effective, the distribution of ICT infrastructure is critical. In terms of ICT infrastructure, the liberalisation of the telecommunications sector has generally helped nations and their peoples to get connected at lower costs. However, before ICT infrastructure can even permeate rural areas at levels comparable to those in urban areas, states are already beginning to exercise their muscles in controlling 'who gets what information, who does what with that information, and who decides'. For example, from 2004 to 2005, Malaysia has seen an increase in the number of attacks made on Internet users, despite assurances by the former Prime Minister, Tun Dr. Mahathir Mohamad, that the Internet would not be censored. This was encoded in law under the

Communications and Multimedia Act 1998, which covers both the Internet and broadcast media. Three bloggers were threatened with prosecution under the Sedition Act 1948 (Amended 1971), which allows for a fine of up to RM5000 (or US\$1351) and up to three years in prison for a first offence. All three bloggers were 'hauled up' based on comments about religion.⁴⁸ Three case studies below further illustrate this growing threat.

Case Study of China's Internet Filtering

China's Internet filtering regime is the most sophisticated effort of its kind in the world. Compared to similar efforts in other states, China's filtering regime is pervasive, sophisticated and effective. It comprises multiple levels of legal regulation and technical control. It involves numerous state agencies and thousands of public and private personnel. It censors content transmitted through multiple methods, including web pages, web logs ('blogs'), online discussion fora, university bulletin board systems and email messages. Testing by the OpenNet Initiative (ONI) - a collaborative partnership between the University of Toronto, Harvard University and the University of Cambridge - found efforts to prevent access to a wide range of sensitive materials, from pornography to religious material to political dissent. Chinese citizens seeking access to web sites containing content related to Taiwanese and Tibetan independence, Falun Gong, the Dalai Lama, the Tiananmen Square incident, opposition political parties or a variety of anti-communist movements will frequently find themselves blocked. While it is difficult to describe this widespread filtering with precision, ONI's research documents a system that imposes strong controls on citizens' ability to view Internet content.

Unlike the filtering systems in many other countries, China's filtering regime appears to be carried out at various control points and also to be dynamic, changing along a variety of axes over time. This combination of factors leads to a great deal of speculation as to how and why China filters the Internet. These complexities also make it very difficult to render a clear and accurate picture of Internet filtering in China at any given moment. Filtering takes place primarily at the backbone level of China's network, though individual Internet service providers also implement their own blocking. ONI's research confirmed claims that major Chinese search engines filter content by keyword and remove certain search results from their lists. Similarly, major Chinese blog service providers either prevent posts with certain keywords or edit the posts to remove them. ONI also found that some keyword searches were blocked by China's gateway filtering and not the search engines themselves. Cybercafés, which provide an important source of access to the Internet for many Chinese, are required by law to track Internet usage by customers and to keep correlated information on file for sixty days. As a further indication of the complexity of China's filtering regime, ONI found several instances where particular web pages were blocked but the domain was accessible, despite the fact that the source of content appeared consistent across the domain - suggesting that filtering may be conducted at a finer level in China than in other countries that ONI has studied closely.

Moreover, China's Internet filtering appears to have grown more refined, sophisticated, and targeted during the years of ONI's testing.

China's intricate technical filtering regime is buttressed by an equally complex series of laws and regulations that control the access to and publication of material online. While no single statute specifically describes the manner in which the state will carry out its filtering regime, a broad range of laws - including media regulation, protections of 'state secrets' controls on Internet service providers and Internet content providers, laws specific to cybercafés and so forth - provides a patchwork series of rationales and, in sum, massive legal support for filtering by the state. The rights afforded to citizens as protection against filtering and surveillance, such as a limited privacy right in the Chinese Constitution, which otherwise might provide a counter-balance against state action on filtering and surveillance, are not clearly stated and appear to be considered by the state to be inapplicable in this context.

Source: ONI website, www.opennetinitiative.net/studies/china/

Email and online discussion fora are the main means by which women are known to communicate over the Internet once they have some basic ICT skills. The 'I on the Mouse' report, which documented the findings of research carried out in Asia and the Pacific on the use of ICTs for women's advocacies and networking in 2000, shows that the dominant use of ICTs by women's groups is in the area of email, used primarily for the dissemination of information (Shivdas 2001). Surveillance and filtering carried out by governments on Internet activities can severely affect the online spaces that women and women's groups have managed to use for mobilising around women's rights and gender equality issues.

It is not just access to ICTs and information per se that are critical. The two case studies below show how information can be withheld and manipulated; hence, who controls the medium through which information is disseminated is equally important. Both the case studies below highlight the need for the plurality of media in all nations, and for an independent media.

Case Study of Broga, Malaysia

When withheld, the lack of information alone can have a devastating effect, with the ability to disempower and further impoverish people. This is a pending case for citizens in Broga, a small, unheard of town near Kajang, which was home to about 300 families and an *Orang Asli* (indigenous people) village in Malaysia.

The citizens of Broga are mainly Malaysian-Chinese, Mandarin-speaking vegetable farmers, with basic literacy levels and very little command of English. When the decision was taken to shift a 1500 tonne capacity incinerator to Broga, no information was shared with the community in Broga of the health dangers that the incinerator would pose. Although Broga is comparatively less populated, it is a hilly, forested zone with a water catchment area supplying drinking water to over 333 residential housing estates of about two million people, and clearly the decision to shift the incinerator to Broga -

‘an environmentally sensitive area’ - broke all national environmental regulations. However, one woman in Broga, Alice Lee, who had very little understanding of English and was better versed in the Malay language, but more so in Mandarin, took the lead in obtaining through the Internet the information that she and her farming family needed on the Ebara Corporation, the company which held the contract to design and construct the gasification-type incinerator in Malaysia, which disturbingly is still in a pilot stage in Japan and that, too, in much smaller capacities. Alice networked and gained support of the nearby communities in Semenyih and of lawyers for legal aid. Her efforts are bearing fruits today, as the issue is no longer one that concerns only the poor Malaysian Chinese farming community in Broga but has become an issue that concerns all Malaysian races within and around that area. The Prime Minister’s Office has now asked the housing and local government ministry to clarify certain points raised in a memorandum submitted by Kampung Broga residents demanding that the 1500 tonne incinerator plant project nearby be permanently scrapped (Theophilus 2005).⁴⁹

Broga in Malaysia is an example of how the private sector seeks markets at the expense of the poor. It is also an example of how the lack of media freedom and lack of diversity of media ownership impacts what and how information is presented.⁵⁰ This is the impoverishing reality of globalisation. In this particular case, Japanese companies, with backing from their government,⁵¹ were seeking new markets outside of Japan for their incinerators,⁵² deceptively selling them as ‘sustainable’ and ‘environment-friendly’ solutions for handling waste. If it had not been for their ability to access information through the Internet and analyse it in their contextual situation, the citizens of Broga in Malaysia would probably have been doomed to further impoverishment at the expense of their livelihood, potential income, health and social inclusion.

Since the completion of a 25-minute documentary entitled ‘Clean Shit’ (now renamed ‘Alice Lives Here’),⁵³ the hearing of the suit has been adjourned once more. Alice Lee’s *locus standi* to represent the people of Broga has been disputed. She is not a land owner, although a resident of Broga. Their interim stop-work order has also expired and work on the project has been revived. Recently, the Land Office has aggressively begun the process of acquiring people’s land for the project. A total of sixty eight land owners, including Alice’s mum, have been directly affected.

Source: Kuga Thas (2005)

The case study of Broga shows that while English can be a barrier, it is not necessarily a barrier that women cannot overcome if their rights are being threatened. Alice’s ability to seek out information over the Internet on the Japanese corporation is a case in point. However, her rights and the rights of the community who live in Broga are threatened by political and profit-making interests. Having access to ICTs is insufficient in empowering women if support - legal, financial and political - is not provided to women.

Case Study of Supinya Klangnarong, Thailand

Supinya Klangnarong, a WACC scholar, journalist, and freedom of speech and media reform campaigner, is a 32-year old woman who made the mistake of publicly noting in an interview published in the Thai Post that Shin Corp, a Thai media and telecommunications company, had experienced a three-fold rise in profits between 2001 and 2002, since Prime Minister Thaksin Shinawatra had come to power. She had on this basis questioned the relationships between politics and commercial interests. Supinya asserted that the information she used in her statement was, in fact, based on the firm's own press releases. Therefore, what she did was constitutional and in the public interest. Shin Corp was founded by Prime Minister Thaksin Shinawatra and was owned by his family until it was sold to a Singaporean company in February 2006. Supinya was made to face a US\$10 million (400 millions Baht) libel suit filed by Shin Corp. Shin lawyers offered to withdraw the suit if Supinya apologised for her comments, but she turned down the offer and called on the company to acknowledge the public's right to scrutinise its activities. Supinya and the Thai Post were acquitted of libel on 15 March 2006.

Source: WACC website, <http://www.wacc.org.uk>

The case study above of Supinya Klangnarong is a clear case of media ownership and control. What does it say if a young woman cannot question issues surrounding accountability and transparency of her government? What does it say if a US\$10 million libel suit can be filed against an individual young woman when all she asks for is transparency and accountability of her government's transactions? How can governments remain accountable to their citizens if the citizens do not know or are not allowed to know what their governments are doing?

While the three case studies above are about access to information, they provide three very different scenarios; yet all three have power as a central theme. The first is where the public may never know that their private emails and online activities are under surveillance or being filtered; hence empowerment through use of information, if it happens at all within such a controlled environment, happens almost in an indoctrinated manner - 'empowered' only by the information that one is 'allowed to have', without any recognition of the individual's right to self-determination and integrity. In this particular case study, the people had access to ICTs and information, but they were not the decision-makers on the suitability of the information they were allowed to access. The appropriateness of the information was decided for them by the authorities concerned. The second is where information is purposely kept from the people and manipulated, yet empowerment takes place because 'the truth' is found through access to ICTs and other information channels (e.g. networking, word-of-mouth, etc.) and as a result, small spaces conducive for the claiming of rights had opened up. The third shows the need for plurality of media ownership and control to allow a more conducive atmosphere for transparency of information, as well as a political and legal environment that supports empowering use of information for enforcing accountability. Globally, there is a growing concentration of media in the hands of less than ten corporations, and while there is an increased presence of women in media, particularly as journalists, women are still a long way from achieving equality with men in the newsroom (Toro 2005). This has affected how women are portrayed and how women's concerns are not prioritised in media.

The case studies above further exemplify how the provision of ICTs alone is insufficient for women's empowerment if such access remains unaccompanied by an enabling political, legal, economic and sociocultural environment. ICT interventions for women need to be informed by empowerment and not only by instrumentalist perspectives. This does not mean to say that access to ICTs cannot empower women. It certainly can, but the whole process of ensuring access has to be closely linked to increasing women's ability to use ICTs as they deem fit. This is the first level of empowerment that women can have according to Sara Longwe (1995).⁵⁴ Access as defined by Longwe is when women improve their own status, relative to men's, through their own work and organisation, arising from increased access to resources. For example, women farmers may improve their production and general welfare by increased access to water, to land, to the market, to skills training or to information. But were they 'given' information considered appropriate by 'higher authorities'? Or did they increase their own access? If the latter, then this suggests the beginning of a process of conscientisation - of recognising and analysing their own problems, and taking action to solve them. This is clearly illustrated in the second case study, on Broga.

Making the Links for Women's Empowerment in the Information Society from Local to Global

The changing circumstances around the evolution of the global information society are best understood in terms of the politics of trade and the decreasing sovereignty of developing countries in the global political and socio-economic context. Even though there are a number of internationally agreed documents that promote women's rights and gender equality (in particular, the Beijing Platform for Action of the Fourth World Conference on Women in Beijing and the Convention on the Elimination of All forms of Discrimination Against Women), these commitments remain largely only on paper, as governments in developing countries find themselves further disempowered to negotiate better terms and conditions surrounding trade. Experience has shown that signed bilateral Free Trade Agreements (FTAs) between the USA (and/or developed countries), on the one hand, and developing countries, on the other, have undermined the ability of developing countries to pull themselves out of poverty and have, in fact, further impoverished them. Significant and profound impacts have resulted in a lack of food security, loss of employment and job security, the obliteration of access to and ability to develop generic drugs and therefore the inability to ensure cheaper access to healthcare, a weakened resilience of the domestic industry and service providers, the decreased viability of small farms and firms, and the list goes on. For women and the poor, FTAs by their governments with the USA and/or developed countries can mean, among other things:

- 1) The inability to use open source and free software due to software patents;
- 2) The inability to develop local content without high costs; and
- 3) The inability to ensure transfer of technology and technical know-how.⁵⁵

In short, bilateral FTAs facilitate a neocolonisation of countries that is subtle but can be equally discriminatory and violent in its outcomes. All of the above 'inabilities' will have significant negative impact on the application of ICTs for development - the key thrust of the WSIS. However, the WSIS did not address these issues, since the WSIS was about the 'information society' and not about trade.⁵⁶

Instead, Phase One of the WSIS encouraged and tried to support a multistakeholder approach that included the private sector and civil society in discussing issues surrounding the global conceptual framework of the information society. Dominating the discussions were 'the digital divide' and issues of infrastructure and access to ICTs. In the negotiations towards the final documents, the main country to be vocally supportive of women's empowerment and gender equality issues was Canada. During the regional preparatory phase leading up to the Phase One Summit in Geneva, the Philippines was the country that women's rights advocates relied upon. Other East Asian countries were relatively silent on issues surrounding women's empowerment and gender equality, citing that there were already international consensus documents for that purpose.

Even though the first Human Development Report, in 1990, put people back at the centre of development, during the first phase of WSIS in 2003 and during subsequent follow-up discussions and meetings between governments and the private sector in particular, the market has again been relied upon as the only feasible solution to sustaining development (not to be equated with any notion of 'sustainable' development). The role of the private sector, where the big players are the transnational corporations, has not shifted to one that upholds social responsibility in promoting and encouraging the development of 'a more equitable' information society'. One example that illustrates this absence of a substantive social role by the private sector in a country is Myanmar (Burma). When launching its report on Internet filtering in Myanmar entitled 'Internet Filtering in Burma in 2005' (<http://www.opennetinitiative.net/burma/>), ONI provided a press release (dated 12 October 2005) which stated:

Burma's system of Internet controls places the country among the world's most restrictive Internet regimes, and it appears to offer the clearest example yet of a Western company offering filtering technology that permits censorship of political speech to an authoritarian government for use upon its populace.⁵⁷ The combination of expensive access, harsh laws and software-based filtering makes the Internet largely a state-controlled space in Burma.⁵⁸

It is not just the role of the private sector that has come under critical review by academics and activists alike, but also the growing threat by commercial interests to the original values and intentions behind the development of the Internet.

While it is not surprising that a country under military rule attempts to stifle freedom of speech and access to information online, what is surprising is that the tools used by Burma to do so are provided by the knowledge and expertise of Silicon Valley's best and brightest. As with an increasing number of other states where basic human rights are denied, such as Iran, Tunisia and the United Arab Emirates, the leaders of Burma have turned to western commercial technologies - in this case, the U.S. company Fortinet - to do the job of censorship and surveillance. There was a time, not that long ago, when the Internet's greatest entrepreneurs focused their talents on unleashing freedom of speech and access to information through technological innovation. In the case of Burma, regrettably, those entrepreneurial talents are being exploited by a military regime to do precisely the opposite.

- Ronald Deibert, Director of the Citizen Lab, University of Toronto (ONI 2005)

However, in opening the international processes to civil society, Phase One of WSIS did begin to push for a new global governance environment in information and communication. As Marc Raboy (2004, 1) notes in his article entitled 'WSIS, Communication and Global Governance':

The global governance environment in communication (as in much everything else) is based on the interaction and interdependence of a wide array of actors and policy-making arenas. Needless to say, power is not equally distributed among actors, and some sites of decision-making are more important than others. National governments still wield tremendous leverage both on the territories they govern and as the only legally authorised participants in international deliberations. Here again, the disparities are enormous but in all cases, national sovereignty is no longer absolute. Multilateral bodies, transnational corporations, and international treaties powerfully constrain the role of every nation state. Global governance is increasingly referred to as a multistakeholder process. The WSIS experience has transformed this framework most notably by sanctifying the place of civil society as an organised force in this process.

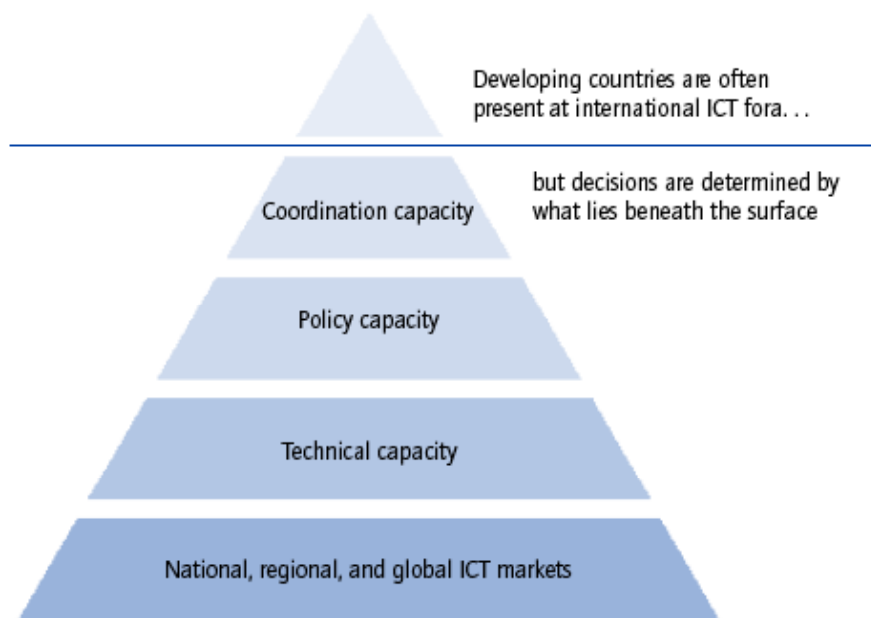
Yet, the question remains, where are women in this proposed new global governance structure? Because:

Each major institutional arena is gendered it its male bias . . . (which) is then deeply reinforced-institutionalised through the formation of social networks or shared understandings and conventions of inclusion or exclusion, justified ideologically, which privilege the participation of a particular social group.

- Anne Marie Goetz (1997)

Figure 3 below shows what exactly lies behind international ICT decision-making. At all levels, women's strategic gender interests⁵⁹ are the least represented, and they increasingly diminish in importance with each level below.

Figure 3. International ICT Decision-making: The Tip of the Iceberg



At the close of Phase One of WSIS, two critical issues remained unresolved among the participating governments: financing and Internet governance. This was not surprising since WSIS had failed to adequately contextualise its discourses in terms of the basic issue of who actually wields power and how exactly that power is used. WSIS failed to recognise that the bartering that happens at international public policy levels is very much tied to the economic and, unfortunately, military leverage of the country concerned, and issues of gender equality have no place there, let alone issues of women's empowerment.

Future Challenges

To date, the success of gender initiatives or gender mainstreaming has been measured by an increase in the representation of women in employment, politics or education, raising the awareness of gender issues within the population and the establishment of committees for the advancement of women. While each of these initiatives incorporates policy change at some level, these changes are not being supported by other changes within institutions. Future initiatives must seek to couple policy level changes with organisational changes that are designed to reform the traditional and often patriarchal cultures of institutions. These include formal institutions such as trade unions, non-governmental organisations, parliaments and business associations. Rao and Kelleher (2005) have flagged the possible challenges we face in bringing about institutional change. Four of the challenges highlighted include:

- The difficulty of implementing attitudinal change on the ground;
- The ideological split between gender mainstreaming and women's empowerment;
- A lack of skills and support at the leadership level; and
- The difficulty in measuring the success of changes due to a lack of tracking mechanisms.

These are challenges that are quite universal since no country has yet managed to close the gender inequality gap. What is particularly interesting is how the movement for gender equality has effectively made invisible 'women's rights and empowerment', as if one half of the population has vanished from that equation.

Policy Recommendations

Having touched on examples from the local context, visited the global context and reviewed the future challenges that East Asian countries will have to face, what kind of policy recommendations can be made to help ensure that women are better able to keep their governments accountable to their internationally-made commitments and to women as citizens?

1. Development policies and plans must build on global consensus agreements/documents and deploy an inter-sectional approach. Gender mainstreaming needs a nuanced approach that takes into account the diverse needs and perspectives of women emanating from differences in geopolitical, historical, class-based, racial, ethnic and other contexts. This means that the development of ICT policy in any country must also closely examine implications to the country's international trade policy, foreign policy, etc. For gender issues to be effectively addressed, strategies and solutions for achieving gender equality must strike at the root of unequal power relations - not just between men and women, but more fundamentally between rich and poor, North and South, urban and rural, empowered and marginalised.

2. Development policies and plans must be people-centred. Only development that embraces the principles of social justice and gender equality can be said to centrally address women's needs and redress fundamental economic and sociocultural divides. Market-based development solutions often fail to address more deep-rooted and persistent subordination that the poorest and most marginalised women face. In short, place priority on addressing gender inequality first in order to reduce poverty, rather than prioritise addressing poverty first and then hope that there will be a trickle-down benefit which will address gender inequality somewhat.

3. Ensure a conscious adoption of the rights-based approach in development policies and plans. A human rights framework needs to be applied in the issues analyses, strategies and solutions when addressing access to ICTs. Women's human rights instruments and crucial communications rights such as freedom of expression, the right to information, and the right to communicate, need to be promoted and protected. Emerging concerns such as the 'information security' on the Internet should not in any way infringe on people's privacy and right to communicate freely using ICTs. Policies that seek to redress the growing use of the Internet for trafficking, violent adult pornography, and paedophilia rings, must not under any circumstances be used for centralist control of all other content development and communication exchange over the Internet.

4. Ensure and safeguard the diversity of media and the plurality of media ownership. Traditional and indigenous forms of media and communications more accurately reflect the information and communications needs and preferences of the diversity of cultural, linguistic, ethics and value systems in East Asian societies. Respect for this diversity needs to be reflected in the diversity of solutions and strategies, since a focus on one solution, i.e. the digital solution, is antithetical to human opportunities and to the notion of democracy overall. E-solutions must always be complemented with equally effective non-e-solutions. Portrayal of issues must allow for different perspectives.

5. Support local solutions that are affordable for all. The current framework of infrastructure development of ICTs is heavily reliant on 'creating stimulating regulatory environments and fiscal incentives' to encourage investments from multinational IT, media and entertainment corporations from the North in countries of the South. National ICT policies must encourage local, low-cost and open source solutions and South-South exchanges that prevent the growth of monopolies in the ICT sector. There is also an urgent need to encourage local content producers, through public funding support to ensure the promotion and protection of local languages and cultural diversity.

Concluding Remarks

The examples from East Asia show that achieving gender equality is not as simple as providing some basic ICT skills and providing access to ICTs. Programmes, no matter how well-intentioned, will not be able to bring about permanent change as resources run out and nothing is left to further persuade and sustain initial efforts. More thought, effort and, particularly, resources need to be put in place in order to ensure women's self-empowerment, as this internalisation of empowerment is the real sustainable driving force towards change. However, these requirements only form a small piece of the bigger picture. Women's empowerment, whether through the use of ICTs or not, cannot be addressed without addressing the issues of power. The strong political power play that takes place behind the scenes of 'who gets to use ICTs,

when and how, and what they get to access' are further complicated by the fact that there is one superpower - the USA - which has the loudest say over what can or should happen in the world, yet is in fact, at the end of the day, only accountable to its citizens.⁶⁰ One big, but maybe impossible, step towards ensuring that gender equality is better addressed through international platforms and human rights instruments is to see the USA finally ratify the Convention on the Elimination of all forms of Discrimination Against Women (CEDAW) and its Optional Protocol. Expansion of the powers and purview of the International Criminal Court may also be necessary considering how trade is increasingly about political power plays that result in discrimination, exploitation, violence and increased suffering.

It should also be acknowledged that many countries are aligned with the USA's stand on cybercrime issues and issues of Internet security, using the USA's stand as a convenient tool only because terrorism in most of these governments' understanding is defined as anything subversive to their existing power regimes. So while we can criticise the USA for many of the political power plays behind finance, trade and development aid, we cannot keep excusing our governments from their rightful accountability to their own citizens either. Women on the ground must be empowered to keep their governments accountable through the access, discernment and use of information, if we are to ever witness the 'utopic' information society.

Endnotes

- * East Asia includes countries in the Southeast Asian and Mekong region.
- 1 Magaly Peres Pazello (2005), referring to the work of Manuel Castells, 'The Rise of the Network Society', argues that with the emergence of the new flexible and powerful technological paradigm, ICTs have turned information into an output of a productive process, which in turn can bring about institutional transformations, resulting in the intensification of unequal development beyond the boundaries of the North-South division.
- 2 UNIFEM (2000) reports that income inequalities between both countries and individuals have been accelerating since the early 1970s. According to the UNDP Human Development Report 2005, 18 countries with a combined population of 460 million people registered lower scores on the Human Development Index (HDI) in 2003 than in 1990 - an unprecedented reversal. According to the same report, in the midst of an increasingly prosperous global economy, 10.7 million children every year do not live to see their fifth birthday.
- 3 For more information on communication rights, see the World Association for Christian Communities' Centre for Communication Rights portal, <http://www.centreforcommunicationrights.org>.
- 4 This is not to say that ICT heralded the way to knowledge-sharing. Throughout history, knowledge is empowering, and it has been passed on from one generation to another through written texts, folk lore, word-of-mouth, religions and customs. However, within these traditional knowledge systems, knowledge remained preserved geographically and hierarchically. ICTs break down the socially, politically, economically and geographically constructed barriers to knowledge-sharing in an unprecedented manner. Hence, in the information society, knowledge should be able to perpetuate and enjoy a continuous value-addition and customisation.
- 5 This position was first outlined in 'Financing the Information Society in the South: A Global Public Goods Perspective' by Pablo Accuosto and Nicky Johnson of ITeM, in June 2004 (see Association for Progressive Communications 2006, 10). A public good has two critical properties, non-rivalrous consumption - the consumption of one individual does not detract from that of another - and non-excludability - it is difficult if not impossible to exclude an individual from enjoying the good. Joseph E. Stiglitz has discussed the concept of knowledge as a global public good in detail and has spoken of the need for global collective action in protecting this global public good for the equal benefit of all. See <http://www.worldbank.org/knowledge/chiefekon/articles/undpk2/>.
- 6 WSIS was formally created as a result of Resolution 73/2001 submitted at the Plenipotentiary Conference of the International Telecommunications Union (ITU), subsequently ratified by the UN General Assembly, where preliminary negotiations on topics, approaches, and objectives centred mainly on the Internet structure. The ITU, which was

responsible for proposing and carrying out the Summit, has become an organisation where large telecom companies play a key role. The ITU includes large multinationals (sector members) in addition to governments (state members). However, in the WSIS negotiation processes, apart from governments and the private sector, civil society too was involved (Pazello 2005, 2).

- 7 The WSIS was continuously claimed as the first Summit in which all three sectors - government, private sector, and civil society - were actually involved in the negotiation processes. However, (Pazello 2005) contests this citing the UN Conference on Financing for Development which was held in 2002 and which resulted in the development of the Monterrey consensus.
- 8 Internet governance and issues of security are still unresolved topics from Phase One of the World Summit on the Information Society (WSIS). However, there is a growing consensus among nations of the importance of signing the Council of Europe's Cybercrime Treaty which is an international agreement created for the ostensible purpose of helping police cooperate on crimes that take place on the Internet. Unfortunately, the treaty, which was drafted with very little public input, requires signatory nations to cooperate with foreign dictatorships and give invasive new surveillance powers to law enforcement. It also lacks protections for privacy or other civil liberties, and applies far more broadly than to just the Internet. What is curiously interesting is that the final draft of the Treaty was ready by 25 May 2001, long before the September 11 2001 attacks, and was opened for signatures on 23 November 2001. For more information, see <http://www.treatywatch.org/>.
- 9 In addition to promoting and dealing with the liberalisation of telecommunications services and tariff-free trade in information technology products, the World Trade Organisation (WTO) addresses intellectual property rights (IPRs) and e-commerce issues. The General Agreement on Trade in Services (GATS) and the Agreement on Basic Telecommunications (ABT) have been used to pry open the global telecommunications market, while the Trade-Related Aspects of International Property Rights (TRIPS) agreement of the WTO not only precludes possibilities for developing countries to obtain affordable generic medications to treat HIV/AIDS, but also precludes developing countries from benefiting from the fruits of modern science that has its roots in local and indigenous knowledge which originates from these countries in the first place - most times knowledge held by local women. In the TRIPS agreement, intellectual property was extended from individual works to intellectual creation, making software copyrightable. With this new agreement, WTO is effectively precluding developing countries from the benefits of ICTs, affecting the public's access to knowledge in the public domain and to copyrighted works, limiting legitimate opportunities for cultural appropriations, stifling learning, creativity and innovation, and therefore, efficiently placing curbs on the democratisation of knowledge. The laws that regulate patents are national laws but agreements such as TRIPS make sure that these laws are extended internationally. For a fuller discussion, see 'Chapter 19: Intellectual Property' in Chris Nicol (2003, 85-96).
- 10 Phase Two of WSIS witnessed the Tunisian government's clampdown on freedom of expression (including website filtering, intimidation of journalists, and the sabotage of the Citizen's Summit on the Information Society, a WSIS side-event organised by a group of international organisations in partnership with Tunisian human rights and media freedom groups. This raised critical questions on the thoroughness of procedures in choosing the host country for UN summits, the protocols for host country agreements with UN agencies and the commitments required of the host country (Association for Progressive Communications 2006, 7-8).
- 11 The term 'thy' means 'your'. There is an inherent belief that naming allows you control over that person. This is particularly highlighted in biblical and spiritual texts. Feminists recognise the importance of language, and that men have historically been in positions to define the words that are used and thereby define the context of women's realities vis-à-vis men's.
- 12 See the earlier discussion of WSIS and Figure 3 for an idea of who actually wields decision-making power in the field of ICTs.
- 13 However, the Internet Backbone Service Providers argue that they do not charge developing country ISPs any more than they do other customers. They cite poor telecommunications infrastructure at the regional and national levels, fewer peering points than elsewhere, and a lack of genuine competition in most developing countries, as reasons for the higher international costs. For a fuller discussion, see Chapter 4 on 'Market Structure Monopolies and Multinationals' in Nicol (2003, 30-33). For further reading on this and other issues relating to financing ICT as discussed in the context of WSIS, see Association for Progressive Communications (2006, 6).
- 14 Fewer than one in ten people worldwide speak English (Nath 2000).
- 15 For a more extensive discussion, please refer to UNESCAP (2007).
- 16 See <http://foi.missouri.edu/internationalfoi/> for more information.

- 17 Thailand's Official Information Act of 1997 was to guarantee government transparency, make public agencies clearly accountable, enable the people's participation in the formulation and implementation of government policy, and provide access to the information necessary to do so. The law's scope is linked to the 1997 Constitution. Article 58 of the Constitution establishes a 'right to know'. A right to privacy is also established, in Article 34. The Official Information Act covers these two important rights by guaranteeing every citizen access to public information while protecting his or her privacy. The Official Information Act thus obliges the government to act in accordance with the desires of the citizens. For more information, see http://www.foi-asia.org/Thailand/Confreport_Thai.htm. For more information on the Japanese law, see <http://www.nfoic.org/international-foi-laws#JAPAN>.
- 18 Available at <http://www.info.gov.hk/access/code.htm>.
- 19 For more information on these efforts to petition for Malaysia's Freedom of Information Act, please visit SUARAM's website, <http://www.suaram.net>, and the Centre for Independent Journalism Malaysia's website, <http://www.cijmalaysia.org>.
- 20 There is no one definition and measurement of e-readiness; rather, these depend on the objectives of the study undertaken. Thus, according to the Economist Intelligence Unit, e-readiness is the extent to which a country's business environment is conducive to Internet-based commercial opportunities and its preparedness for e-business. One of the more appropriate and broader definitions of e-readiness includes issues of governance and accountability. An e-readiness definition with respect to States, based on Sen's Capability Approach and Brown's Information Based Approach, goes as follows: 'It is the preparedness of states to provide governance equitably and cost effectively and the capability reflected in the degree of integration the deprived segments of society attain after application of ICT as an e-governance tool. Apart from this, the ability of the state to provide business, the capacity to participate in the provincial level digital economy and further networking with the national level digital economy.' See www.mit.gov.in/ereadiness/2003/EX_SUMM_I-VI.pdf.
- 21 Michael Mingos (2002) acknowledges that, 'The availability of ICT statistics showing a breakdown by gender at the country level is limited, indeed almost non-existent'. Having identified the reasons behind this problem, the ITU began to ask for a more straightforward and easily obtainable statistic: the number of female telecommunications employees in a country. The results illustrated not only the difficulty of obtaining a simple statistic even for developed countries such as France, Germany, Japan and the United States, but also showed the wide variation in the data from an analytical perspective. For more information, see http://www.itu.int/ITU-D/ict/WICT02/doc/pdf/DOC07_E.pdf.
- 22 The term 'institution' takes on the meaning highlighted by Naila Kabeer (1994), that is 'as the rules for achieving social or economic ends'. These are the rules that specify how resources are allocated and how tasks, responsibilities and values are assigned. In short, these rules determine who gets what, who does what and who decides. Although institutions vary within and across cultures and are constantly evolving and changing, they are embedded in relational hierarchies of gender, class, ethnicity, sexuality, nationality, etc., that define identities and distribute power both symbolically and materially.
- 23 A number of people may not agree with this view, especially in places where the State has historically and continuously failed to effectively deliver public goods and services to the people. For example, privatisation of the healthcare sector in Latin America has been welcomed by women health activists, as expressed during the Beijing +5 review process in New York, in the year 2000. However, recently, some have begun to realise that privatisation has a very limiting effect in terms of access for the poor.
- 24 The study is a first attempt by the World Economic Forum to assess the current size of the gender gap, by measuring the extent to which women in fifty eight countries have achieved equality with men in five critical areas: economic participation, economic opportunity, political empowerment, educational attainment, and health and well-being. These five important dimensions of female empowerment and opportunity were chosen based on the findings of UNIFEM concerning global patterns of inequality between men and women.
- 25 Even in these, Asia ranks third and second from the bottom, respectively.
- 26 In measuring women's health and well-being, it was good that the adolescent fertility rate was used as an indicator of health risks among women aged fifteen to nineteen years, and as an indicator of the lack of other choices available to young women. However, the other indicators used were more traditional, i.e. the percentage of births attended by skilled health staff, and maternal and infant mortality ratios. Women's health and well-being is surely more than just her fertility. Data which directly measure ownership and control over women's bodies and sexuality, such as access to (safe) abortion, were not included. Other statements point to the report's emphasis on the inclusion of women for national economic prudence, rather than on the empowerment of women. For example, Sweden, Norway, Iceland, Denmark, and Finland were described as countries that provide a 'workable model' for the rest of the world to follow, as they had supposedly understood the economic incentive behind empowering women; yet domestic violence persists in Sweden. 'Countries

- that do not fully capitalise on one-half of their human resources are clearly undermining their competitive potential'. See comment by WEF chief economist, Augusto Lopez-Claros, at <http://news.bbc.co.uk/2/hi/business/4550789.stm>.
- 27 Available data on the UNAIDS website shows that HIV infection among women is increasing, with estimates sometimes tripling (for more information, visit <http://www.unaids.org>. Current global spending on HIV/AIDS, a disease that claims three million lives a year, represents three day's worth of global military spending.
- 28 This should not be equated to number of women-headed households alone. Here, issues are related more to access, control and allocation of opportunities and resources.
- 29 For example, the Gender Mainstreaming Action Plan (GMAP) is a strategy to engender sectoral plans that was developed by Cambodia's Ministry of Women's Affairs with the United Nations Development Programme (UNDP) facilitation. Currently 21 out of Cambodia's 26 Ministries and 2 Secretariats have set up gender mainstreaming action groups to develop plans in their sectors. For more information, please visit <http://www.un.org.kh/undp/?url=/undp/areas/gender>.
- 30 Unfortunately, women are still not valued for their productivity at the household level, and women's unpaid work remains significantly missing from quantification in national accounting. However, a recent move by the Malaysian government, which was reported by the media on 8 August 2005, has encouraged husbands to contribute to their stay-at-home wives' employee provident fund. Contributions, however, are voluntary and there is no minimum stated.
- 31 Both women's and men's generation, adaptation and use of knowledge and technology are shaped by the economic, social, cultural, political and geographical contexts in which the two sexes live but which each gender experiences in a different way (Fernandez 1994). See <http://www.nuffic.nl/ciran/ikdm/2-3/articles/fernandez.html>
- 32 Women, who are often visible in their own cultures and production systems, are becoming less and less visible as disconnected 'bits' of local – indigenous – knowledge are made known to the outside world (Fernandez 1994). Although women and men not only can have a different knowledge of similar things; a different knowledge of different things; different ways of organising knowledge; and different ways of preserving and transferring knowledge; there is little or no reference to the differentiated role of men and women in the generation, transmission and use of knowledge. Hence, the mere sharing of knowledge cannot be assumed to have the same effect on men and women if it cannot be applied further.
- 33 There are a number of replications in East Asia of the Grameen Bank's micro credit system, e.g. in Indonesia, the Philippines, Malaysia and Vietnam.
- 34 For example, through the establishment of community telecentres such as those in Cambodia and the Philippines, although all of these may not necessarily be designed from a gender perspective.
- 35 The Women's Electronic Network Training Workshop, strongly supported by UNESCAP for five consecutive years, was initiated by the Asian Women's Resource Exchange (AWORC). AWORC is an Internet-based women's information network, founded in 1999 to develop cooperative approaches and partnerships in increasing access to and exploring applications of new information and communication technologies for women's empowerment. The members of AWORC include women's information, resource and documentation centres, women's information providers and users, communications organisations working closely with women's networks. For more information on the network, see <http://www.aworc.org/inidex.html>.
- 36 According to Maxine Molyneux (1985), these are called women's practical gender interests, defined by women acting to promote perceived practical needs that they have as a part of their given gender role in the sexual division of labour. On the other end of the scale are women's strategic gender interests. Molyneux defines these as interests that are derived from a critique of male domination and a vision of an alternative set of gender arrangements that would eliminate it. Caroline Moser (1989) made a similar distinction to Molyneux but re-defined both as 'practical and strategic gender needs' and explicitly tied both to subjective claims of women, consciously identified, rather than defined outside of the context. This was to distinguish between what she called 'top-down' government approaches to development and 'bottom-up' approaches.
- 37 Illustrative case studies on the application of ICTs for development have largely come from South Asia, rather than East Asia, with most of these examples from India, Bangladesh and Nepal.
- 38 WENT, as described earlier, was an Asia Pacific regional annual training for women in the use of ICTs, and was a project that was implemented for five years continuously. At the end of those five years, an award was funded by UNESCAP as a form of acknowledgment to the most successful WENT graduate who applied her learnings from WENT for a selected community or within her own organisation.
- 39 In 2005, e-Homemakers tied in second place for the Gender and ICT Awards, organised by the Global Knowledge Partnership (GKP) and the Association for Progressive Communication Women's Networking Support Programme (APC WNSP). Two awards were given out for the economic empowerment of women.

- 40 Most of e-Homemakers' members are women who have tertiary-level education.
- 41 Given that women in Asia continue to fulfil traditional gender roles, promoting teleworking for women should be done with a conscious recognition that it will not fully challenge gender issues and concerns in relation to work and family. Home-based work can clearly address practical gender needs without necessarily challenging socially (and internally) accepted roles of women and men in the home. Home-based work can become a compromise for women so they can continue to fulfil their roles as mothers and homemakers. The long-term effects in terms of gender relations within the family will not be truly evident until further evaluation and monitoring is done. What is necessary, however, is to make sure that indicators and benchmarks in terms of changes in gender relations as a result of teleworking are developed and that evaluation of teleworking from a gender perspective is continuous (APC WNSP 2003).
- 42 The exercise, though, may prove to be complicated as unemployed men or men who have lost their jobs may also be mistakenly counted as 'househusbands'. Here, househusbands does not just mean that the husband stays at home, but that he plays an active role in undertaking responsibilities around the household which have been traditionally done by women.
- 43 Jayati Ghosh (1999) has pointed out that the possibility of easy dismissal was one of the main reasons why women found employment in large numbers during the boom years of the 1980s and early 1990s. She has also highlighted the widespread perception that female employees are more tractable and subservient to managerial authority, less prone to organise into unions, more willing to accept lower wages, less likely to expect upward job mobility and easier to dismiss using life-cycle criteria like marriage and childbirth.
- 44 Interviews conducted by Womenshub, Philippines. ICTs have enabled the outsourcing of work, which has affected women both in the South and in the North. As women in the North lose out on employment opportunities because their labour costs are higher, women in the South who may not have high level technical skills but have a reasonable command of English are being trained to handle calls at call centres.
- 45 Laws do not always necessarily properly reflect the content and intention of the country's constitution.
- 46 Unlike other indicators of progress, which show systematic differences between wealthy and poor countries and an undeniable link between poverty and gender inequality, there are no such differences in terms of women's participation in national governments. This is the only indicator that is not affected by national poverty, resulting in the fact that in some wealthy countries, women's political participation is well below that achieved in many developing nations. The United States, France and Japan, where women's share of parliamentary seats is 12 percent, 11.8 percent and 10 percent respectively, lag behind thirteen developing countries in sub-Saharan Africa, which is experiencing the greatest regional poverty in the world. In South Africa and Mozambique, women's share of seats is 30 percent, while Rwanda and Uganda have 25.7 percent and 24.7 percent respectively.
- 47 Women's agency in governance issues can be severely affected by whether they are citizens or whether they are migrant workers (legal or illegal). In East Asia, the Philippines, Indonesia and Cambodia are 'sending countries', with women making up the majority of those migrating for work.
- 48 For further reading, see 'Malaysian gov't must review laws to free media and information' by the Centre for Independent Journalism. <http://www.genderit.org/upload/ad6d215b74e2a8613f0cf5416c9f3865/CIJMalaysia.pdf>
- 49 See http://www.suaram.net/display_article.asp?ID=199. The citizens of Broga hope to go one step beyond the efforts of Kampong Bohol, i.e. to ensure that the problem does not get shifted to an even poorer community and that incinerators of that capacity are never built in Malaysia.
- 50 At the time of the controversy, big advertisements were taken out to promote the establishment of the incinerator as 'safe and for the good of all'.
- 51 It is not clear to what extent the Japan Bank for International Cooperation, Japan International Cooperation Agency and other related offices are supporting such private sector 'initiatives'.
- 52 Incinerators, including those depicted as 'state-of-the-art', endanger public health and the environment with toxic emissions, destroy huge quantities of valuable resources, burden importing countries with unbearable debts, weaken recycling, hinder job creation and community development and concentrate financial gains in the hands of big businesses.
- 53 'Clean Shit/Alice Lives Here' (2005) is directed by Ong Ju Lin and produced by Reel Power Productions. The film came first in the amateur category and won the Justin Louise Award at the Freedom Film Festival held in August 2005 in Malaysia.
- 54 For more information on Sara Longwe's women's empowerment framework, see http://www.apcwomen.org/gemkit/en/understanding_gem/longwe.htm.

- 55 For further reading, please see Third World Network (2005).
- 56 In thematic summits, government representatives are reluctant to touch on issues that fall outside their Ministries' portfolio. This results in international declarations and consensus documents that are sometimes very weak in an integrated analysis and approach to the issues of concern.
- 57 According to the Press Release by ONI (2005), the filtering software was reportedly obtained from the open source DansGuardian project and purchased from US-based vendor Fortinet. Fortinet denies that it directly sold such software to the regime, while a May 2004 article in a Burmese newspaper features a picture of the company's local sales director presenting a gift to Burma's Prime Minister at a ceremony commemorating the sale.
- 58 Myanmar is not the only country that conducts Internet filtering. China is reported to have one of the most sophisticated systems of Internet filtering (report available online at http://www.opennetinitiative.net/studies/china/ONI_China_Country_Study.pdf) and Vietnam is involving corporations to take more concrete steps to block the net, see <http://www.vermontguardian.com/global/0904/BlockingTheNet.shtml>.
- 59 Maxine Molyneux's analysis of strategic gender interests and practical needs is vital in our discussion on women's empowerment. Women's strategic gender interests enhance women's power of choice over politics, reproduction, work and income. This is where interventions are needed in order to change institutions.
- 60 But not necessarily equally accountable to each citizen since the USA's policies and programmes are not that well-known for addressing the inequalities and inequities within its own borders.

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What Women Want from IT: Views from Western Asia

Deborah L. Wheeler

This paper analyses the role that gender plays in shaping information societies in Western Asia. It starts by outlining the main factors that condition women's access to information technology - in terms of physical access as well as the the social and cultural constraints at play in women's lives - and also sketches a picture of the information society readiness of Western Asia in general. It then goes on to explore women's engagement with the information society in the region in more detail through case studies of Kuwait, Saudi Arabia, Bahrain and Jordan. In each case, an investigation of the country's e-readiness is followed by an exploration of women's narratives regarding their experiences with information and communication technologies in this context. The result is a rich portrayal of the motivations, challenges and opportunities (both realised and missed) that characterise women's relationships with information technology in the region. Using as a guide the wide range of women's voices thus explored, the paper concludes with a number of recommendations that aim to make IT policy and practice more compatible with what Western Asian women want.

Introduction

It has become commonplace in the twenty first century to link women's empowerment and information technology (IT), and many of these voices have come from women leaders in Western Asia. For example, Queen Rania of Jordan, addressing the Second Arab Women's Summit in 2002, observed that 'it is important for Arab women to make use of the latest technologies, particularly the Internet, to reshape their lives' (Jordan Times 2002). Similarly, Najat Rochidi, director of the Information and Communication Technologies for Development in the Arab Region (ICTDAR) programme at the United Nations Development Programme (UNDP) has stated that the Internet can be leveraged to expand women's leadership skills, provided that 'the "culture of machismo in Muslim countries" is also changed so that women are valued as "clever and accomplished people" in their own right "outside the tutelage of a father or husband" and not only "as mothers and caretakers"' (Rochidi, quoted in Sakr 2004, 143). The UNDP reinforced these views when in 2002, its Arab Human Development Report observed that failing to provide women with easy and equitable access to IT slows the development and progress of society as a

whole. This same report ranked expanding women's access to information technology as the third most pressing concern women in Western Asia face, preceded only by domestic violence and poverty (UNDP 2002).

Gender and IT Access

While great expectations are placed upon information technology as a tool for transforming women's lives, relatively little is known about why, how, and when such transformations take shape. This is especially true for the lives of women in Western Asia where, statistics suggest, Internet penetration rates among women are lower than in any other place on the globe.

Table 1. Women's Internet Usage by Country/Region, 2002

Region/Country	Percentage of all users
Arab States	6
China	37
European Union	25
Japan	18
Latin America	38
Russia	19
South Africa	17
United States	50

Source: Women's Learning Partnership, Technology Facts and Figures (www.learningpartnership.org/facts)

The problem of understanding women's relationship with information technology in Western Asia is compounded by an absence of current and reliable statistical data with which to grasp women's role in building regional information societies. The 6 percent or less access rate for female Internet users in the Middle East is a number that has been floating around the region (uncontested by new data) since a 1998 DIT-Net survey conducted for 'PC Magazine Middle East' generated it. Issues that complicate the measurement of women's access to the Internet (and other forms of IT) have to do with ownership. If the male head of household is listed as account owner by the Internet Service Provider, that does not tell us whether or not any women in the household use the same account. Similarly, women who have access to IT only via a community centre or Internet café are also difficult to count without more carefully targeted surveys designed to get at the gendered nature of IT access and use. When more gender sensitive assessments are performed, women may figure more equally in terms of the percentage of local individuals involved with building the information society.

Several international organisations, including the International Telecommunications Union, the World Bank, the United Nations and the World Summit on Information Society Gender Caucus, have acknowledged the need for more gender sensitive surveys of the information society (Hafkin 2003). These organisations have called upon the international community and local organisations to begin collecting data on the role that gender plays in information technology diffusion and use. Given the fact that empirical data has not kept pace with enquiry, key issues affecting our understanding of women's access to and use of IT in Western Asia remain an emergent framework. At this stage, qualitative data can serve to illuminate the richness of many West Asian women's IT lives as demonstrated below.

Qualifying Women's IT Access

Qualitative data gathered by the author throughout Western Asia (1997-2005) with the generous support of the United States Fulbright Programme, the Oxford Internet Institute, the United Nations Development Programme, the Zein al-Sharaf Institute for Development (Jordan) and the Digital Opportunity Trust (Canada) suggests that women play a much greater role in the regional information society than is presently understood.¹ When one juxtaposes our only extant statistical data (as indicated in the chart above, a mere 6 percent of users) with narratives of female Internet users throughout Western Asia, for example, it is clear that we have much to learn about West Asian women's IT practices. Emerging data, such as a recent survey of 125 female Internet café users between the ages of seventeen and forty eight, conducted in Jordan and Egypt in 2004, illustrates that many women in the region spend on average twelve hours a week in an Internet café (Wheeler 2006).² Typically, women in such cafés are accessing information they would not have access to otherwise (such as that relating to sensitive issues linked with relationships and health) as well as chatting online, which, some of those interviewed argue, allows them an ability to form and articulate a wider personal and political consciousness. The most common explanations for women's use of the Internet are chatting and the maintenance of email networks among family and friends. Such surveys, and the narratives below, suggest that women in Western Asia want access to IT, that they are getting access to IT, and that once they have access, such technologies provide paths of empowerment. It is also clear that access in itself - not to mention the paths to empowerment women take once they have access - is shaped by the local contexts of women's lives. This is especially clear in the results of the NetCorps Jordan 'IT and sustainable livelihoods' training program analysed later in this paper.

Regional Realities Challenge and Shape Women's IT Practices

There are a number of key development indicators which intervene in compounding women's access to IT and shaping the context and impact of use. For example, nearly 50 percent of women in the region over the age of fifteen cannot read and write. In terms of formal access to political power, only 3.5 percent of all seats in parliament in Western Asia are occupied by women. Most of these seats, including those held by women in Morocco, Egypt and Jordan, are only filled because the government has reserved key parliamentary seats for women. It is generally understood that without the quota system, women would not gain enough votes to be elected, if running directly against men. Illustrating the challenges women face in Western Asia in terms of grasping their full potential as leaders, a Jordanian observer notes, 'Our

community would not accept the idea of a woman to be a leader. It is difficult to convince men that this would be a good idea. Our community does not trust women's abilities'.³

In terms of access to the economy, men in Western Asia have three and a half times the purchasing power of women, and women constitute on average only 28 percent of the labour force. Many female activists in Western Asia argue that until women gain financial independence, their lives will continue to be dominated by dependence on men - brothers, husbands, fathers, sons, and beyond. These deeply entrenched relationships of patriarchy often severely limit and constrict West Asian women's independent identity formation. Financial independence is a step towards the subversion of such limits on women's lives. As one observer notes, 'If a woman can achieve financial independence, she can achieve her full potential. If she stays financially dependent on a father, brother or husband, she will not be independent and it would be difficult for her to achieve her full potential'.⁴

Women also face significant legal challenges, especially in terms of rules regarding freedom of movement: many countries still require a male family member's permission to obtain a passport or to travel abroad, and divorce laws also do not favour women in many West Asian countries.

Unequal access to information technology is therefore just one of the many forms of challenges that women in the region face. Shaping all of these gendered inequalities are three main factors:

1. Social/cultural norms:

- a. These norms define women's work generally in terms of care giving within the home - for husbands, for children, for elderly relatives, and for the sick.
- b. Definitions of women's work as primarily linked with care for hearth and home discourage women from working outside of the home.
- c. Financial dependence is maintained by discouraging women from working outside of the home.
- d. Financial dependence deters women's independent identity formation and action.
- e. Obtaining access to IT is shaped by these cultural norms, with access in the home being rare in Western Asia, and access at public centres often out of reach of women in conservative areas, who, in the words of one Jordanian observer, 'after the age of thirteen are discouraged from exiting the home, even for shopping'.⁵
- f. At play in all of these gender-based social and cultural norms is the issue of women's honour, which is one of the mainstays of patriarchy, and constrains the small and large ways in which women, often at great risk to themselves, strive to challenge these norms.

2. The state:

- a. Given strong social and cultural currents against redefining women's roles to include positions of leadership and work outside of the home, the state is constrained in its efforts to evoke change.
- b. Pushing too hard to change women's social, political, and economic roles could encourage protest and unrest within West Asian societies.

- c. Even if the state builds community IT access points for rural and outlying regions, it cannot force these conservative communities to change their attitudes about giving women access to technology, information, and public space.

3. *Feminism/IT revolution as imperialism:*

- a. The idea of 'women's liberation' is often critiqued in Western Asia by those resistant to change as an imperialist plot to weaken the social fabric of local communities.
- b. Mahnaz Afkhami and Erika Friedl (1997, xii) argue that 'the most obvious strategy for those who feel threatened' by the call for women's empowerment in Western Asia 'is to link women's rights to cultural imperialism'.
- c. The fact that many of the technologies which define the information age are imagined, invented, produced and distributed by Western countries have left some critics talking about new forms of 'electronic colonialism'.⁶
- d. Linking feminism and the IT revolution with imperialism discredits both in the eyes of those resistant to change within Western Asia.

Signs that IT Leads to Empowerment

In spite of the challenges to women's identity articulation and empowerment outlined above, some have argued, including several of those women interviewed below, that information technology is enabling at least some women in Western Asia to increase their power and influence in both public and private spheres. Some of the paths to empowerment outlined by women in Western Asia include the ways in which ICTs, especially the Internet and mobile phones, give women a global voice. Many women in the region when interviewed claim that IT empowers them by giving them access to information regarding women's rights world wide, and access to advice and information on taboo subjects like marital satisfaction, divorce support, lesbianism and women's health issues. Some women have observed that the Internet and other forms of IT give them access to professional networks which might otherwise be inaccessible to them. Some celebrate the way in which Internet technologies especially downplay the role of gender in online social interactions, thus liberating them from key gendered social constraints that are present in face to face conversations. Some view the Internet as an important tool in saving family expenditure by reducing the cost of keeping in touch with friends and family members, especially those living and working abroad. Some women interviewed claimed that IT training had given them a marketable skill - familiarity with computers - which makes them more competitive in the job market or more indispensable in the jobs they currently hold. All of these factors and more, outlined below, indicate the importance of both analysing and promoting the role of IT in Western Asian women's lives. Together, these narratives reinforce Dale Spender's observation that computers are not toys, they are paths to power (Spender 1995).

The following pages provide a brief overview of the role that gender plays in shaping information societies in Western Asia. While the discussion focuses most on the role of ICTs for personal, social and political identity formation, the institutional context of such changes as well as connected issues of ownership and control over technology and its use for collective action for women's empowerment are also touched

upon. While the intention is to give a snapshot of women's informational lives in Western Asia as a whole, given the poverty of empirical data on this subject specific case studies are used to supplement the general overview with real stories. It is through the narratives of women in the region that we can glimpse the motivations, challenges and opportunities (both realised and missed) of women's relationships with information technology. The ultimate goal of this analysis is to provide recommendations for making IT policy and practice more compatible with what Western Asian women want, using women's voices from across the region and the social spectrum as a guide.

The victories outlined below may seem miniscule when considered objectively in terms of the strength of the patriarchies that regulate women's lives in Western Asia. While having access to IT will not automatically place women in new positions of power, it is often a fundamental first step towards enabling an environment where women can learn to 'debate, mobilise and lobby' in favour of their multiple interests (Afkami and Friedl 1997, xi). We must also remember that in Western Asia, women's interests are contextually shaped and potentially as various as women's lived experiences, meaning that what may seem like a small change in one woman's life could actually produce a significant alteration in power relations when judged from within the context of a particular woman's life and circumstances. For example, in a conservative village woman's household, permission from the patriarch to attend a computer class could produce a significant alteration of normal family behaviour, whereas for a liberal family from Amman, it might require a woman using her computer training to start her own business to see an equally significant alteration in power relations. Neither transformation should be discounted as less important than the other. Both should be taken as contextually shaped expressions of the diversity of women's lived experience in Jordan. Thus, we should not discount any form of empowerment narrated by women themselves and, instead, should understand the many contextually determined ways in which power relationships interplay in shaping women's identity and existence.⁷

The Macro-Picture of the Information Society in Western Asia

States throughout Western Asia are under great pressures, both from the world community, the global economy and their own populations (especially from the new middle classes), to move towards the development of information societies. E-education initiatives, e-government initiatives, community access information technology projects, targeted training in IT and sustainable livelihoods and various capacity building projects for the regional information society are common expressions of the top-down move to build connectivity throughout Western Asia. The proliferation of Internet cafés and the rapid rise in usership throughout Western Asia represent the bottom-up approach of building the information society. There is a direct correlation between state attitudes towards information technology and levels and sophistication of IT use within society. For example, in some West Asian countries, leadership structures attempted to discourage IT use within society, for fear of potential destabilisation and security risk if citizens were fully empowered to have easy access to IT. Tactics for diminishing a society's IT capacity include making Internet access illegal, as was the case for a number of years in Syria and Saudi Arabia. Once Internet use is legalised, states in Western Asia use a host of strategies for keeping use concentrated in privileged pockets of society, by keeping costs for Internet access and computers high; heavily filtering Internet content; and stalling the spread of high speed Internet access, thus making it frustrating and time consuming to surf over regular land lines. More draconian measures for slowing Internet spread include

arrest and harassment of Internet users who overstep the bounds of appropriate use. This definition of 'appropriate' use varies from state to state, but in the past, users have been arrested and punished in Syria, Bahrain, Tunisia, Egypt and Jordan, for oppositional or immoral purposes. In the words of an Algerian exile whose family is living in Tunisia, 'I cannot get my relatives to use the Internet to communicate with me here in the States. They say the government has conditioned the people to think that using an Internet café means that one is either surfing porn or trying to oppose the government, so people want to keep their reputations clean and stay away from public access sites'. Another tactic for slowing the growth of Internet use in Western Asia is maintaining a complicated and lengthy process for obtaining business licenses to open Internet cafés and other IT-related businesses. Many Internet café owners in Jordan when interviewed claimed that it took as many as three years to get their business licenses to open their cafés. Every state in Western Asia has used one or more of these strategies to keep IT penetration 'regionally appropriate', i.e. concentrated in the hands of those who need it - business men and women and the cosmopolitan elite - and out of the hands of those who shouldn't have it - like the poor and disenfranchised, Islamists, or any other groups/individuals who might use such empowerment to press for change.

The rapid growth in regional Internet connectivity, especially in the past two years, throughout Western Asia suggests that in spite of state reticence and security concerns, pressures from the population and from the global community are producing institutional change in information environments. For example, until 2000, the Internet was growing and spreading more slowly in Western Asia than in any other world region (perhaps because of the predominance of security concerns resulting in state tactics as described above). As of 2006, the Internet is growing and spreading more rapidly in Western Asia than in any other world region, thus suggesting that states in Western Asia are no longer adopting a 'wait and see' approach to the Internet and instead are giving in to social and global pressures to embrace the information age. Table 2 (see p. 58) illustrates the phenomenal pace of recent IT diffusion in the region.

In most cases in Western Asia, the nature of local and national information societies is as much a reflection of state attitudes towards information diffusion throughout society as it is a reflection of society's demand and capability for information resources. For example, in Jordan, where Internet access has grown in the last five years by more than 250 percent, King Abdullah II has played a defining role in promoting access to IT via the Knowledge Station project. With the support of the King Abdullah Fund, and the United Nations Development Programme, one hundred community knowledge stations have been established throughout the Kingdom. These community access points to IT have been especially important for the urban and rural poor, and are found in places like Ma'an and Tafeilah, as well as Eastern Amman. These places were identified by Jordan's regional Human Development Report for 2004 as ones with great pockets of poverty and a lack of opportunities to create sustainable livelihoods. In these IT centres, Jordanians can obtain International Computer Driving License (ICDL) certification, which, it is hoped, will enhance their employability. Apart from accessing Internet at these centres, citizens can also take up government subsidised computer training courses and, in some cases, courses in IT and sustainable livelihoods (as evidenced by the NetCorps Jordan programme profiled below). A high percentage of local women participate in such IT training programmes, with female participation often as high as 67 percent.

Table 2. IT Diffusion in West Asia

West Asia and North Africa	Size of Population (2005)	Number of Internet Users (2000)	Number of Internet Users (March, 2005)	Percentage of change 2000-2005
Algeria	32,557,738	50,000	500,000	900.0
Bahrain	707,357	40,000	195,700	389.3
Egypt	69,954,717	450,000	3,000,000	566.7
Iran	68,458,680	250,000	4,800,000	1,820.0
Iraq	26,095,283	12,500	25,000	100.0
Israel	6,986,639	1,270,000	3,040,000	139.0
Jordan	5,788,340	127,300	457,000	259.0
Kuwait	2,530,012	150,000	567,000	278.0
Lebanon	4,461,995	300,000	500,000	66.07
Libya	5,980,693	10,000	160,000	1,166.7
Morocco	31,003,311	100,000	1,000,000	900.0
Oman	2,398,545	90,000	180,000	100.0
Palestine (West Bank)	3,997,861	35,000	145,000	314.3
Qatar	768,464	30,000	140,800	369.3
Saudi Arabia	21,771,609	200,000	1,500,000	650.0
Syria	18,586,743	30,000	610,000	1,933.3
Tunisia	10,116,314	100,000	630,000	530.0
Turkey	73,598,181	2,000,000	6,000,000	200.0
United Arab Emirates	3,750,054	735,000	1,110,200	51.0
Yemen	19,600,009	15,000	100,000	566.7
Total for Western Asia	459,112,545	5,994,800	24,660,700	411.4

Source: www.internetworldstats.com

While access to the Internet has more than quadrupled over the past five years in most countries in Western Asia, when user communities are considered as a percentage of the population penetration figures are still low as measured by conventional techniques. In many countries throughout Western Asia, Internet access is still a luxury, with less than 5 percent of the population participating in this fundamental aspect of an information society when one counts users in terms of Internet service provider (ISP) data (e.g. in Syria, Saudi Arabia, Iraq, Egypt and Algeria). Increasingly, measures of Internet diffusion in Western Asia are being used as an indication of information society development and penetration. This is because it is one of the easiest and most basic measurements of information society readiness. Analysts are now attempting to expand such a focus by developing statistical databases on mobile phone access, PC penetration, as well as e-governance indicators. The United States Agency for International Development (USAID) has also begun funding projects which attempt to delineate the nature and power of the IT economy in the region, starting with a study of Lebanon. One of the most ambitious and comprehensive assessments of the information society in Western Asia was performed by the Economic and Social Commission for Western Asia as a form of preparation for the UN sponsored World Summit on Information Society. The study was designed to provide 'the necessary prerequisite for establishing national and regional plans for building the information society' (ESCWA 2003, iii). This document provides qualitative ratings of IT policies and strategies, legal and regulatory environments for ITs, IT infrastructure, IT capacity building, IT sector of the economy and IT applications in government, education, business and health care. However, gender and IT is not among the factors considered.

It should not be surprising that gender specific indicators of the regional information society are scant at best, given the fact that IT indicators for West Asian society as a whole are still emerging. We know that as late as 2002, estimates were that only 6 percent of all women in the region had regular Internet access (reliable statistics segregated by gender are difficult to obtain). While connectivity for women must surely have grown along with the phenomenal spread of the technology indicated above, more careful attention to statistics about women's IT access is desperately needed. Without having such figures disaggregated along gender lines available, it is difficult to know what percentage of women participate in the emerging information society.

Another important complication for measuring women's IT access in Western Asia, and most likely for society as a whole, is the fact that a large percentage of those connected - as much as 80 percent by some estimates - has regular access to computers, the Internet and other forms of information technology only via a community access point or an Internet café. The standard method for measuring Internet users as an indication of information society development and penetration is to count the number of Internet accounts via Internet service provider data. Because in most countries in Western Asia there is only one main pipeline for Internet connectivity, which is mostly controlled by the state, counting the number of accounts via an ISP is a relatively reliable and easy process. On the other hand, measuring access via an Internet café or community centre is difficult to gauge. In most cases, regular ISP data is just multiplied by an arbitrary factor, generally between four and six, to reach at a figure for the number of people accessing Internet through these centres. In Internet cafés, for example, it is not uncommon for a small café with ten to fifteen computers to have as many as three hundred clients a week. Recent interviews with Internet café staff in Jordan and Egypt suggest that there are an equal number of men and women who form the clientele (Wheeler 2005b, 2006). The hours of use, however, are highly gendered, with women forming the majority of users before 8 pm and males forming the majority of users in the late evenings.

Understanding the importance of communal access points for women's IT empowerment, this analysis of information society in Western Asia pays particular attention to data, gathered in 2004-2005, that documents women's access to, attitudes toward and use of community Internet access points in Jordan (Wheeler forthcoming). Along with the other case studies offered below (Kuwait, Saudi Arabia and Bahrain), the analysis provides an intimate look into the informational lives of women in Western Asia. Use of the Internet by women in Western Asia is also a key focus of this analysis, as this is one of the IT tools that provides the greatest opportunity for empowerment.

Contextualising the Information Society in Western Asia: Voices of Empowerment

Kuwait

In terms of ICT policy and strategy readiness, Kuwait was ranked as level 2 of 4 (4 being highest) in the United Nations Economic and Social Commission for Western Asia (ESCWA) information society regional survey.⁹ This means that Kuwait's ICT policies and strategies 'indicate articulated vision and existence of a national strategy and display a somewhat operational implementation plan and initiative'. ICT infrastructure is also at level 2 of 4, which means that Kuwait is connected to the global Internet backbone, Internet access is on the rise and PC dissemination is also on the rise. Between 2000 and 2005, Internet use in Kuwait increased by 278 percent, jumping from 150,000 users in 2000 to 567,000 users in 2005. Kuwait University was the first university in the Arab world to provide full Internet access to its students for free. A survey of Internet access by Kuwaiti students in 1997 revealed that female students constituted more than 50 percent of Internet users.¹⁰ The Internet is an important part of youth sub-culture in Kuwait, especially for young women as profiled below. In Kuwait, men and women do not mix freely in public, but in cyberspace easy communication across gender lines with little social risk makes the Internet an important space for women to interact with the opposite sex. The ability to cyberdate is one of the main appeals of the Internet to young Kuwaiti women. In fact, the desire to join chatrooms is one of the main forces drawing young women online. It is not uncommon, however, to find that professional women in Kuwait over the age of thirty have no familiarity with computers. Many do not know how to type, and have administrative staff who type and use the computer for them. Given the fact that many professional women are not required by their jobs to use computers, they remain a minority among women users of the Internet; perhaps over time, as more young female Internet users enter the work place, this situation will change.

Examining the Internet practices of Kuwaiti women can give us important insights about IT and paths to empowerment in Western Asia. The following interviews were conducted by the author during 2001 and 2002.

Buthayna¹¹ is a Kuwaiti college student completing a BA degree. She is twenty years old.

Interviewer: Why do you think the Internet is so popular among young Kuwaiti women?

Buthayna: Well, I have been told that you have lived for a while in Kuwait, so I would gather you are familiar with the way in which the Kuwaiti society is built. There is a

somewhat double standard, and there are many gray areas in terms of the two sexes mingling with each other. Therefore I think the most common place for both sexes to mix with each other is through the Internet. Girls, especially, cannot form relationships with boys even as friends in many families in Kuwait, so the Internet is a 'safe' place, I guess, for them to do so. And the fact that the two sides don't know each other, they feel safer to voice their concerns, ideas ... without having their reputations ruined or without it affecting their social life.

Buthayna is drawn to the Internet because it provides a neutral ground on which females can interact with males without fear of social consequences. A woman's reputation is something to be carefully guarded in these societies, and interacting too freely and openly with the opposite sex is a sure way to blemish one's social standing as a 'respectable woman'. Men are not subject to the same rules. If they talk with other women, it is the woman who is at risk, not the man. Thus, the Internet, according to Buthayna, is a place for Kuwaiti women in which to overcome this 'double standard'.

Interviewer: Do you think the Internet has any special significance for Kuwaiti women?

Buthayna: The Internet indeed is different for a woman than it is for a man, in many ways. As I have said earlier, due to the society that we live in, women are still bound by so many (more) rules than men are, even if people in Kuwait are not willing to admit it. Therefore, the Internet makes it easier for a woman to experience much of what she might not be able to experience in real life, even though this may just be virtual. In terms of (doing) research, it is also different, for there are many subjects in our society that are considered taboo, whether sexual or not, so the Internet makes it easier to delve into many worlds, sometimes answering questions that cannot be asked, or just opening new horizons.

Buthayna celebrates the Internet's ability to provide women access to information that may be considered socially or politically sensitive. Women in the region appear eager to enhance their access to information, uncensored by the government or strict social norms which are apparently in place to protect their 'honour and reputations'.

Sabiha¹² is a nineteen-year-old Kuwaiti college student finishing a BA degree. Her testimony is similar in character to Buthayna's. She also stresses that the major impetus behind Internet use among young Kuwaiti women is the desire to communicate with members of the opposite sex. Illustrating the conservative nature of Kuwaiti society, Sabiha finds that there is a difference between chatting online, which is relatively harmless, versus having a relationship with someone online, which she observes 'isn't possible' nor advisable, for reasons explored below.

Interviewer: Why do you think the Internet is so popular among young Kuwaiti women?

Sabiha: The main reason the Internet is so popular with the Kuwaiti youth is because it's the most effective way for boys and girls to communicate with each other. Mostly they use the Internet to chat with people from the opposite sex because, to them, it is easier

to communicate with a name and not a face. Very rarely, if ever, do they use the Internet to do any research.

Interviewer: Do you think Internet use has a positive or negative affect on women in Kuwait?

Sabiha: In some ways there is a positive affect on women because they are more able to communicate with guys and it's a way for them to know that guys are not so bad. The bad thing is that some girls try to have relationships with someone online, and that isn't possible. Many guys think this is possible and wind up having something like three or four, if not more, girlfriends online. Then there are the girls who try and do the same thing. Of course this causes the problem that girls wind up not wanting to trust guys and visa versa. So this is a major problem.

Cyberdating, although it is common, is viewed as 'a major problem' by Sabiha. Because there are no face-to-face responsibilities and accountabilities between the parties and no firm commitment to a single partner relationship, online relationships are said to be breaking down the trust between the sexes. Chatting, on the other hand, is viewed by Sabiha as a positive way for girls to understand that guys 'are not so bad'. This perspective is interesting as it implies a degree of female solidarity as well as a gendered separation common in Islamic societies. Women's attitudes towards men in the Islamic world are often conveyed in terms that one might see applied to foreigners. Men are clearly an 'out-group', with strange thoughts, desires and appearance. Only within marriage will these mysteries and this sense of foreignness be breeched. Cyberspace is also a ground for such breeching, and it is possible that providing some data with which to access the mysteries of the opposite sex will transform young people's attitudes towards dating and marriage. At present, parents are considered the best judges of suitability in marriage. Moreover, love, it is said, will grow out of a 'good' union. Until engagement, knowledge of one's future spouse is superficial, and love is something that is understood to grow as the couple takes steps towards marriage. With the Internet, young people are increasingly empowered to explore knowledge of the opposite sex, oftentimes choosing a spouse outside of a parent's influence and often knowing more about their future spouse via chatting than was ever before possible within the confines of society's norms and values, which place great emphasis on keeping men and women separated outside of marriage and family relationships.

When asked if she considers the Internet as holding any special significance for women, Sabiha responds:

One thing that I see changing is that women try to do research on women's suffrage which is a major issue in Kuwait at the moment. So women try and find a way to convince the government to let women vote, and the Internet is helping them do this.

Sabiha is one of the few women interviewed who saw an overt political importance associated with Internet use. One of the mysteries of the spread and impact of the Internet in Western Asia is why so few citizens choose to use the tool for political purposes. Can and will the Internet serve to promote civil society, women's activism and empowerment, and a retreat of the state in public life, or is the culture of authoritarianism too firmly established at present to allow for such risk taking? As discussed above, the risks can include arrest if the state finds one's 'activism' a threat to security. This issue deserves further study, especially in light of women's networks and processes of democratisation in the region. The section

on collective action later in this paper examines some new trends in women's IT-supported activism in Western Asia, of which an especially powerful instance is the use of IT in women's struggle for full political rights in Kuwait. Sabiha was prescient when she predicted that women in Kuwait would use IT in the future to obtain their full political rights. She was interviewed in 2001, while the IT-enabled political struggles for women's full voting rights in Kuwait occurred in 2005, under the leadership of Rola Dashti.

Saudi Arabia

Unlike Kuwait, Saudi Arabia is ranked in tier 1 of 4 in terms of policy and leadership readiness for the information society. This lowest ranking possible means that Saudi Arabia, unlike many of the other countries in Western Asia, has no clearly articulated policy vision or national strategy for building the information society in the Kingdom, nor are there any clear plans to do so in the near future. This lowest tier ranking puts the Kingdom on par with relatively ICT-impovertised Yemen and Syria in terms of policy and planning. Since the infrastructure factor seems to have significant connection with government vision and policy factor, the factor slowing the progress of the information society in Saudi Arabia is the fact that ICT infrastructure was relatively slow to emerge and spread, with public Internet services not becoming available until 1999. This low penetration is also a result of state policies which made the Internet illegal to use in the Kingdom until the late 1990s. In order to maintain the security of the network and to discourage misuse, all connections to the Internet are routed through a state server located at King Abdul Aziz City for Science and Technology. This connection is managed by the Internet Services Unit (ISU) at the City for Science and Technology. ISU does not service end users. Instead, connectivity is provided to universities and licensed commercial ISPs, who in turn provide service for faculty, staff, government, and commercial users. The Ministry of Information web site provides a list of licensed Internet service providers in the Kingdom, of which there are twenty eight at present. They have provided service for more than 112,000 users in 1999, 490,000 users by 2001, and 1,500,000 by March 2005. In spite of a lack of state leadership preparing the Kingdom for the information society, the phenomenal rapidity with which Internet use is spreading (650 percent growth between 2000 and 2005) suggests that Internet use is an increasingly important aspect of everyday life in the Kingdom.

Data provided by the Ministry of Information surveys reveal that Internet access grows by at least 20 percent annually in the Kingdom. Eighty three percent of Internet users are between the ages of twenty and thirty five. More than 78 percent of all Internet use in Saudi Arabia is by males. The average Internet user uses the Internet for approximately three and a half hours a day. Some users, an estimated 6 percent, go online from one of the two hundred or more Internet cafés in the Kingdom; while as many as 78 percent of Saudi Internet users have access to the Internet at home (this is a high percentage). Carrying on from the above point, does the government actively neglect community access possibilities? Community access in the Gulf is mostly for expatriate workers. In spite of this, access costs are relatively high (sometimes as much as five to ten times the cost of Internet café access in Jordan or Egypt). As of May 2001, Saudi authorities at the ISU were censoring on average 200,000 web sites, most of which were pornographic or contained materials critical of Saudi or Gulf regimes. Forty five percent of all Internet use in the Kingdom takes place from Riyadh, the capital. In terms of use, 93 percent of Internet users surf the web, 72 percent use email, and 32 percent engage in Internet chatting. Fifty six percent of Internet users in Saudi Arabia have bachelor degrees.

The following narrative is provided by Feda',¹³ a twenty-year-old college student from a prominent Saudi family.

Interviewer: How and when did you become an Internet user?

Feda': I learned to use the Internet in the early 1990s (1993-94). I got a computer a few years prior by winning a bet with my father - I was able to grow my hair half way down my back. A representative from the company who did technical support from my father's workplace came to my house after strenuous nagging on my part and explained how to connect (via Bahrain, there was not yet Internet access in Saudi Arabia, so the phone bill was ridiculous!) and use e-mail.

Here we see that a very feminine act contributed to bringing this young woman online: she grew her hair! Long hair is an important manifestation of female beauty; concealing this beauty is one reason for veiling. Most importantly, connectivity was provided by parental consent, and access to technical support from a parent's business. Moreover, the family could afford expensive long distance phone calls to Bahrain, which used to be required when the Internet was officially banned in Saudi Arabia. These aspects of the narrative separate this young woman's experience from the masses of women in the region who are poor, uneducated and lack access to centres of business and political power.

When asked about her use, Feda' observes:

When I first began using it, I frequented chatrooms and met as many people as I could online. I then discovered that I could also use it for getting information for papers I needed to write in school. I now use it for much of my research papers, to keep connected with my friends and family, and the various consumer products available online.

Her use patterns are typical for wired youth in the region and parallel the narratives provided in the Kuwaiti case. The greatest attraction of the Internet for young women in the Gulf is chatting, second is shopping and third is to obtain information, especially data that might be censored otherwise.

When asked about the impact of the Internet in Saudi Arabia, Feda' notes:

Because of the nature of the Saudi society, I feel that people have abused the openness of chatrooms. I think that it has done wonders for some, where they have even met their husbands online. And for others, like a friend of mine I was talking to earlier today, it has ruined their lives. This girl got in a fight with a colleague of hers, and apparently the colleague spread the girl's phone number in chatrooms. She claims she got phone calls and obscene messages from all around the world, which led to her to get in trouble with her family, and she eventually changed all of her phone numbers. I also think that many women are also discovering the amount of useful information that is available online, and many women are using it for medical information, as well as shopping.

Feda's narrative once again highlights a common theme: that the Internet can have both a positive and a negative impact on women's lives and society in general in Western Asia. The technology promotes the

unprecedented flow of uncensored information: even if the Internet is censored in Saudi, Feda' notes in other conversations that it is really impossible to filter everything, and there are companies which offer software to break through firewalls that is commonly available in the Kingdom.¹⁴ The Internet promotes young people's freedom of movement and interaction across gender lines. In this case, Feda' explains that the Internet can also be used to harm a young woman's 'reputation', creating a considerable negative impact on her life. Moreover, Feda' explains that she thinks some people in Saudi Arabia abuse the freedoms provided by chatrooms and the Internet. Her explanation is the nature of 'Saudi society', meaning that given the restrictiveness of the culture, when people are awarded freedoms like those available via the Internet, some are unable to control themselves or to conduct themselves properly. In the same way that hunger can interrupt table etiquette in the case of a starving child that is given access to a lavish buffet, Internet freedoms can bring out unaccustomed behaviours, including what would be considered 'misuse' of the Internet given Saudi social codes. Joshua Teitelbaum has analysed uses of the Internet in Saudi Arabia and summarises the ambivalence of local attitudes towards the technology via a quote by the Minister of the Interior, Prince Nayef bin Abdal-Aziz. Prince Nayef was addressing a gathering of imams from local mosques when he observed, 'the Internet, while containing much negative material, could be used as a tool to inform the world about Islam in Saudi Arabia' (Teitelbaum 2002, 7).

When asked about Internet use among women in Saudi Arabia, Feda' notes:

I think that less than half (of the female population in Saudi Arabia) uses the Internet. Those who do are mainly the elite, but they are beginning to introduce the Internet to students in private schools (which could widen access).

We know from figures provided by the Ministry of Information that female Internet users constitute just over 20 percent of all Internet users in Saudi Arabia. In terms of what percentage of women have access, we have no figures, but Feda' highlights a common pattern in Western Asia, that users tend to be part of the elite and tend to have gone to private schools (this is changing in Jordan, as analysed below, with more rural and urban poor women gaining IT access and training in community knowledge stations).

When asked about the potential long term effects of the Internet on Saudi society and its relationship with the global community, Feda' optimistically observes:

I believe that having a portal to the world is extremely necessary in the world we live in today. I do believe that being able to access information from all around the world does help build tolerance and understanding. I also believe that it can be harmful, not only because of the instance I mentioned earlier, but because it is still very difficult to control the information that is available online, and any charismatic psychos are able to mislead the weak into flying airplanes into buildings. I hope that by seeing that an open society online functions on a normal level, which hopefully it can prove to do, Saudis will begin to consider transforming their closed and very limited social activities. I think that interaction between the sexes, especially in the workplace, is inevitable in the future, and I think that the Internet may be the only means to proving that decent and respectable interaction is possible. Hopefully the good will overcome the evil that is spread online, and people can see that the glass really is half full.

Feda' refers above to the Al-Qaeda movement, which has Saudi roots and has made liberal-minded Saudis eager to illustrate to the world that extremist views are not the norm in the Kingdom. Feda' also celebrates the Internet's ability to provide incentive for Saudi society to be less insulated from the world. She hopes that exchanges of communication via wired technologies can help to promote global understanding.

Bahrain

The information society in Bahrain shares many features with that in Kuwait and Saudi Arabia. Bahrain, like Kuwait, is in the second tier of information society readiness in terms of policy and leadership preparation. In terms of ICT infrastructure, Bahrain, Saudi Arabia and Kuwait are all second tier countries, meaning that ICT infrastructure is experiencing a rapid expansion, but still the countries' ICT sectors are regulated and state controlled to the degree that they are lagging behind Western Countries in terms of access and diffusion. The Internet was made publicly available in Bahrain beginning in 1995. From 2000 to 2005, Internet access grew by 389 percent, but there are still just under 200,000 users and Bahrain still has a single ISP, Bahrain Telecommunications Company or Batelco, the state's majority-owned telecommunications firm.¹⁵ Internet access was provided initially to serve the business community. At the same time, access is closely monitored by the state, for which the explanation given is the need to ensure that connectivity does not undermine state security.

The government does block access to some sites. For example, the Bahraini Freedom Movement web site (www.vob.org) was blocked by Batelco because it was considered by the government to incite sectarianism. In 1997, Sayyid Alawi Sayyid Sharaf, a Batelco engineer, was arrested and detained for two years without charges for allegedly using the Internet to transmit information to political opposition groups (HRW 2001, 2). In spite of some evidence of censorship and monitoring, the Internet is a powerful force in business, education and entertainment in Bahrain. Bahrain University, like Kuwait University, offers all of its students free email accounts and access to the World Wide Web. An Information Technology Centre provides access and training at Bahrain University for students, faculty and staff. Incorporation of computers and Internet use into instructional objectives is encouraged. Even in government high schools, there is a commerce track which requires training in Internet use and content development as well as other forms of IT literacy for business. Since the government continues to monopolise the ISP market in Bahrain, the cost of access is unlikely to drop until competition is allowed. Among those who are active Internet users, the most popular portals are www.inet.com.bh, www.accessgcc.com, www.zawya.com, and www.tradearabia.com.¹⁶ While we do not have figures with which to understand women's contributions to the information society in Bahrain, the following narratives suggest that women do participate in the information society, and their numbers are increasing.

Haya¹⁷ is a government employee in her mid-twenties. When asked about the characteristics of Internet use in Bahrain, Haya replies:

Internet use in Bahrain is especially widespread. Most business women here are Internet savvy, as are many housewives and self-employed women. Internet in the workplace is an integral part of work (email, research), so for business purposes, it is widely used. Chatting is also hugely popular. From first-hand observation, the age range of eleven to thirty years, I would say, likes to chat on the net.

From Haya's observations, we can conclude that Internet usage in Bahrain closely parallels the Kuwaiti and Saudi cases in terms of young people's use of the Internet for chatting. Moreover, her observation that Internet use is common in the workplace resonates with the idea that getting online is also often associated with work-related demands. What is distinct about Haya's observation is her comment that Internet use in Bahrain is widespread. Figures cited in the introduction to this paper indicate that of all the cases considered in this analysis, Bahrain has one of the highest Internet penetration rates per capita, with nearly 30 percent of the population having access.

When asked about the possible impact of the Internet in Bahrain, Haya notes:

Socially, it is also interesting that there seems to be an undocumented rise in the number of marriages that start off as Internet romances. I think this is especially true in the Gulf, and probably mainly for twentysomethings, who don't have the opportunity to date all that much. Email is also used quite a bit as a chat up method- it isn't uncommon to get random emails from strangers telling you that they have seen you somewhere and would like to get to know you (again, over email!!). Instant messaging is also hugely popular.

These observations resonate with those made in Kuwait and Saudi Arabia, that the Internet is a common forum for cyberdating, especially for the young. Most of the observers seem to find this 'interesting' or 'curious' or 'liberating' rather than to be concerned about the undermining of more patriarchally and matriarchally controlled forms of courtship, common in the region.

When asked about women's access to the Internet in particular, Haya states:

I think that what started off as a rich woman's technology is now becoming increasingly mainstreamed. I know that in Bahrain, a lot of schools are improving their connectivity - some at a faster rate than others, but we are getting there.

Bahrain's approach, according to Haya's observations, is to improve connectivity and IT training by providing for it at government schools. As a relatively wealthy country with a relatively small population and relatively high literacy rates, Bahrain can realise positive results over a short period of time, with the right kind of enabling environment provided by the state.

In terms of the impact of the Internet in her own life, Haya comments:

For me personally, the Internet has just sped things up. Whether its work related or for pleasure, my ability to stay in touch with people, send and receive information, obtain information over the web, keep in touch with goings-on at my alma mater, etc., the speed and ease of access to all of these have made the desire to maintain connections with people easier to realise.

Again we see that for women who do have access to the Internet, their use fits a global pattern, in that Internet is making life faster paced, more connected globally, and more information driven.

Fatima¹⁸ is a professional woman in her mid-twenties and a friend of Haya's. In this interview, Fatima decided to contextualise her narrative of the Internet's use and impact in Bahrain in her own personal experiences. She explains:

Speaking only for myself, I use the Internet everyday at all times and for all purposes. I rarely chat. I book plane tickets and hotels, buy groceries, use it for work related research, obtain directions, book movie tickets, buy theater tickets, read news (My) uses are many and varied. I have an ADSL line so I can use it 24/7.

Fatima's use patterns fit those of other mid-career professionals - in Western Asia, and abroad for that matter. She uses the technology 'everyday ... and for all purposes' which is testimony to the advanced development of Internet culture in Bahrain. We see through her narrative that e-commerce is not only possible, but practical in Bahrain, where one can buy groceries, movie and theatre tickets and airline tickets online. In spite of her own use patterns, Fatima notes below that e-commerce still has much room for growth in Bahrain, as most companies don't use their web sites to transact business, but rather as a form of advertising. Fatima's narrative also suggests that some of the speed and ease of her use of the Internet stems from her regular access to an ADSL line, which gives her reliable and quick home access. Wide access to ADSL also distinguishes the Bahraini case. In most West Asian nations, including Oman, Jordan, Yemen, Iraq, Saudi Arabia, Syria, Jordan and Lebanon, high speed Internet connections are scarce, and this has been a significant factor in slowing the emergence of an information society. E-governance, e-commerce, and e-education all require high speed bandwidth to be widely available to run smoothly and efficiently.

In terms of the broader use and impact of the Internet in Bahrain, Fatima observes:

My thoughts on Internet usage are that it is, probably, currently a phenomenon of the wealthy rather than the poor, for the following reasons:

- The high transaction costs associated with acquiring a computer/getting and paying for an Internet phone line - most Gulf countries do not have freely accessible and cheap/free broadband telephone networks and computer penetration, and literacy tends to be higher among the more educated.
- The wealthier tend to have more ease with English (which is vital for Internet use); even those who can read Arabic may not know how to type Arabic quickly, which would make computer usage more difficult.
- Gulf countries tend to censor traditional media, so to the extent that the usage is to obtain news, users would tend to be people who are politicised and/or are interested in obtaining several different points of view; I don't know how that cuts in terms of usage.
- There are currently not many local Internet commerce opportunities (i.e., businesses treat their web pages as an advertisement, not as a medium to transact business), so I assume from that that the utility of the Internet is likewise somewhat curtailed.

Fatima's observations regarding barriers to more widespread Internet use in the Gulf and beyond parallel those offered by others in the region: information society transitions are inhibited by the cost of connectivity, education and literacy factors, and lack of public interest or demand except among isolated pockets of society - the rich, the young and rich, the politically active and the urban professionals. In its present state, even in Bahrain, connectivity is inhibited by all of the factors which account for the digital divide

world wide. If we take Fatima's and Haya's narratives together, they present a clear snap shot, indicating that for the elite, Internet use is widespread. For other social classes, its use is limited.

Jordan

The Jordanian case offers the most promising example of how a country with relatively few natural resources can build a successful information society, not just in the capital but throughout the country. With the support of King Abdullah II, the information technology community and policy makers in Jordan developed the REACH initiative, the implementation of which has distinguished Jordan as among the most information society ready countries in the region. Jordan ranks on par with the United Arab Emirates in terms of leadership, policies and vision, and in terms of legal and regulatory readiness for the information society. Jordan is a second tier country, ranking on par with Kuwait and Saudi Arabia, in terms of ICT infrastructure. For example, connectivity to the Internet has grown over the last five years at a rate of more than 250 percent. Several organisations are responsible for promoting the diffusion and use of IT in Jordan, including the National Information Centre, which helps to support use of IT in public sector organisations and projects, and the Ministry of Information and Communication Technology, which spearheads such high profile projects as the Jordan Education Initiative, the e-Village project, and the Jordan e-Government initiative. The promotion of IT and sustainable livelihoods in the private sector is supported by the Information Technology Association of Jordan. The United Nations Development Fund for Women (UNIFEM) regional headquarters in Jordan is also playing a significant role in assessing women's access to and use of IT in Western Asia by making, in the words of one local observer, 'ICT policies and forums more gender sensitive' (Abdel Khaleq 2004, 5). King Abdullah II has also helped to spread IT use and access in Jordan through the Knowledge Stations project, which has established one hundred information technology access and training centres throughout the Kingdom in poor and rural communities. The ubiquity of Internet cafés also promotes community access. Jordan is in the 'Guinness Book of World Records' for having the highest concentration of Internet cafés in the world. In Irbid, on University Avenue, across from Yarmouk University, more than one hundred and fifty Internet cafés exist within an expanse of a few city blocks. The same phenomenon can be observed on University Avenue in Amman, across the street from the University of Jordan, where more than seventy five Internet cafés exist within a few city blocks. Women form a majority of Internet users in cafés and community access points in Jordan (Wheeler 2005b, 2006, forthcoming).

In order to more fully grasp women's role in the emerging information society, this section draws on data gathered in 2004-2005 to profile the narratives from Jordanian women who participated in the NetCorps Jordan project. NetCorps Jordan is a project launched in 2002 via a partnership with the Digital Opportunity Trust of Canada (DOT) and the Zein al-Sharaf Institute for International Development. The project attempts to use information technology for development at the community and national level by training interns in IT and sustainable livelihoods and placing such interns in their local community knowledge stations throughout the country. The interns are trained to raise awareness of ICT in their local communities by offering training courses in ICT and sustainable livelihoods. The NetCorps Jordan programme was funded by the Digital Opportunity Trust of Canada, the Jordanian Ministry of Information and Communication Technology (MOICT) and the Achieving Market-Friendly Initiatives and Results programme (AMIR) which is funded by the United States Agency for International Development (USAID).

All of these organisations saw great potential in the NetCorps model for helping Jordanians to spread IT literacy, sustainable livelihoods and the knowledge economy. Narratives of the participants suggest that the NetCorps Jordan project was in particular a path to ICT-enabled empowerment for Jordanian women.

When explaining why she enrolled in the NetCorps Jordan programme, Maha, a woman aged forty, observes:

The reason I registered for this course was to learn computer skills, which was a challenge for me. I was always asking my son, who is a tenth grader, questions about computers and their uses, and I used to have some information but it was not enough. I had to work more on that. My son used to answer me by telling me he does not have time, he was busy, and he used to trivialise my questions, which actually motivated me to register for this course, to know more about computers and to learn on my own without his help. My goal was to better supervise his usage of the computer, as a mother. Moreover, the nature of my work requires me to have computer skills for report writing and indexing. This also constituted a motivation, to learn something my work expected from me, so I would not need to keep asking people, especially people that are not always free or there to guide or help me. Ultimately, I wanted to develop myself, to not feel ignorant over something which all people around the world know how to use, computers and (the) Internet.

Often 'IT for development' projects focus upon empowerment via enabling women's access to public centres of power - the knowledge economy, parliament, policy making communities, etc. Maha's narrative suggests that IT can also be a path to empowerment even for more traditional women who view IT training as a path towards more effective parenting. In Maha's case, her IT training in the knowledge stations via the NetCorps Jordan project also empowered her by making her more effective at work.

Again highlighting the role that IT can play in advancing the interests of Jordanian women, twenty-three-year-old NetCorps intern Noor observes the following when assessing her most important achievements as a NetCorps volunteer:

One of my clients was a thirty-nine-year-old woman with a seventh grade education. She knew nothing of computers before taking my NetCorps training session. Her husband has an electric and tool shop, while she is a dressmaker. After she took the power point course, she did a slide show of pictures promoting her husband's business and displayed it on a screen in his shop. Now when a client enters the shop, he sees the screen and the pictures as well as the actual products. I really liked what she did and I felt that being able to influence change in her life was an achievement for me. Also, since she is a tailor, she started searching on the Internet for different dress styles that are the latest fashion, in order to benefit when she is making clothes for people.

Noor's narrative is important because it highlights the fact that even women with limited education can benefit from IT training. Noor's student used her IT skills to improve the quality of her designs as a tailor. Likewise, Noor's student shared her IT skills with her husband by using IT for marketing in his electric and tool shop.

The link between IT and empowerment featured prominently in interviews with NetCorps participants. The following list highlights some of the most important IT-enabled paths towards empowerment for women participants who formed the majority of NetCorps interns and clients:

1. Rimah, twenty five, from Jarash, states that her NetCorps training 'widened her vision and made her more strategic in her thinking, made her decide she did not want to be a housewife, led to more volunteer experiences and ultimately to employment'. She now works at a handicapped rehabilitation centre in Jarash.
2. Inas, twenty one, from Amman, gained new employment opportunities which enabled her to find a profession where she could fulfil her dreams of using IT to help people achieve their full potential. Via NetCorps, Inas gained complete financial independence and gained deep respect from her father when she was invited to deliver a speech in front of King Abdullah II (Young Entrepreneur of the Year Award).
3. Niveen, twenty four, states that 'NetCorps allowed us to recognise things in ourselves that we might not have known. Things which we might actually make good use of, like I did not know that I have the ability to prepare and train people. I never thought in my whole life that I would become a teacher. I didn't know that I had the energy to deal with children. I also made new friends, and this is a major step, because I do not get along with people easily. I also became more social and active in family visits'.
4. Hanadi, twenty four, observes that 'NetCorps taught me how to be more organised, how to be a leader and more creative. I became pickier about my future career. I aim to improve myself more. I know after the NetCorps experience that I love to work'.
5. Al'a, twenty four, from Amman, notes, 'I consider NetCorps Jordan as an introduction phase for professional life. What I have learned and practised in NetCorps is what I am doing now on the job. I now work with the Fredrich Norman Foundation in a community development programme, working with local communities at the household level. NetCorps prepared me for this career'.
6. Maha, forty, from Sweleh (and profiled above), says that NetCorps helped her earn more respect from her children and encouraged a family learning tradition (her husband signed up for a distance learning course following her NetCorps experience). She also gained skills that helped her at work, including more professional presentation skills. Her knowledge of power point, for example, led to her being invited to address an international conference on her organisation's behalf.
7. Sayada, fifty two, from Amman, gained more independent mastery of technology, expanding and strengthening family and friends networks with enhanced IT use.
8. Ibtisam, thirty, from Ajloun, was inspired by her NetCorps training to volunteer for the Al Arz Cultural Centre where she helps with the organisation's word processing needs. She hopes that her training and volunteering will lead to employment in the near future.
9. Safa, thirty, from Zarqa, notes that 'her life has completely changed after the training'. She was able to supplement her income by finding a job doing freelance typing and editing for students and the

general public. She placed ads for her services at bookshops near the University of Jordan. Word of mouth is spreading news of her services, and she is earning good money now. One of her client's father works at a Middle East research centre, and he asked her to type and translate documents from Hebrew to Arabic, further augmenting her income.

10. Basma, forty five, from Amman, explains that she used her computer skills, gained during the 'IT and sustainable livelihoods' NetCorps training, to enhance her teaching at Sunday School and during her Tuesday women's meeting at the church. She notes, 'I also got a part time job because of my computer skills. I was volunteering for four years at this place, the Daily Arabic Women Office, but now I am actually paid for my work. I used to send them hand written articles, but now I type my own articles and add photos and send it to them by email. Now they just have to post it on the website magazine. Because I save them time and the quality of my articles is better, they offered me a part time job. I was also selected as one of four in the Middle East and North Africa to participate in a distance learning seminar called Folk Bildung, a Swedish educational institute. I will get a certificate at the end of the course. They accepted me in part because of my newly acquired IT skills. Without NetCorps, none of this would have happened. I also save lots of money on books, newspapers and educational materials, because now I use the Internet for reading and research'.

Ownership: Can Women Shape the IT Revolution in Western Asia?

In each country in Western Asia, signs of women's ownership of the IT revolution can be grasped. For example, in Jordan, Doha Abdel-Khaleq is a Managing Partner at ESKADENIA Software Solutions; in Egypt, Magda Ismael was head of the Ministry of Information and Communication Technology's E.Commerce initiative; in Kuwait, women are prominent members of the IT community as trainers and business owners; in Bahrain, women are visible in the management structure of BATELCO. In spite of this visibility, the majority of women in Western Asia are far from such positions of power and ownership in the IT arena. A recent study by Dr. Zeinab Karake Shalhoub, Associate Dean of the American University of Sharja, points out that in the United Arab Emirates - where literacy rates are high, Internet access rates are high, and a female-only IT University exists to train women for the information economy (Zayed University) - women still constitute less than 12 percent of those trained for technology-related fields. Dr. Shalhoub (undated), herself a woman, gives several explanations which are representative of the general problems women face throughout IT sectors in Western Asia:

1. A 'glass ceiling' and old boys' network keep women from advancing in the IT professions. A lack of advancement for women means a lack of incentive for other women to join the IT professions.
2. The intense work and time demands of the IT field are incompatible with the social and family demands placed on women throughout Western Asia. If women have to choose career or family, they tend to place family higher and thus do not enter the IT profession.
3. Self doubt and timidity among women in Western Asia make them risk averse and thus discourage them from taking the risks to enter the IT field.

These observations are more representative of the lives of elite women in Western Asia who may be struggling to break into all-male domains. Among other classes, women's access to and use of IT and

training opportunities are limited by many other contextual and cultural constraints on their participation in public life and educational opportunities. Participants in the NetCorps Jordan project identified the following constraints on IT empowerment for rural and/or poor women in Jordan:

1. Maha observed that traditions which concern a woman's honour, her safety and not 'courting trouble' by working late hours are a barrier to women's full participation in the work force (in the IT industry and beyond).
2. Majeda claimed that community scrutiny is a barrier to women's advancement. She stated that 'society is small and closed, so everyone knows everyone else's business. People gossip and this can harm a woman's reputation. Complications happen when women do actions against cultural norms'.
3. In terms of IT education and empowerment, Fayza explained, 'I would love to continue my education, even though I am older now ... but my dreams need to be within the limits acceptable for the community. People talk, and this could affect our reputation'.
4. Stereotypes and local cultural identities also play a role in women's empowerment or lack thereof. Along these lines, Hakmeh observed, 'Women's roles are usually associated with the kitchen'!
5. Again, stressing the role that stereotypes and cultural constraints play on women's empowerment in Western Asia, Liana observed, 'Society perceives that women should not work but rather stay at home and take care of the house management, children and husband'.
6. Safa added to Liana's observations when she stated, 'The women in my neighbourhood face challenges, and their biggest challenge is their husbands: husbands treat them as slaves, their wives have to spend their life cooking, washing clothes and taking care of children'.
7. Rimah had a different opinion. She stated that women's advancement is limited by women themselves. She stated, 'The problem is within women themselves, because when a woman wants something she can achieve it. A woman is able to accomplish whatever she puts her mind to. Will and determination are the key'.

Traditions, lack of will or determination, a non-supportive family or husband, too many domestic responsibilities, communal pressures, lack of education, or all of these factors together combine to limit women's ownership of the IT revolution in Western Asia. Add to these factors the issues of women's illiteracy and poverty and it is easy to understand why women face potential marginalisation from emerging information societies.

Collective Action and Institutional Transformation: Using IT to Reshape Women's Lives

In spite of the challenges women face in becoming IT literate, in advancing in the IT professions, and in reshaping their lives with IT, important signs of women's empowerment via IT do exist in Western Asia. For example, the NetCorps Jordan programme as profiled above illustrates clear links between women's IT training and empowerment.

Moving beyond this case study, we can see throughout Western Asia examples of women using IT to create paths towards empowerment. One of the most telling examples of this process occurred in the spring of 2005, when women in Kuwait used cell phone technology and the Internet to mobilise protesters and public opinion in favour of granting women full political rights in Kuwait. Ultimately their IT-enabled campaign helped to persuade the Kuwaiti parliament to extend full political rights to women. One of the activists, Rola Dashti, hopes to run for office in the next election. During the campaign, Dashti was often the target of critical text messages. In one such message, circulated by the Islamist camp, her ancestors' Persian and Lebanese heritage were used as a form of insult, to call into question her identity as a Kuwaiti (Coll 2005, 1). Throughout Western Asia, especially in the oil rich Gulf but also in the recent protests against Syrian occupation of Lebanon, women (and men) are using text messaging 'to mobilise followers, to dodge authorities and swarm quickly to protest sites' (Coll 2005, 1). Electronic channels of participation expand the realm of women's activism. For example, in Kuwait, the suffragists like Dashti note that 'Kuwaiti women organising protests for voting rights said that they had been more effective during their 2005 campaign than during their last serious effort five years ago because text messaging had allowed them to call younger protesters out of schools and into the streets' (Coll 2005, 2). Similarly, in March 2005, the Lebanese used text messaging to encourage friends to attend demonstrations. One example of such a message read, 'This is the last card they are playing, and we are moving faster to freedom - no one should stay home Monday - please forward' (Mitchell 2005, 1). Using IT to organise and coordinate demonstrators resulted in hundreds of thousands protesters storming the streets of Beirut. With such mass demonstrations and the flow of such images across borders and global communities, processes of empowerment are encouraged as 'messages of protest and hope are transmitted from one country to another' (Mitchell 2005, 1).

Conclusion

This study of women and IT in Western Asia suggests that IT offers women in the region access to what they may not have in the real world: opportunities for self-expression; abilities to interact with people from different cultural, political and social backgrounds; and opportunities to network, to improve their job prospects or to find support for issues that trouble them. IT enables West Asian women to recreate social space as they want it, with enhanced freedoms of expression, expanded choices for social interaction and opportunities for experiencing people and places that are beyond their reach in the real world. For those online, experiencing new freedoms has spillover effects in their day to day lives, whether it's just making them more confident and better able to express themselves or less isolated when they refuse to submit to strict social sanctions on their character. If we take these micro victories to the macro level, we can argue that IT policy definition and implementation can be more gender aware and effective in Western Asia if it takes into account the various patterns of women's empowerment illustrated above - from IT-enabled village women who use their new skills to better teach their children to be computer literate (Jordan), to more elite women who leverage IT in their quest for full political enfranchisement (Kuwait).

Socio-Cultural Context of IT Empowerment: The Role of the State

As illustrated above, although the state's IT policy is an absolutely crucial piece in solving the regional information society puzzle, it is a necessary but not sufficient variable in enhancing women's access to the

technological infrastructure once it is established. At this stage, contextual variables like social and cultural norms regarding women's status, more than the state, help to shape women's IT experiences. If a husband or male relative does not want a wife or daughter or sister to have access to information technology (hardware and/or training), then it is local patriarchies rather than the state that ultimately keep women from participating in the information age. If the price for becoming an active participant in the IT world is a woman's honour, then the cost may be too high for most to risk. In the NetCorps Jordan study, 100 percent of the women interviewed stated that their ability to participate in the programme was facilitated by a supportive spouse and/or son. With male family support, women could overcome communal gossip which took aim at their reputations in an attempt to correct a breach of local communal norms and values. The state can build community access points; it cannot guarantee that society will allow women access, especially in towns and villages far from the capital city. There are some who will orient their behaviour in line with the policies of progressive governments, and it is these individuals who will be swayed by public information campaigns about the importance of computer literacy for all citizens, including women. In the NetCorps Jordan study, some participants cited King Abdullah's wish that all Jordanians should be computer literate as a reason for joining the programme. So, the state can have an effect on spreading the information society, even if it remains difficult to change local cultural perceptions of women's ideal role within such transformations. Some strategies which the state can pursue to enhance the place of women in the information society include:

1. Reducing the cost of PCs by removing tariffs on imports and, better yet, by developing local computer production/assembly capabilities, which also lowers costs. Some governments, like Egypt, have also introduced low interest loans for Egyptian families to purchase a PC through their 'PC for Every Home' programme.
2. Expanding IT training programmes to go into homes at the village level so that women will not have to face what may be considered a public stigma of attending classes in the community (often with male trainers).
3. Expanding the number of female IT trainers so that women do not have to learn computing and other IT skills from men (which can attract social sanction).

Context Shapes Method and Outcome of IT Empowerment: From Micro Processes to Macro Results

It is clear from this study and the other work done by the author on IT and gender in Western Asia that context plays a significant role in shaping women's IT experiences. For example, women who grow up in regional capital cities, who are moderately to well educated, who are employed in professional fields, have IT existences which are part of a global pattern - IT is a fundamental part of their everyday life, from e-commerce to e-governance to email and telecommuting. For these women it is almost as if life without IT is a life that cannot function normally. We especially see such patterns in the IT narratives provided by West Asian women in Bahrain, Kuwait and Saudi Arabia. Unfortunately, these cosmopolitan cyberelites constitute a small minority of West Asian women. The majority of women live life in a different set of circumstances. Many have less than a high school education, are functionally illiterate (more common in Egypt and other parts of North Africa than in Jordan and the Gulf, with the exception of Yemen and

interior Oman), were married young, have on average three children or more, don't work outside of the home, and are discouraged by their neighbours, their husbands and sons from advancing their education, including learning IT skills. These women make up the bulk of female West Asian society. It is these women who need the most attention when states expand the boundaries of the information society.

Some policy strategies for softening the effect of contextual variables on non-elite women's IT lives include the following:

1. Enhancing public information campaigns which stress the value of IT for strengthening family ties (via email) and better preparing younger generations for the knowledge economy as well as the importance of computer literacy for accessing e-government and e-education programmes. These public information campaigns should be mediated by leaders with authority within local communities.
2. Creating networks of women teaching women IT. These networks will be most effective if trainers are drawn from within local communities. A household-women-to-household-women network will be most effective in conservative communities.
3. Linking IT training with employment opportunities and other sustainable livelihood strategies will help provide incentive for training and incorporating IT into households at the village level.
4. Developing a series of micro finance loans so that women can put ideas for IT-enabled sustainable livelihood projects into action without risking already limited household funds. Such funds could be used to purchase a computer, to buy monthly Internet connectivity or to expand or create a home business. Many women involved in the NetCorps Jordan project stated that they gained from the Internet valuable information with which to enhance or create a business, including ideas for hair styling, access to the latest fashion trends (especially important for seamstresses) and access to networks through which to market handicrafts and homemade foods/baked goods.
5. Targeted education strategies for gender sensitisation of men, so that changes in women's lives and roles can be better accepted and discussed within local communities and thus will be more likely to take root. Such training sessions should be endorsed by local leaders respected within the community.

Ownership: Overcoming a Barrier to Women's IT-enabled Advancement

It is clear that women will not own the information revolution until they become more active participants within it. The methods for expanding women's participation include increasing the number of women who work outside of the home and reducing the price of IT so that more families can purchase PC's and other high tech tools, thus giving women who do not work wider access. Also important to widening women's role in the information society is providing gender sensitive forms of IT training. Also key to women's advancement in the IT economy is enabling more women to break through the 'glass ceiling' in these emerging markets.

Some policy steps to increase women's ownership of the IT revolution in Western Asia, in addition to those already outlined above include:

1. The implementation of female targeted IT industry internships through which women can access positions of leadership within this emerging field.

2. The creation of female targeted IT management training seminars linked with entry into leadership roles within the information economy.
3. A government/private sector supported venture capital fund to support women-owned IT businesses or businesses with an employee base of 50 percent female staff, including equal representation in corporate and upper level management positions.

Collective Action and Institutional Transformation: The High Profile Signs of Women's IT-enabled Empowerment

For the majority of West Asian women, the personal costs of being an activist for gender related change are too high to take such risks. Once again, those women who do leverage IT in their struggle for equitable social change as discussed above are part of an elite minority. Although the results of such activism make headlines, the roots of such activism do not spread far and wide within West Asian societies. They are instead the legacy of a handful of well educated, well placed elite women armed with IT. IT enhances their public voice and extends their global reach in their quest for change. The narratives above suggest that the anonymity of cyberspace is broadening the scope of women who are experimenting online in terms of expressing their opinions, debating political and social issues, and taking risks that would too dangerous to pursue in real life. One of the legacy effects of the information age is that a growing contingent of women may be enabled by IT in overcoming the risks to their reputations that activism can bring. Cyberactivism plays a role in change and, according to the narratives above, it is not considered by West Asian women as being as 'risky' as directly acting in the public sphere.

It is the bravery and boldness of IT-enabled cyber chatters, as much as it is the growing chain of IT literate village women, that hold the real keys to hope in this region. Each woman who takes information technology into her own hands, fashioning it to fit her contextual circumstances, makes a step towards personal and communal growth; it is she who illustrates the clear links between IT and empowerment. Women, leveraging IT to break through the norms which constrain them, provide the keys to the IT revolution budding and blooming in Western Asia.

Endnotes

- 1 See, for example, Wheeler (2001, 2004, 2005b).
- 2 The interviews upon which this research is based were conducted in Arabic by two Jordanian female research assistants in 2004 and 2005. Part of the research was supported by the Digital Opportunity Trust of Canada.
- 3 Interview with NetCorps Jordan intern, 10 January 2005.
- 4 Interview with NetCorps Jordan intern, 15 December 2004.
- 5 Interview with NetCorps Jordan participant, 15 December 2004.
- 6 When I met with a group of Moroccan journalists and intellectuals during a lecture tour in Rabat and Fez in 1997, several of the participants said that they intended to resist the information age because it was a form of electronic colonialism. For more on this view, see Mboka (2003).
- 7 In some cases, IT acts to enhance traditional roles, such as in the case where a woman desires IT training in order to be a better mother, more educated in regulating a child's IT use.
- 8 Interview with Hassan (a pseudonym), Washington, D.C., March 2006.
- 9 <http://www.escwa.org.lb/information/publications/edit/upload/ictd-05-1.pdf>

- 10 Survey conducted by Seif Abbas, at the time Professor of Political Science at Kuwait University, and used with permission. For more on women's Internet use in Kuwait see, Wheeler (2005a, 105-32).
- 11 Interview, 29 October 2001.
- 12 Interview, 30 November 2001.
- 13 Interview, December 2002.
- 14 For more on censorship of the web in the Arab World, see Goldstein (1999).
- 15 <http://www.batelco.com.bh>
- 16 Email correspondence with a Batelco employee, 30 March 2002.
- 17 Interview, 15 April 2002.
- 18 Interview, 10 April 2002.

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ICTs and Women's Empowerment: Findings from South Asia*

Mridula Swamy

This paper begins with a discussion of the three policy approaches that can be adopted to harness information and communication technologies (ICTs) in developing countries, and the implications of each vis-à-vis development and gender issues. Presenting the specific social and development contexts in the South Asian countries, the paper highlights the current state of ICTs in these countries as well as national efforts to promote ICT through policy directives. These are then examined in light of the three ICT approaches to understand their potential towards achieving gender equality and social development. Case studies from the region are used to analyse the four pillars of the general framework - women's identity, control over technology, collective action and institutional change - and to develop recommendations for ICT policies in South Asia such that they hold positive and transformative potential for women.

Introduction: Locating ICTs within the Development Context

There is little doubt that information and communication technologies (ICTs) are changing the way in which society is organised. Right from the processes through which data is transmitted, to the way in which business is conducted, to the channels through which news and current events are disseminated, to the way in which individuals and members of groups communicate with each other, and to the manner in which governments make available services and information to citizens, ICTs have impacted the way in which our lives are organised. In fact, the defining characteristic of these new technologies is that they are 'general purpose', in that they permeate all realms and levels of society and transform the world of business, governance, social communication, education, amongst other spheres of our social and personal lives.

As ICTs are characterised by declining costs, widening reach, greater availability and increasing versatility, there is a need to examine their potential within the existing development context. The way in which ICTs are conceived and adopted in national policies plays a significant role in determining their development impacts at the local level. In this sense, there are three basic approaches that can be espoused: the business approach, the enabler approach and the systems approach.

The business approach draws primarily from a neoliberal paradigm, which is 'the assertion that the market is the core institution of modern - capitalist - societies and that both domestic and international politics

are (and should be) increasingly concerned with making markets work well' (Cerny 2004, 4). While the focus of this paradigm is primarily economic, it has wider political and social implications, as it necessitates the creation of institutions that are market-led and infuses in governments and international bodies the need to adopt a 'market friendly' attitude - one that is governed by increased competition, deregulation of sectors, dismantling of barriers on trade and privatisation of public services. By replacing 'government' (a formal institution) with 'governance' (an informal structure), neoliberal policies demand for 'the systematic restructuring of domestic politics around the imperatives of successful insertion of the domestic into the new world politics' (Cerny 2004, 7).

In developing countries, the implications of this market-centric ideology on ICT-led initiatives has created an environment in which the growth of the IT and telecom sectors are seen as best pursued through the market and through the narrow lens of expanding IT and IT-enabled service industries. The private sector is considered a critical partner in this approach and, through increased competition, efficiency of service provision, and reduced costs, is believed to best meet the needs of the people. Liberalisation is a key plank of this approach and necessitates the opening of domestic markets to international players. From a development standpoint, the benefits of a market-led ICT sector for the poor and marginalised sections is seen as coming through a trickle-down effect - where greater domestic and foreign private investment in the IT sector leads to higher incomes and better employment opportunities for certain sections of the population, which in turn is expected to trigger additional jobs and opportunities for those not directly involved in the sector.

There are several issues in substituting universal access to basic entitlements with a privatised, market-centred approach. Bayliss and Kessler (2006, 5) identify three major problems:¹

First, to the extent that the spending decisions discipline service providers, those with little or no income can be excluded from public services. Often the poor cannot even become consumers due to their inability to pay for services. Second, the consumer's strongest signal, the decision to change providers, cannot be used for services that are natural monopolies, such as water and electricity utilities. Finally, private provision of public services requires effective regulation by states, which often have weak governance institutions and little experience in monitoring or enforcing complex contracts.

A private sector-led approach is believed to increase the poor's access to services, due to improved service delivery and higher efficiency; yet, it may not necessarily strengthen access for certain categories of the poor, who are located in difficult-to-access regions. Furthermore, in the absence of state regulation, privatisation may actually result in overpricing and low quality of services delivered, worsening the conditions of the poor. In this context, given the 'public good characteristics' of basic socioeconomic services, a private supply of the same would result in outcomes that are below a socially optimal level, and market-based frameworks applied in this context divert attention towards the needs of private players and away from the needs of the poor. Most countries in South Asia have looked up to the spectacular success of the export oriented Indian IT and ITeS (IT enabled services) industries, and have oriented their IT policies largely to meet the needs and demands of these industries, rather than those of the development sector.

The second approach is where ICTs are treated as 'enablers' or tools that facilitate the achievement of a larger goal or end. This approach, advocated in the Digital Opportunity Task Force Final Report, argues that ICTs can contribute towards the achievement of development goals 'by increasing the effectiveness and reach of development interventions, enhancing good governance and lowering the costs of service delivery' (Accenture et al. 2001, 9). In the business realm, ICTs can contribute towards higher productivity, lower costs, reduced delays and improved market standing, leading to higher industrial growth which in turn affects a country's global economic position.² The role of ICTs in this approach is to spur improvements either in economic sectors that do not use new technologies in their existing operations, or in development sectors by improving the reach of health, education, social security and livelihoods support services to the people.

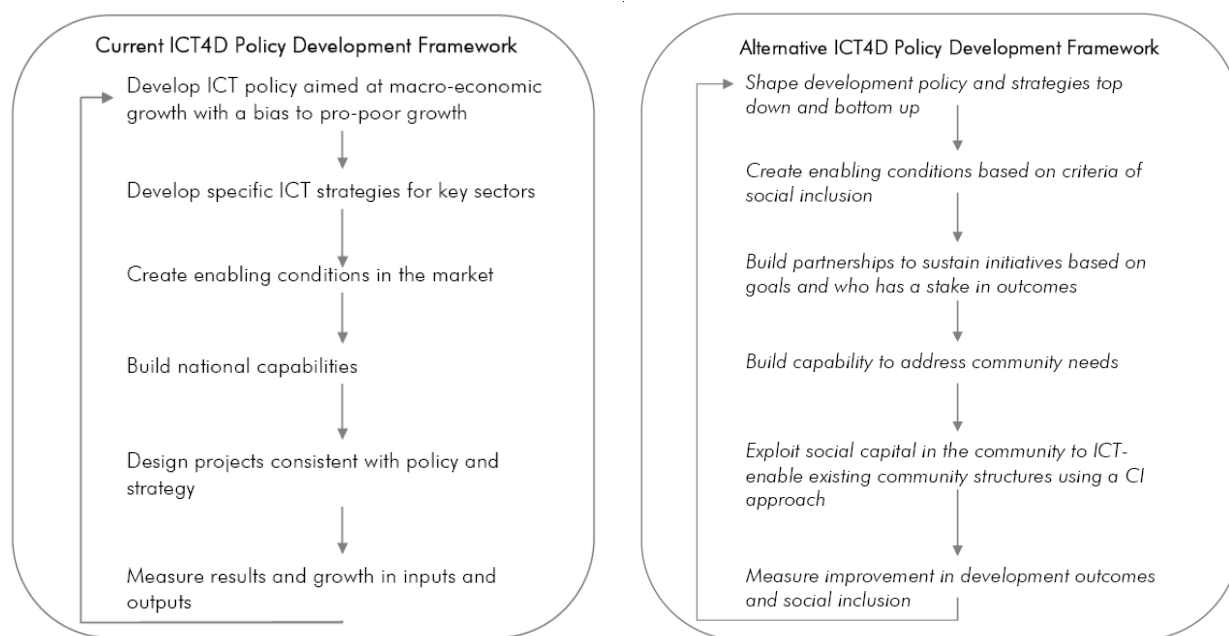
Although this kind of approach recognises the potential of ICTs in the development sector, it mostly adopts the same 'efficiency' formula of the business approach to reach its ends, wherein the reduced inefficiencies and costs brought about through integration of ICTs in sectors is believed to lead to greater availability and accessibility of services for the community. This approach fails to consider power relations at the community level and, thus, has little impact on affecting unequal gender, caste and class relations in society. Greater efficiency and transparency in the provision of government services could benefit the community, but who in the community is able to maximise these benefits depends on the power structures in the community, that assign control over assets, resources and networks to certain groups at the cost of others. A simplistic enabler approach that ignores the power dynamics that constitute information and communication processes in the community (called community informatics in some recent studies) can have limited impact on social justice parameters. Most ICT projects in South Asia - and the region has one of world's largest concentration of such projects - have taken an enabler approach to ICT for Development (ICTD), including those projects that profess gender concerns.

The systems approach, in contrast, adopts a paradigmatic view, where ICTs are seen as transforming and re-constituting many basic structures, institutions and relationships in the society, an aspect which has great relevance to gender equality advocates. The underlying principle is that 'ICT does not just enable us to do new things; it shapes how we do them. It transforms, enriches and becomes an integral part of almost everything we do' (ISTAG 2006, ii). In what is increasingly characterised as an information era or a knowledge era, the approach moves beyond the efficiency gains brought about through new ICT 'tools', and examines how they can be systemically applied towards meeting development and social justice ends. The approach recognises that these new technologies are not neutral; they can (and do) in fact embed themselves in existing social and political structures, and so their potential can be biased towards reinforcing these unequal structures and further marginalising communities and individuals. As Gurusamy (2006, 1-2) observes in the context of the Internet, which symbolises the digital era:

...the virtual is not just a new site of struggle or a system of discrimination but in fact a new animal, that strengthens and unleashes old ideologies of exploitation; it is anti-poor, anti-south, racist and patriarchal. In this sense, the virtual is much more real than we think. And the 'digital gap', as we know and understand, does not capture these structural aspects adequately.

This is seconded in Vaughan's (2006) analysis of ICTD policies, wherein she observes that a sustainable ICT policy would pay as much attention to the existing community structures as to the technology itself, if it attempts to challenge these structures and to provide new avenues for social, economic and political empowerment for marginalised groups. She contrasts the business approach model to ICTD policies with an 'Alternative ICT4D Policy Development Framework' (presented in Figure 1), the latter underscored by the parameters of social inclusion and sustainable, community-defined outcomes.

Figure 1. Comparing the Current Approach to ICT4D Policy Development to an Alternate Community-Centred Approach



Source: Vaughan (2006) - the abbreviation 'CI' in the above representation stands for 'community informatics'.

The Gender Dimension within ICT Approaches

The criticism of the neoliberal approach from a gender standpoint is fairly well acknowledged. Çağatay and Ertürk (2004), for example, observe that the neoliberal agenda and corresponding macroeconomic policies have resulted in the retrenchment of public sector jobs, the weakening of public service provisions, and instability arising from international capital flows - and all of these have had adverse redistributive effects on people living in poverty, particularly on women and girls. The commodification, not just of government services, but also of knowledge and life forms that previously were common property, has, on the one hand, devalued and restricted women's use of traditional knowledge and, on the other hand, limited women's ability to access and take advantage of new forms of knowledge available through ICTs. And while the expansion of the IT sector through foreign direct investment and privatisation has resulted in new and better employment opportunities for women, these, like in other export-oriented industries, come with long working hours, restrictions on unionising and, increasingly, a lack of physical security and the absence of formal contracts. Women tend to be concentrated in lower-end and lower-skill jobs. For

the non-literate, poor, rural, non-English speaking women who constitute the majority in developing countries, even these jobs are out-of-reach, and these women continue to remain distanced from the opportunities that come with employment in the IT and related sectors. Thus the feminist struggle lies not just in revealing the shortcomings of the neoliberal approach, which fosters and is fostered by the growth of the ICT sector and is clearly unsuitable for redistribution and sustainable development, but also in adopting new and holistic frameworks to address media and ICTs in a gender-sensitive manner (Jenson 2006).

The enabler approach to ICTs provides some gains from a gender perspective in that new technologies are seen as enabling women to better achieve various ends under the broad goal of 'bridging the digital divide'. For instance, through e-literacy and e-learning programmes, women and girls can secure better education; through information kiosks and portals, women can get regular and accurate information on health, agriculture, livelihoods and job opportunities; through e-governance and computerisation of public services, women can access their entitlements and avail of government schemes and programmes. These benefits are real; yet, an enabler approach has limited potential for a gender equality agenda as it is overemphasises the possibilities made available through an externally-induced technological advancement, in terms of its ability to spur efficiency and innovation, without addressing broader and deeper structural issues.

(The) big problem with 'the digital divide' framing is that it tends to connote 'digital solutions', i.e., computers and telecommunications, without engaging the important set of complementary resources and complex interventions to support social inclusion, of which informational technology applications may be enabling elements, but are certainly insufficient when simply added to the status quo mix of resources and relationships.
(Rob Kling in Warshauer 2002, 5)

By focusing on technology first and people next, it fails to account for social inclusion parameters that would allow individuals and communities to 'fully participate in society and control their own destinies' (Warshauer 2002, 5). A 'technology as enabler' paradigm, by neglecting the socio-political context in which it is embedded, and specifically the roles and statuses that women hold in the productive, reproductive and community spheres within their contexts, provides a limited response to the needs and priorities of women.

The systems approach as a starting point recognises the 'multiplier effect' that ICTs have on a 'wide range of socioeconomic activity', and argues for a strong public policy role in the provision of ICT infrastructure to ensure the inclusion of marginalised groups in order to create social transformation (Gurumurthy 2006, 4). From a gender standpoint, women's access to ICT infrastructure is necessary but not sufficient, as it is tantamount to assimilating women 'into a space that they cannot own and control on their terms and where gender relations mirror existing patterns of marginalisation, exploitation and oppression' (Gurumurthy 2006, 5). The information society offers both risks and opportunities, and Gurumurthy lays out three vantages from which women's rights must emerge - in challenging exploitative pornography, trafficking and other gender-based crimes on the Internet; in revitalising older rights such as the right to information and the right to education, using ICTs; and in taking advantage of new avenues for expression, communication, networking and institutional change, made possible through ICTs. The feminist agenda,

therefore, needs to be two-fold: to change the perception of ICTs as a 'ghettoised area relevant only to those who are privileged enough to have technological access' to a broader arena informed by a women's rights-based framework that includes issues of violence against women; and, for the women's movement to grapple with technologies 'as a site of feminist political struggle' and to take control of the technologies it uses, which influence 'the decisions that direct their development' (Ramilo 2006, 70).

How do these three approaches to understanding ICTs fit within the development and gender contexts of South Asia? No country unilaterally adopts one specific approach at the exclusion of all others - rather, most countries tend to espouse certain aspects of each of these approaches, which then influence their national ICT policies and strategies. This is as true for South Asia, where varied efforts have been made to appropriate and promote ICTs towards various economic, political and social ends. Yet, as mentioned earlier, the approach that is most widely accepted and endorsed by the South Asian governments continues to be the business approach, where the market is seen as the best mechanism to determine and stimulate the growth of the ICT sector and the private sector is seen as the key leader in the ICT arena. The main policy effort in such a context is to push forward pro-market reforms and provide public support and facilities for the growth of IT and related industries.

In the following sections, the South Asian scenario is examined along three dimensions: 1) the development and gender reality of South Asian countries; 2) policy efforts made to integrate ICTs into the national economies; 3) linking ICT policies in different countries to the development contexts to understand the potential (or lack thereof) of these policies to achieve gender equality and social development.

The South Asian Scenario: Social and Gender Equality Indicators

South Asia, despite its rich resource endowments and high gross domestic product (GDP) growth rates in recent years, lags behind on most social and gender indicators, with more than 500 million people living in a state of severe deprivation in terms of even the most basic needs. Table 1 and 2 present some of the data on basic development and gender parameters, which are discussed below.

As can be seen in Table 1, the countries vary significantly in their population, but have similar urban-rural distribution of their population. The proportion of the urban population has been on the rise in the last couple of decades, but continues to be as low as 11 percent in Bhutan and below one-third of the total population in all South Asian countries. This means that a large part of the population continues to reside in rural areas and is highly dependent on agriculture and related activities. The GDP per capita adjusted for purchasing power parity (GDP PPP) reveals that Sri Lanka and the Maldives, with a GDP PPP of over \$4000, are clearly better off, but Nepal, Bangladesh and Bhutan, at less than \$2000 GDP PPP, are lagging behind. GDP on its own does not reveal the way in which income is distributed amongst various sections of the population and this is where the Gini coefficient provides insight. The coefficient ranges from 0 to 1 and measures the cumulative income share by the cumulative population share, wherein a value closer to 1 indicates greater inequality.³ Most South Asian countries have a Gini index (which is the Gini coefficient expressed as a percentage) of around 30 percent, which indicates moderate inequality. Nepal has a fairly high inequality index, at almost 50 percent. The percentage of the population living in poverty is dependent on how the poverty line is determined by the national authorities of each country. Although this is not ideal for cross-country comparison, we find that Bangladesh has the highest percentage

Table 1. Demographic Profile and Development Indicators in South Asia

Country	Population (1000s)	Urban Popln. (%)	GDP Per Capita (PPP US\$)	Gini Index	Popln. Living Below the National Poverty Line %	Adult Literacy Rate (% ages 15 and older)	Combined Gross Enrolment for Primary, Secondary, Tertiary School (%)	Life Expectancy at Birth (Years)	Under-Five Mortality Rate (per 1000 live births)	HIV Prevalence (% ages 15-49)	Popln. with Sustainable Access to Improved Water Source (%)	Population with Sustainable Access to Sanitation (%)	Public Expenditure on Health (% of GDP)	Public Expenditure on Education (% of GDP)
Bangladesh	139,215	24.7	1,870	31.8	49.8	41.0	57	63.3	77	<0.1	74	39	1.1	2.2
Bhutan	2,116	10.8	1,969	-	-	47.0	49	63.4	80	<0.1	62	70	-	-
India	1,087,124	28.5	3,139	32.5	28.6	61.0	62	63.6	85	0.9	86	33	1.2	3.6
Maldives	321	29.2	4,798	-	-	96.3	69	67	46	<0.2	83	59	5.5	8.1
Nepal	26,591	15.3	1,490	47.2	30.9	48.6	57	62.1	76	0.5	90	35	1.5	3.4
Pakistan	154,794	34.5	2,225	30.6	32.6	49.9	38	63.4	101	0.1	91	59	0.7	2
Sri Lanka	20,570	15.2	4,390	33.2	25	90.7	63	74.3	14	<0.1	79	91	1.6	-

Source: Human Development Report (2006)

Table 2. Performance on Maternal Health and Gender in South Asia

Country	Gender-Related Development Index (Value)	Total Fertility Rate	Births attended by skilled personnel %	Maternal Mortality Ratio (per 100,000 live births)	Life Expectancy at Birth (years) - MALE	Life Expectancy at Birth (years) - FEMALE	Adult Literacy (% 15 yrs and older)- MALE	Adult Literacy (% 15 yrs and older)- FEMALE	Net Primary Enrolment (ratio of female to male)	Ratio of estimated female to male earned income	Female economic activity rate (%15 and older)	Seats in Parliament held by Women (% of total)
Bangladesh	0.524	3.2	13	380	62.5	64.2	51.7	33.1	1.03	0.46	52.9	14.8
Bhutan	-	4.4	37	420	62.2	64.6	-	-	-	-	44.3	9.3
India	0.591	3.1	43	540	62.1	65.3	73.4	47.8	0.94	0.31	34	9.2
Maldives	-	4.3	70	140	67.4	66.6	96.2	96.4	1.01	-	46.1	12
Nepal	0.513	3.7	15	540	61.6	62.4	62.7	34.9	0.87	0.5	49.7	6.7
Pakistan	0.513	4.3	23	500	63.2	63.6	63	36	0.73	0.29	32	20.4
Sri Lanka	0.749	2	96	92	71.7	77	92.3	89.1	1	0.42	35	4.1

Source: Human Development Report (2006).

of people living below the poverty line - almost half its population - and Sri Lanka has the lowest, at 25 percent. On average, one-third of South Asia's population lives in poverty.

Given that basic education and literacy are recognised human rights in various international declarations, adult literacy rates and enrollment rates are compared across the region. There is great variation in the adult literacy rate, with four of the seven countries falling below 50 percent. India scores moderately higher, at 61 percent, whereas Sri Lanka and the Maldives are on par with the developed countries, at 91 and 96 percent respectively. Where combined enrollment in primary, secondary and tertiary schools as a percentage of the school age population is concerned, Pakistan has the lowest enrollment rate at 38 percent while most other countries fall in the 50-60 percent range.

Life expectancy at birth is considered an important human development indicator. Sri Lanka is the only country with a life expectancy greater than seventy years, while all other countries are very similar with a life expectancy of around sixty to sixty three years at birth. Under-five mortality captures the probability of a child dying between birth and five years. For every 1000 live births in Pakistan, the under five mortality rate is 101, which means that one in ten children is likely not to live up to the age of five. India, Bangladesh, Bhutan and Nepal are not far behind, while Sri Lanka again ranks amongst the developed countries, with a low under-five mortality rate of fourteen children per 1000 live births. HIV prevalence is currently not very high for countries in this region, compared to counterparts in Africa.⁴ Although most countries, except Bhutan, have a relatively reasonable proportion of their population with sustainable access to an improved water source (such as household connections, public taps, boreholes, etc), there is great variation in the sustainable access to improved sanitation.

Less than 40 percent of the population in Bangladesh, India and Nepal has reasonable access to sanitation, whereas more than 90 percent of the Sri Lankan population does.

Finally, Table 1 takes a brief look at public spending priorities in the South Asian countries. Most countries spend an abysmally low percentage of around 1 percent on health, barring the Maldives, where the government spends 5.5 percent on public health. The education scenario is equally appalling as - barring the Maldives again - the countries, despite their poor literacy records, spend just 2 to 3 percent of their GDP on providing education for their population. Interestingly, these countries spend about the same percent of their GDP on military expenditure.

Table 2 (see p. 85) takes the indicators one step further, analysing how countries perform on gender equality parameters. The Gender-Related Development Index, which adjusts the human development indicators of life expectancy, literacy and enrollment and income for inequalities across men and women, shows that South Asia has mediocre performance. Even Sri Lanka, which leads the region at 0.749, is still much behind the developed countries of the world.

As Millennium Development Goal (MDG) number five emphasises improving maternal health, the total fertility rate, the number of births attended by skilled personnel and the maternal mortality rate are examined. Although the total fertility rate has declined in all countries in the past decade, it still remains high at an average of three to four births per woman. Sri Lanka has reached fertility replacement rate with two births per woman on average. The relatively high fertility becomes problematic when the percentage of births attended by skilled or accredited health personnel (doctor, nurse or midwife) is examined - in

Bangladesh and Nepal, only 13 and 15 percent, respectively, of all births are attended by skilled personnel. The rest of the countries, except for Sri Lanka, are not much better off, well below the world average of 61.5 percent. Maternal mortality is also very high - Nepal, India and Pakistan are at the bottom of the chart, and even Sri Lanka falls below the world average. These figures indicate the extremely poor condition of reproductive health in South Asia.

Comparison of some indicators in terms of men-women difference shows that there is not much difference in the life expectancy of men and women at birth, and in most cases, women have a slightly higher life expectancy than men. Adult literacy rates reveal a much larger disparity, where for every ten men who are literate, only five or six women are literate in Pakistan, India, Nepal and Bangladesh. The island countries, Sri Lanka and the Maldives, have achieved gender parity in adult literacy rates as well as in enrollment in primary schools. With regard to the latter indicator, the rest of the South Asian countries are not far behind, although Pakistan has some catching up to do. Estimated income is based on female and male non-agricultural wages and other parameters, and where developed countries themselves perform moderately with ratios of .6 and .7, women earn less than half of male earnings in South Asia and lower than one-third of male earnings in Pakistan. The female economic activity rate is increasing rapidly in the region, but still remains below 50 percent in all countries except Bangladesh. Finally, looking at the seats held by women in the parliament (lower or upper house), we again find that in no country in the world are women on par with men. Compared to the best performing country, Sweden, where 45 percent of all seats are held by women, in South Asia approximately 10 percent of the seats are held by women. Pakistan is the noteworthy exception, with 20 percent of its parliamentary seats being held by women.

While most of the social and development indicators reveal that the South Asian performance has been average at best, the maternal health and gender indicators highlight the poor performance of the region in ensuring decent life chances and opportunities for women. This is further revealed by research studies in the region. Oxfam's (2004) study on violence against women in South Asia presents some shocking findings from other studies done in the region on the issue. When asked about violence in the household, 80 percent of Pakistani women, 50 percent of Indian women, 47 percent of Bangladeshi women and 60 percent of Sri Lankan women reported experiencing some form of violence within the home. The extent of violence goes even further, with the continued prevalence of women being raped and killed under the pretext of 'honour' killings in Pakistan; dowry-related violence against women and suicide by women due to dowry harassment in India; acid attacks against women in Bangladesh; increased sex trafficking of Nepali girls and women; and sex-selective abortions in most parts of India and some regions outside of India.

Women's unequal status in various realms impacts their access to social protection and their capacity to manage vulnerabilities, risks and crisis, including that of domestic violence. In such contexts, studies hypothesise that 'women's rights over ownership and control of property and inheritance would be protective for women from social and economic shocks, particularly those arising from the experience of domestic violence' (Batla et al. 2006, 5). Yet, women's property ownership is extremely low in South Asia and furthermore, sex-disaggregated patterns of land and house ownership are not captured in official census studies. Field level research studies, such as those undertaken by the International Center for Research on Women, provide a glimpse into property ownership by women in the region (see Table 3, p. 88).

Table 3. Rural-Urban Prevalence of Property Ownership by Women

Ownership of Property by Women	Sri Lanka (%)	West Bengal (%)	Kerala (%)
Currently own property			
Rural	23.0	26.0	29.1
Urban	44.0	50.0	47.5
Do not own property			
Rural	77.0	74.0	70.9
Urban	56.0	50.0	49.4

Source: Batla et al. (2006)

A cursory glance at indicators relating to and studies of the South Asian region clearly show that women in the region face discrimination in multiple spheres - literacy, employment, political leadership and asset ownership, amongst others - and face multiple inequalities in the household, as daughters, wives or mothers. Where do ICTs fit into this picture? The next sections capture, first, ICT statistics in the region and then, the ICT policy scenario in South Asian countries from the context of gender and development.

ICTs in South Asia: Present Condition of Connectivity and Affordability

Table 4 presents some of the information and technology indicators of the region.⁵ The number of fixed and mobile subscribers per thousand of the population shows extremely low performance for all countries except the Maldives. On average, only seventy six in every thousand persons - less than 8 percent - in South Asia have subscriptions to fixed landlines and mobile phones, and this puts South Asia below its Asian counterparts, Latin America and even the Middle Eastern region. Telephone mainlines, or the number of telephone lines connecting a customer's equipment to the public switched telephone network, again shows that South Asian countries have fairly low connectivity. Bangladesh, with six persons per thousand connected to the public switch, and Nepal, with thirty persons per thousand, fare particularly poorly. The countries perform better on the percentage of the population within the range of a cellular signal (covered by mobile telephony): on average, 43 percent of South Asia is covered by mobile telephony, with Bangladesh and the Maldives covering over half of their population. Given that television is a much older technology, the share of households with a (colour) television set, should be fairly high even in the developing countries of South Asia. We find that on average about one-third of the households have a television set in South Asia, ranging from only 3 percent in Bhutan to 68 percent in the Maldives. The world average of households with television sets is 84 percent.

Where computers and Internet connectivity are concerned, South Asia, despite promoting itself as an 'IT destination', has very low usage across its population. Broadband subscribers - with a digital subscriber line, cable modem or other high-speed technologies - average 1 percent for the entire region, which is hardly comparable with the average of twelve persons per thousand for lower-middle income countries⁶ or

Table 4. ICT Indicators of South Asian Countries

Indicator	Bangladesh	Bhutan	India	Maldives	Nepal	Pakistan	Sri Lanka	South Asia
Fixed line and mobile phone subscribers (per 1,000 people)	37	53	85	451	22	63	165	76
Telephone mainlines (per 1,000 people)	6	33	41	98	15	30	51	35
Population covered by mobile telephony (%)	50	-	41	71	-	45	30	43
Households with television (%)	29	3	37	68	-	39	32	32
Broadband subscribers (per 1,000 people)	-	-	1	2	-	-	-	1
Internet users (per 1,000 people)	2	22	32	59	7	13	14	26
Personal computers (per 1,000 people)	12	12	12	112	4	5	27	12
Price basket for residential fixed line (US\$ per month)	7	-	3	8	3	6	7	3
Price basket for mobile (US\$ per month)	4	-	3	-	3	3	4	3
Price basket for Internet (US\$ per month)	20	73	9	62	13	16	15	15

Source: World Bank (2006)

the world average of thirty two persons per thousand population. The same is the case with Internet users, or the number of people accessing the world wide computer network, where even the highest performer in South Asia, the Maldives, with fifty nine users per thousand population still has fewer than lower-middle income countries (seventy four users per thousand population) or high income countries

(545 users per thousand population). Finally, data on personal computer owners, or the number of single individuals owning self-contained computers, shows that only 1 to 2 percent of the population owns computers in all of South Asia, barring the Maldives, where more than 10 percent of the population owns personal computers. Recognising that data on connectivity is not strictly comparable as it is drawn from national surveys and estimates, it is still safe to say that South Asia as a region underperforms when compared to the world average.

With reference to the poverty and development situation highlighted in the previous section, affordability of ICTs is a central issue in the South Asian region. The price baskets for residential fixed lines,⁷ mobile phones⁸ and the Internet⁹ are used to ascertain the affordability of ICTs. The method of calculation of each of these is provided in the footnotes, and for each variable, the data in the national currency is converted into US dollars¹⁰ per month based on the annual average exchange rate. The data reveals that in fact, the price basket for residential fixed lines is significantly lower in South Asia compared to the rest of the world, with the cost in most countries ranging between \$3-8 per month. Similarly so for the price basket for mobile in South Asia, which is around \$3-4 per month and is lower than the average for lower middle income countries of \$10 per month. Internet costs vary significantly in the region, from as low as \$9 per month in India, to as high as \$62 and \$73 per month in the Maldives and Bhutan respectively. The average for the region, around \$15 per month, is lower than the world average or the average for high income countries which range in the 20s. In general, the dataset reveals that the price basket for ICTs in the South Asian region is lower than the averages for lower middle income or high income countries as well as the world average. This could be a critical factor for accessibility by marginalised groups, including women, an issue that will be examined in greater detail in next section.

Taking Stock of the ICT Policy Scenario in South Asia

Starting in the 1970s with Sri Lanka, and then in other countries in the region in the early 1990s, highly closed and restrictive economic systems were opened up and liberalised, with the regular prescriptive measures of currency devaluation, reduction of tariff and non-tariff barriers, removing restrictions on import and exports, and non-trade measures of deregulation, privatisation, and tightening of fiscal spending. A component of this regime is the deregulation and liberalisation of the telecom and IT sectors. Policy measures in this regard came about as early as 1983, with Sri Lanka's National Computing Policy that led to the setting up of Computer and Information Technology Council of Sri Lanka. But it is largely since the mid-1990s that the South Asian countries have established national IT policies in which strategies and action plans for specific areas, such as infrastructure, connectivity, capacity building, e-commerce, privacy and human resource development, are spelled out.

How do these national policies on IT, telecom and broadband fit with the three approaches laid out in earlier sections? And what is their potential from a gender and development standpoint? While the specifics of each country's policy will be discussed below, three broad generalisations can be made about the focus of all of these countries' policies. One, the policies mostly concern themselves with the export potential of IT and related industries; consequentially, there is little vision for a domestic economy and/or national society based use of IT. Two, even if viewed in terms of their impact on the society, these policies see ICTs narrowly as efficiency enhancing 'tools' that can bring about productivity gains and

reduced costs in the various spheres in which they are applied; ICTs are, thus, considered to be best appropriated through a market-based or a business model approach. And three, although some countries address a host of socioeconomic development issues in their policy documents, gender concerns find minimal reference, if at all. Even when references to women exist, they tend to be fairly tokenistic, without comprehension of the real issues - the challenges and the opportunities - involved.

India and Pakistan's ICT policies completely embrace what has been discussed earlier as the neoliberal agenda in the ICT arena. The policies are grounded in creating a competitive market environment pushed through private sector investment and leadership and explicitly oriented towards the economic growth and export revenue potential of ICTs. The strengthening and expansion of ICT infrastructure - basic telecom or broadband - is to be achieved through specifying obligations of and providing incentives to the private sector, towards the goal of faster economic growth. Local producers of hardware and software are to be encouraged by policy and material support (information technology parks) with the basic objective of capturing global markets.

From a development standpoint, the lack of access and affordability of ICTs is recognised as a concern that needs to be addressed - something which is true not just of India and Pakistan, but of all the South Asian countries. A provision of using Universal Service Funds, collected as a proportion of the earnings of telecom providers, is mentioned in most policies in an attempt to bring ICTs (and their expected benefits) to rural and geographically difficult-to-reach areas as well as to marginalised groups. The need to integrate ICTs into development sectors such as health, agriculture, governance or education is articulated in the light of the efficiency gains and greater transparency that it can bring. Capacity building efforts in the government sectors are seen in the same light. From the citizen's perspective, human resource development is the catchphrase, wherein ICT education in colleges and universities and training through various kinds of public and private institutes is considered an essential building block for the growth and sustainability of the ICT industry. The goal in this regard is to develop a skilled and competent workforce that can seamlessly contribute to the IT and telecom sector's growth and, thereby, the country's economic growth. An expansion of telemedicine, distance learning and e-government services is contemplated with the intention of meeting the needs of under-served areas while also increasing the 'competitive edge' and skills of the local companies that make the hardware and applications for these services. Pakistan's policy documents make mention of promoting local language software and content development as well as open source software in government offices, while the Indian policy highlights the need to develop ICTs as tools for disaster mitigation and management.

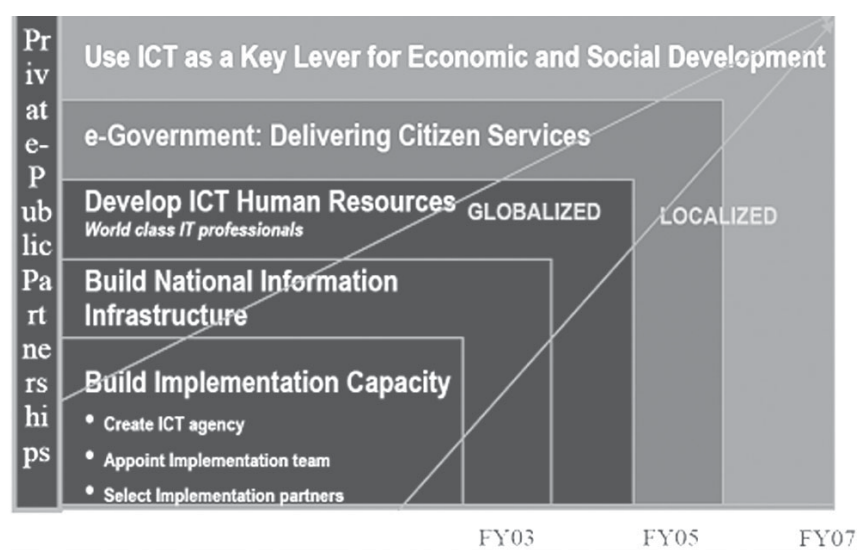
Interestingly, the IT Policy of Pakistan, in its discussion of e-commerce and broadband, recognises the pervasive and transversal nature of ICTs; the role that ICTs are playing in changing business and social systems and in providing new solutions to address existing human development issues; and how the information society brings about new capabilities that were not possible in the industrial society. While seemingly endorsing the systems approach to ICTs, it sidelines the role of public policy in the same breath by stating that the role of the state is to regulate the telecom and IT industry and to create the right incentives for the market to function and for the private sector to participate in the market. The policy calls for making the 'government a facilitator and an enabler to provide maximum opportunities to the private sector to lead the thrust in development of IT in Pakistan' (Government of Pakistan 2004).

The vision of Bangladesh's ICT policy emphasises empowerment of citizens and enhancement of democratic values through ICTs. Yet, the 'ICTs as an enabler' approach is coupled with other statements that express the need to push the export potential of the ICT sector to enable growth. Here, too, the training of teachers and the development of a skilled workforce is with the goal of reducing bottlenecks in the ICT industry which is to be promoted through Special Economic Zones. Infrastructure is to be built by deregulating the telecom market and 'cooperating' with the private sector to reach unserved areas. Increased access through higher teledensity is expected to increase the socioeconomic condition of the people, as is the increased efficiency resulting from integrating ICTs in agriculture, fisheries, medicine, environment and governance. The policy calls for the participation of private professionals to run the ICT Cells in each government department and coordinate the implementation of ICT projects and services, while assigning the role of village level hardware and software provision to NGOs.

Sri Lanka's ICT policy calls for an enabler role for ICTs, to achieve growth across all business and social sectors and to bring about economic growth, peace and equity (see Figure 2). Similar to the other country policies, it asserts the need to 'to rebrand Sri Lanka as a destination of choice for ICT products, services and investments' by strengthening the ICT export industry through increased competition and through creating thousands of jobs for ICT professionals (ICTA 2008). Empowerment of the rural poor, women, youth, and other disadvantaged groups is also recognised as a key goal. Through distance and e-learning initiatives and affordable access to information and knowledge through the setting up of rural telecentres, or Nenasalas, ICTs are expected to act as a key lever for socioeconomic development. The e-Sri Lanka policy is unique because it talks about participation of local communities who must take complete ownership, identify their needs and participate in the designing stages of the process. Furthermore, women are recognised as a marginalised group along with the poor, displaced persons, and people living in conflict areas, and for these groups a grant fund is to be established to develop innovative ICT-based solutions.

Nepal's ICT policy calls for the need to harness ICTs in order to become a knowledge-based society and achieve socioeconomic development, poverty reduction and good governance. On the one hand, ICTs are seen as enablers that can bring about unique opportunities in sectors such as education, agriculture, tourism, health and trade, and whose application will 'engender economic consolidation, development and strengthening of democratic norms and values, proportional distribution of economic resources and enhancement of public awareness, thereby raising living standards and, eventually, contributing significantly towards poverty reduction' (Government of Nepal 2004). On the other hand, it takes on the narrow view of ICTs as growth enhancers and directs efforts at creating an enabling environment by developing IT parks and offering incentives such as tax holidays to foreign investors to promote export of hardware, software and IT-enabled services. The policy takes into account development concerns in access to ICT and Internet infrastructure, calling for the need to establish multimedia community telecentres in Village Development Committees. Nepali language content and applications are to be encouraged as are open source standards in software development. Special mention is given to women, who are amongst the marginalised groups, and with whom ICTs are to be promoted 'without barriers' to bring about rural sector development.

Figure 2. Sri Lanka's Five Programme Strategy



Source: Rainford (2005)

The Maldives and Bhutan are the smaller countries in South Asia. Their ICT policies take into account the geographic difficulties that they face as an island nation and a landlocked nation respectively. The Maldives ICT policy notes that although high levels of telephone, mobile and Internet coverage have been achieved, the costs are prohibitively high and a series of measures need to be undertaken to reduce costs and increase affordability. The primary measures in this regard are privatisation and increased competition, in addition to using innovative technologies such as Internet phone and Inmarsat satellite service. While prioritising ICT development in those islands that are centres of economic growth, that are densely populated and where there are tourist resorts, the policy also calls for abolishing differentials in telecom charges across islands and for setting up residential phone lines and local telephone networks in unserved islands. The government's role as a regulator of tariffs and in setting the contribution of service providers to the Universal Service Fund is highlighted. From the development perspective, the policy emphasises an increase in access, awareness and knowledge of ICTs.

Bhutan sees ICT as an enabler and as an industry that can be utilised to achieve the MDGs and advance what Bhutan calls the 'Gross Happiness Index', with the government playing a key role. The cross-cutting nature of ICTs, and the challenges and opportunities they present, necessitate a multi-sector approach geared towards making governance transparent and inclusive; setting up a modern regulatory framework; liberalise infrastructure and making it competitive to ensure better service and wider access; strengthening human capacities through ICT education and technical skills training; and boosting private enterprise in the ICT sector. The policy realises the threats and potentials of globalisation and sees ICTs as essential to connecting to global markets, knowledge and ideas while preserving cultural heritage and identity. Open source software and open standards in infrastructure are seen as important, as are efforts to strengthen local language and content support. The policy expresses a keen interest to participate in the ICT-exports sector through outsourcing opportunities. At the same time, it addresses development concerns such as ICT-education for the youth, e-governance services to facilitate active citizen participation, especially for those located in mountainous areas, and universal access to networks and services.

Why do ICT Policies Matter from a Gender and Development Standpoint?

The previous sections provided an overview, first, of the social and gender indicators in the South Asian countries, and then, of these countries' ICT indicators and of the main priorities of their ICT policies. A look at these in tandem reveals a serious mismatch: despite the poor performance of the region on basic development indicators, ICT policies fail to take into account the conditions of poverty and deprivation in South Asia and the wide gender inequalities that exist in the region. The review of the South Asian countries' ICT policies reveals that they have largely embraced a neoliberal outlook wherein the potential of ICTs is mostly seen in terms of the needs of the industry sector and its ability to produce revenues through export as well as to generate employment. From this starting point, the policies go on to develop those elements that would support the IT industry: IT education in schools and universities and in newly established institutions that will produce a cadre of IT skilled people who can fulfill the growing human resource requirements of these industries; technology parks with attractive incentives, such as tax holidays, offered to spur foreign and local companies to invest in the region; reduced duties on import of IT hardware and the promotion of domestic production of hardware and software to compete with the global industry; and so on. From this angle, the South Asian market-centred, private sector-led ICT sector has been hailed as a huge success in its ability to generate jobs on a scale of thousands for the educated population and to provide incomes that are relatively higher than those paid in non-IT service industries. In India, for example, there are approximately 800,000 people employed in registered IT and ITeS companies and software engineers earn approximately Rs. 30-40,000 per month,¹¹ while in Pakistan, despite relatively higher salaries, there is still a huge gap in meeting the human resources requirements of the 1300-odd IT and telecom companies (Upadhya 2006).

A common element of all the country ICT policies is the strong backing of private sector leadership in the ICT arena. While policy support for the IT industry is certainly required, the promotion of the private sector to the extent that it is also supposed to take on roles that fall into the realm of public policy is problematic. The policies call for private players to take on a leadership role, compensating for the inability of the state to meet basic infrastructure and connectivity requirements thus far. The improved service quality and price reduction that private players can bring about, through increased competition and efficiency gains, are expected to increase coverage and connectivity even to underserved and difficult-to-reach regions. However, the reality, as exemplified by the ICT indicators of the South Asian countries, is that - considering that the costs of technology deployment have gone down drastically - infrastructure provision has not increased sufficiently outside of urban areas in the last few years, even when private players have played a dominant role.

In India, for example, while urban teledensity reached 30 percent in early 2006, rural teledensity remained at a low 2 percent (Jain 2006). This is because private players have been reluctant to get into 'unprofitable' rural telecom provision, and this despite special provisions created by the Telecom Regulatory Authority of India to enhance connectivity to remote areas. These provisions include a Universal Service Obligation Fund (USOF), to which all telecom providers are expected to contribute 5 percent of Aggregate Gross Revenue; a Universal Service Obligation (USO), to ensure that telecommunication services expand in remote areas; and Access Deficit Charges, whereby telecom providers are expected to contribute towards a fund to subsidise rural landline connectivity. Most USOFs lie unutilised in India while private telecom

providers make a mockery of the USO by failing to fulfill their license obligation for rural telephony and preferring to pay fines instead. Access Deficit Charges have been greatly cut, affecting the public sector provider's ability to extend telephony into rural and other difficult-to-reach areas. The lack, until very recently, of public policy endorsement and support for open standards and open source software applications and low-cost hardware oriented to the low-end markets has also meant that ICTs have been out of reach for the vast majority of the poor in South Asia, who can by no means afford the exorbitant cost of proprietary applications or standard IT hardware which has a high rate of obsolescence built into the business model.

Proceeding from a private sector and market-centred orientation, the ICT policies of these countries also recommend that ICTs are to be used in the spheres of health, agriculture, tourism, culture, education, and so on, to enhance the efficiency and reach of these sectors. On the governance front as well, efforts to set up community centres or kiosks in rural and remote areas are limited in their vision, in that they concentrate almost exclusively on improving the supply side in the form of greater reach, reduced delays and more affordable access through ICT-induced elements of transparency, accountability and efficiency. While the promotion of these 'one-stop-shop', '24/7' type service centres are essential steps in improving governance, the sole focus on cleaning up and speeding up the supply of government services and schemes has come without a simultaneous push on the demand side. In other words, few concentrated efforts have been made to make communities and local governance bodies aware of the kinds of changes being brought about through e-governance experiments, or to involve them in the design, implementation or monitoring of projects. Furthermore, e-governance initiatives have been implemented with private sector participation and with the parallel objective of connecting remote communities to the mainstream market, so that the products and services of the private, corporate sector get a larger market base. These two aspects of e-governance initiatives in South Asia - the developmental and governance services on the one hand and outreaching markets often through private monopolies, on the other - are not reconciled. In effect, telecentres have come to embody the extended arm of globalisation by bringing the markets that govern urban life into rural areas, rather than a space to battle existing development challenges and unequal power structures.¹²

The potential of using ICTs for development from a gender standpoint is lost on most fronts by the policy makers. By proclaiming that the IT sector provides new and previously unavailable opportunities to women who possess the necessary qualifications and skills, it is assumed that they can compete with their male counterparts to reap the benefits of a modern, 'forward thinking' industry and through relatively high incomes, can become economically empowered. This argument rests on the assumption that the IT industry is a gender-neutral space, right from the entry requirements to the conditions of work and potential for growth in the sector. Yet, this is contradicted by the findings of ethnographic research conducted by Upadhyaya (2006, 83-84), who reveals that 'the working conditions and management systems in this industry present greater obstacles to women than men in terms of entry, retention and career growth'. She attributes this to a failure on the part of the management of the IT sector to:

recognise that although they might treat women employees on par with men and even provide special facilities to cater to their needs, women still live in a gendered society and highly unequal domestic situations. While software companies may be 'global' workplaces that attempt to divorce themselves from the larger society, relationships at

work continue to be shaped by the conflictual and asymmetrical gender relations that prevail more broadly within the Indian middle class. (Upadhyaya 2006, 84)

Looking beyond the IT and telecom industry, there is marginal, if any, attention given in the ICT policies to women who are not IT-literate, or even school literate, who do not live in urban areas and who do not possess the income levels to afford the benefits of the so-called 'IT revolution'. On the one hand are a significant number of initiatives launched by the government and private sector (and sometimes even the NGO sector), that approach technology as a 'neutral' tool and assume that its effects can be isolated from the local community context in which unequal power structures, including unequal gender roles and statuses, are reinforced. Effectively then, these initiatives proceed from a simplistic view that mere provision of ICT-enabled information or services will benefit those in the community in an undifferentiated manner, as technologies underlying these services are gender, caste and class 'neutral'. On the other hand, there are a set of initiatives that proceed from an empowerment motive, but where the term is usually watered-down to capture the benefits resulting from women's access to previously unavailable information or services, or from the income earned by women who become managers of revenue-generating telecentres or kiosks. Income earning opportunities are, of course, of great importance - indeed, an independent and secure income is quoted in many a scholarly study and claimed by poor women as a critical factor in ensuring survival and bargaining power within and beyond the household, and the interlinkages between economic empowerment and other kinds of empowerment are many. But a primary focus on employment and income generation is not sufficient to fully and meaningfully empower women in a region where female adult illiteracy levels are greater than 50 percent in four out of six countries; where women's participation in the agricultural and informal sector is very high; and where even those women working in privileged IT jobs and earning high incomes do not have complete autonomy over decisions in their household.

Thus, at both the policy level and at the project level, the South Asian ICT scenario is broadly one in which an explicit pro-poor and pro-women emphasis is absent, and where a narrow market or business focus comes at the cost of the empowerment and social justice gains that could have resulted from a more systematic approach to using ICTs for social and developmental objectives. In a policy context that fails to address gender and development in a paradigmatic and holistic manner, what are the options for the vast majority of women of the region who remain untouched by the present ICT policies? The situation may look dismal on the policy front, yet there are some inspiring case studies in pockets of South Asia, that show how new technologies have been appropriated for women's empowerment through various means - using ICTs to strengthen women's political and social identity, stimulating far-reaching ICTs-induced structural transformations and thus, challenging the status quo norms that define gender relationships. These are presented in the next section.

Stories from the Sub-Continent: Women's Empowering Engagements with ICTs

Women's Collective Identity

Women-centred community radio programmes are widely acknowledged as an effective medium for women to discuss and share issues and build a collective voice based on their common identity as women. There

are a few outstanding examples from the field, where explicit women-oriented radio programmes have been established or where women-centred content is prioritised within the larger ambit of the programme. Two such examples are presented below.

The Radio Ujjas project by Kutch Mahila Vikas Sangathan (KMVS) in Gujarat, India, is an excellent example of the use of radio to strengthen women's identity. KMVS has worked in one hundred and fifty villages of Kutch district for the past fifteen years, and in 1999 began a series of bi-weekly radio programmes in the Kutchi dialect (Virmani 2002). The programmes are broadcast on a purchased time slot, on the AM frequency of the state-owned All India Radio. The media team, which includes village youth with basic education, works closely with the women's collectives of KMVS, who provide guidance in the editorial content to reflect their ideology, aspirations and experiences and also ensure that the programmes reflect the needs of the most marginalised communities in Kutch, including women, minorities and the disadvantaged castes. There are a wide variety of programmes broadcast in multiple formats, covering women's issues such as female infanticide, dowry, violence against women, collective management of resources and elected women representatives, and other village-level issues. The initiative has also helped revive and popularise local cultural forms of expression and storytelling and has generated a platform for the articulation of sociopolitical and economic issues confronting the community.

'During these four years of radio programming and communicating with the people of Kutch, we have learnt many things. We realised radio's affinity with oral, non literate cultures; how it can easily reflect and generate debate on local concerns, needs, priorities and issues; why this highly localised programming brings pluralism into our broadcast culture; its power to enhance a sense of self respect and how a radio programme in the local language affirms local cultural identities. These kinds of programmes are participatory in contrast to the alienated spectatorship on the part of the audience in mainstream media,' says Latabhen, Ujjas Production Group.

Source: Soni (2004)

An obvious indicator of the programme's success is its listenership, of more than two-thirds of the Kutch population, and the 'scores of postcards' received at the studio as well as phone calls from listeners during the programme (Virmani 2002, 3). There are several reasons for the programme's success. The programme builds on a strong grassroots network that was in existence for many years before the need for a radio component was felt and expressed by the women. Furthermore, the content of the programmes is presented in the language and cultural form that is familiar to the audience and is completely in sync with the socioeconomic background of the listeners and the issues they face in their local communities. Aside from the women's involvement in the editorial content, radio reporters also travel to villages and sit in with the community during the broadcast to raise issues for discussion.

The Deccan Development Society's (DDS) community radio programme was established from women's expectations that their own radio 'would provide more effectively a medium for articulating locally relevant issues, in their own language, and in their own time' (Satheesh n.d). These are poor dalit (disadvantaged castes) women from Zaheerabad area of Medak District in the state of Andhra Pradesh, India, who are members of DDS women's groups and are working on issues of food sovereignty, autonomy over natural resources, traditional knowledge and gender justice for several years. The radio programmes,

managed by a three women team, are narrowcast through the distribution of audio tapes in the seventy five villages where DDS functions, where women's groups listen to the programmes. Over three hundred hours of recording have been completed, on issues ranging from a wide array of agricultural topics in tune with the agricultural seasons to other topics such as gender, education and health (Satheesh n.d.).

A typical radio magazine heralding the rainy season

- o Starts with sounds of drum (Alugulu) typical of the area
 - o Song: Vaana Vaanalante Valcherutunnaaru Devuda (a traditional song on rains)
 - o Followed by sounds of rain and cattle
 - o Anchor comes up and talks about the impending rainy season and possibility of diseases for cattle. She also introduces a traditional animal healer, Hulgera Sangappa, who will be interviewed on the kinds of diseases that afflicts cattle and their natural cures
 - o Interview with Sangappa follows
 - o Another song on cattle and rain
 - o Anchor follows and says that women have far more intimate knowledge of the animal diseases and the healing methods and therefore a discussion with a group of animal health workers.
 - o Discussion follows
 - o Song: Vaanakalam Poyi Chaana Kaalam Aaye Devuda (a traditional song on rains)
 - o Anchor: signs off
- Source: Satheesh (n.d.)

Why is the DDS radio programme so successful? Similar to the KMVS initiative, the DDS programme came out of a need expressed by women in an annual meeting of DDS, and the issues discussed in it are central to the livelihoods and struggles of marginalised dalit women. The quotes below from some of the women (Sateesh n.d.) highlight this adequately:

Siddamma, Matoor: 'If we are talking on our radio about our DWCRA¹³ group's experiences. We will tell about where we bought the goats. How did we take care of them. What were our problems. How did we solve them. And how did we make profit out of it.

Their (the mainstream) radio has no time for these (micro) details. They only talk broadly. For the poor this broadness has no meaning. They need (micro) experiences. Our radio can do this effectively. As we share these experiences we also get other women's (women outside the *sangham*, the village association of dalit women) support in the work that we are doing'.

Pushpalata, Pastapur: 'Our language and their language are very different. We can't understand their language at all. They will never use our language. For e.g. I want to tell my fellow women not to stop eating green leafy vegetables during the rainy season. Only if I use our language and our imagery do people understand what I am talking about. But in the mainstream radio they won't use this language'.

'.. The essential difference between the issues that our radio and the mainstream work on... We are talking about Saama and Sajja (some minor millets). We are always talking about marginalised grains, marginalised people marginalised language and marginalised issues. This does not interest the mainstream radio. This is the reason we should have our own radio to allow us to discuss our issues'.

Chilukapalli Anasuyamma, Pastapur: 'In our *sanghams* (...) we are carrying on a number of tasks which used to be done by men. So also our men. They are doing a number of tasks which were only being preserved for women. This way we have been able to erase the boundaries between man's work and woman's work'.

'The mainstream radio is still steeped in the traditional gender roles. If we depend on it, we have to go back in time. All that we have done in our *sanghams* will come to a naught. If we have our own radio it can help us continue this progress we have made on gender issues'.

Women's Control over Technology

Control is a central element of women's empowerment - whether it is control over tangibles such as land, property, jewelry and other assets, or intangibles such as decisions made in the household or community or control over one's own body, sexuality and representation. In the information society, control becomes an important gender dimension, through women's ability to grasp, use and manipulate new technologies in ways that further their own cause. Women's control over technology can strengthen their identity, stimulate individual and collective action and bring about new and positive statuses and roles in the community. It is also an essential skill if feminists and women's movements want to influence the content generated and shared through ICTs so that such content does not reinforce violence against women and negative stereotypes in ways that the mass media have done so far. The examples highlighted below represent the direct use of technology by women in contexts where control over the production and use of the technology is 'normally' considered a male domain.

While most rural women may have seen a mobile phone, be familiar with the broad purpose of a mobile phone, and may even live in a household where a (male) family member owns a mobile phone, very few have themselves used it for communication and information seeking purposes. In Bangladesh, D.Net's Pallitathya Help Line project attempts to change this situation in two ways: at one end, by equipping and empowering young girls as 'mobile ladies' so that they can travel from household to household in villages and meet the information needs of women (and men) in these households on a wide range of issues, such as agriculture, livelihoods, health, legislation, etc.; and on the other end, by creating a Help Desk where female and male youth are trained to navigate a huge database on these various issues, stored in ICT-based systems, and respond to questions around rural livelihoods issues in a prompt and meaningful manner (Raihan et al. 2005).

The gender component in the project is very strong, in terms of recognising the empowerment potential of a young girl acting as the mobile operator in a context where rural women rarely travel outside their homes, tend not to seek information from external sources (particularly from males), and have very low usage of ICTs such as mobile phones due to affordability as well as cultural reasons. This is reflected in the impact of the project: around 50 percent of the callers in the four target villages are women, and the largest group of callers are housewives, who constitute almost 36 percent of all callers and are, according to D.Net, the 'most information-poor' (Raihan et al. 2005, 24). Furthermore, almost half of the questions raised are on health care issues, and the majority of these questions are raised by women. In fact, 14.2 percent of the female callers inquire about gynaecological issues according to a D.Net study of the project, which D.Net finds significant in a cultural context where women are reluctant to discuss issues related to their health and bodies with rural physicians who are mostly males (Raihan et al. 2005, 27-28). The mobile phone based solution also gives rural women some degree of anonymity in discussing issues personal to them.

The role of the mobile lady is central to the impact of the project

As Mobile Operator Lady was a female and moved door to door to assist villagers to share their problems with the Help Desk, women felt comfort to share their problems with another woman. Thus the unexplored problems of the women were captured under this project.

... the mobile ladies became not only a source of information, but also a trustworthy person, with whom they could share their problems. Any information received by the female users made them confident in dealing with various difficult situations.

Source: Raihan et al. (2005, 45)

In terms of their own empowerment, the 'mobile ladies' reported that their new role expanded their horizons, gave them the confidence to become tech savvy with other ICTs such as computers, and increased their status in the household as contributors to the family income. In turn, the D.Net study reports that the thorough understanding of the job requirements by the mobile ladies and their confidence in using the technology were key success factors (Raihan et al. 2005).

Another successful example of control over technology is the Government of Kerala's Kudumbashree project in India, where women from below the poverty line households are formed into community-based organisations under a poverty eradication programme of the government and opportunities are created for thrift, skill development and micro-enterprise. Amongst the hundreds of micro-enterprise activities that have been set up are IT units, which include data processing units on the one hand and computer manufacturing units on the other. In the latter category, women go much beyond their role as manufacturers: they are not only the owners of the businesses that they set up, but are also equipped to hold responsibility for the overall management of the enterprises and for all key decisions and innovations that need to be made to sustain the enterprises (Swamy 2007).

Manju S. on her involvement in the Kudumbashree project

Some women from our self-help group (SHG) were trained for six months. We took a loan from Canara Bank for Rs. 3.29 lakh (one lakh is 0.1 million), and each of us invested Rs. 1650 in the enterprise. We chose this area because there is more technology involved and we find it suitable for our education and skills background. Compared to non-IT enterprises, this is higher level work and the field itself is a dynamic one, becoming more important in the world.

My husband was not supportive initially, as I had to borrow money from our family to invest. I used to work long hours and didn't earn much income. Also, the workplace was very dusty and the work hours were long and tough. But now I earn almost Rs. 5000 a month and contribute to the household expenses. So there is no more opposition!

I was always interested in this field but I hadn't studied computers. There were no women in this field to serve as role models. And none of us had any prior experience. But we were interested and Kudumbashree supported us and trained us in hardware assembly. Some officers were willing to take a risk and give us work. Thus, we got started and were able to build our confidence.

We provide quality equipment at a low cost. Starting with a zero rupee turnover, we reached Rs. 10-15 lakh turnover in two years. Now, we are at Rs. 50 lakh and we aim to reach Rs. 1 crore (one crore is 10 million)! We also plan to concentrate more on advertising and marketing so that we can survive without Kudumbashree support.

Now, we have the confidence to carry on independently. We are the 'glittering stars' of the IT business. We are also very happy because we don't have to work for someone else - we are our own bosses. I am no more dependent on the extended family to meet my needs and household expenses. I have learned a new skill and earned an income of my own. I can achieve a lot of things.

Source: Interview with Manju S., Entrepreneur, Kudumbashree Project, Kerala, 2006

The benefit of this enterprise for women is that they can make a substantial income, either because they may not have many competitors (if the enterprise is located in a small town, for example) or because they are able to sell their products at a lower price than branded products regularly available in the market because of lower profit expectations (Swamy 2007). From a women's empowerment standpoint, these kinds of enterprises are of significant importance because they bring a new social status to these women and help weaken gender stereotypes. Women are not just employed as workers but make many key decisions about the enterprise, including how to improve product quality, how to expand the customer base, how much to reinvest into the business and how to diversify the business to meet broader needs.

Collective Action

For women's groups, collective action is a central element in bringing to the table issues that have been historically sidelined and in fighting for rights that women have been historically denied. However, the

main factors behind women's disempowerment are their social proximity to the source of oppression (within and beyond the household) and structural isolation as individual women located in these social structures of oppression. Self-help groups have been set up to create a forum for sharing and learning, in order to strengthen women's social and political identity as women and to collectively fight for and resolve issues that they face. ICTs can be a significant contributor to collective action efforts, by, for instance, creating online networks where women from different geographic locations can share, discuss and solve problems on issues such as domestic violence, rape, dowry, harassment and so on, as well as by directly helping women capture events through audio, video and photo recordings and use this 'evidence' to bring strength and legitimacy to their issues. Some examples of such possible empowering uses of ICTs from South Asia are presented below.

Banchte Shekha is an organisation in western Bangladesh with a membership of more than 20,000 women, working on issues of awareness generation, economic empowerment and legal aid (Bery and Stuart 1996). In 1991, two young women from Banchte Shekha attended a twenty day participatory video workshop organised by Communications for Change, and since then, several women have been trained in handling video equipment and using participatory video techniques. Once trained, they return to their villages to make video programmes on issues directly related to their own work and also lead community screenings of these productions.

Clear evidence of the impact of the programme is Bulu, a woman whose husband deserted her and then tried to sell her. After attending the workshop, she made a video on the story of her neighbour Nasima, a victim of domestic violence. By filming the video in the village setting and screening it to community members, Bulu was able to clearly present Nasima's perspective to the villagers and prevent Nasima's in-laws from giving false testimonies in court.

In another case of desertion, a report notes that 'the mere mention that Banchte Shekha planned to make a tape about a particular woman's experience motivated her husband and his family to negotiate a settlement. They didn't want to be embarrassed in front of their neighbours.'

Source: Bery and Stuart (1996, 1)

The programme has given an elevated status to women like Bulu, who have not only gained from their technical knowledge on video making and editing, but have used video equipment to advocate for women's human rights and to strengthen women's voices. By putting their issues 'on camera', they have brought strength and legitimacy to their issues and have been able to create a platform to organise, act collectively and demand their rights from the government and the community. Thus, in a context where violations against rights of women are widespread and commonplace, and yet, are treated as though they are invisible and inconsequential, video has facilitated the process of social justice for women. Members report that participatory video is 'a valuable tool because it can make people conscious; when people can visualise, they understand. Video cannot be bribed, and it tells honestly our stories'.

In the past few years, the online world opened up by the Internet has also become a potential space for women to engage, learn, discuss, question and discover. The Blank Noise media project in Bangalore

(<http://blog.blanknoise.org>) confronts the issue of eve teasing, which Blank Noise views as sexual harassment on the street. The first phase of the project explored victimhood through the private identities of nine women, using video, sound and photographs. The second phase aimed at public confrontation, using street-based events, art and performances to bring attention to the issue of harassment and teasing that women deal with daily on the streets. An important component of this project is the blog maintained on latest issues, events and campaigns, legal information and FAQs on the subject, as well as a forum to discuss and debate on the issue. Participants include young women and men between the ages of seventeen and thirty, who are researchers, professionals, students, technicians and activists.

Institutional Transformation

One-off ICT-based solutions, while often adding cumulatively towards certain long-term impacts, may not be sufficient by themselves to transform deep-rooted structures and institutions of the society towards greater gender equality. In fact, 'IT solutions' that rest on market approaches to dealing with problems in governance and other development sectors such as health and education, can have disempowering impacts as they fail to take into account social accountability parameters. Placing IT solutions on top of a dysfunctional system in order to make it efficient and transparent will have limited impact if all those who are affected by the system are not engaged in the design, implementation and monitoring of the system. From a gender standpoint, these kinds of techno-managerial solutions in health, education, agriculture, governance and other areas may bring about social changes but may not further gender equality. It is critical therefore, to conceive of a more holistic approach to ICT-based transformations of public institutions, such that they strengthen women's rights as citizens and create new possibilities for gender equality and social justice. Two projects in South India highlight efforts in this direction.

Rural eSeva, an e-governance initiative in West Godavari District, led by the state government of Andhra Pradesh, is an attempt to bring good governance to rural communities, particularly women, by enforcing a high degree of accountability and transparency on the government machinery. The project hub, located in the district office, is staffed by government officials, while the eSeva centres are run by community-based organisations.¹⁴ Out of the forty seven eSeva centres, sixteen are run by women's self-help groups and fourteen by members from disadvantaged caste groups. These centres offer a range of services, including the payment of public utility bills; provision of birth, death, caste and income certificates; information on public projects; and the handling of public grievance issues. The last of these, which has become extremely popular, is executed through an online service whereby the complete contents of the grievance as well as the follow-up communication and action on the part of the government are recorded permanently on the Internet and available for public viewing. A community media space has also been created, in which citizens can post opinions and pictures to bring local problems to the attention of the authorities. Over 13,000 grievances cases have been handled through eSeva kiosks, a significant number of them submitted by women, and some long-pending issues have gotten sorted out in a remarkably prompt manner.

Women have played a critical role in this project, not only by running and managing the centres but by positioning themselves as 'information leaders' within their local contexts, and have achieved an elevated status and better bargaining power in their local communities.

Women's role as information leaders in eSeva

The project visualised that lack of empowerment (for disadvantaged groups) is primarily due to information gaps and once the right access is ensured, a real change in the outlook of these communities can be made possible.

The unique thing about the rural kiosks we established is that they are run and managed by the women SHGs and have positioned the rural women as 'information leaders' to help bridge the gender divide. The women population in this district has previously been subjected to exploitation and comparatively inferior treatment vis-à-vis their male counterparts. The project therefore envisaged a strategy that can catapult the women's movement to a different plane and allow their evolution as information leaders. The aim is to help them act as change agents and makes it possible for them to grow in strength and stature with the project. As a result, women SHGs, trained to handle a computer and the processes which govern the entire project, have been positioned as information intermediaries and this helps in improving their relative bargaining power over the men.

The project exemplifies how big tasks are easily done if broken down into small doable tasks and assigned to various stakeholders. As far as citizens are concerned, the design of the project is demand-driven rather than supply-driven. And so, pressure from citizens will keep the administration on their toes and ensure the project's long-term sustainability. The project also establishes that women are next to none and can achieve desired results. By bringing in opportunities and prosperity to impoverished areas in the district, we have helped in the creation of a knowledge and information economy, wherein villages are knowledge hubs which can gain symbiotically from each other and derive benefits from the global networks.

Source: interview with Gangadhar Rao, District Informatics Officer, NIC, West Godavari District, Andhra Pradesh, India, November 2006

DHAN Foundation, in the Indian state of Tamil Nadu, is an organisation that has been engaged in rural development and poverty eradication for many years (<http://www.dhan.org>). It has set up rural Internet kiosks to provide computer education, access to the Internet, information on locally relevant issues and telemedicine services. One component of the project is the use of video conferencing services to set up interactions between government officials from departments such as agriculture or veterinary sciences, on the one hand, and the local community, on the other hand, at fixed times every week. The telecentre's operator, who is a woman from the local community, plays a critical role in keeping the community informed about these sessions and in encouraging members of the community to participate in order to get solutions to their problems.¹⁵ She also travels to district offices and local departments to collect information on schemes, services available and statistics that are relevant to the local community, as well as processes for the community applications for basic entitlements such as ration cards, birth certificates, pension schemes, etc. In this role, she attempts to set in place new processes that change the community's access to public information and services and help community members participate in agenda setting at the local level.

**Radhika, Village Information Centre Operator, DHAN Foundation,
Thiruvathavur, Tamil Nadu**

I had completed tenth standard. My mother is an agricultural labourer and could not afford to support my higher studies. There was a DHAN centre nearby and the operator at the centre wanted to teach about computer hardware and software free of cost. I joined the centre and received training. I had never seen a computer before, except in pictures. Only after I joined, I touched a computer for the first time!

I assisted in training some students at the centre. I collected electricity bills from villagers and paid them at one shot. I got some 'jobs' from the neighbouring villages and assembled some computers. From all these tasks, I earned an income.

Then DHAN asked me to run a new centre in the neighbouring village. At first, I found it difficult to talk to people, but this gradually became easier. Now everyone knows me well. They now call me 'computer akka'! People find the services we offer useful. For example, if people want to get birth certificates, they have to sacrifice their time, pay bribes and all that. With us, they pay the correct amount and get it. We save people time. Also, while maintaining the quality, our services are cheap compared to other places. Right now I make Rs. 1000 from various services like teaching courses, data entry, video conferencing, astrology, etc.

I was shy initially. But over time, and with the encouragement of DHAN and the operator, I am even ready to talk on stage when I am nominated! There are difficulties involved in the job - people do not come immediately, we have to compel them. We have to tell them that if they want to contact the Panchayat (village self governance body) or other bodies, we can assist them and submit the details for them at the centre.

I am where I am today because of DHAN. Initially, my mother was not supportive because girls are not supposed to go outside the home. Now I bring Rs. 1500 home as income, which helps the family. Now, mother fully supports me. She is very proud of me.

Source: interview with Radhika, Village Information Centre Operator, DHAN Foundation, Thiruvathavur, Tamil Nadu, India, May 2006

Lessons Learnt and Policy Implications for Gender Equity

It is quite obvious that although each case study has been highlighted in terms of one of the four dimensions of empowerment - women's collective identity, control over technologies, collective action, and institutional transformation - there is, in fact, significant overlap between them. These aspects often represent a single continuum of women's empowering engagements with ICTs. Developing the capacity to control and use new technologies brings with it a new identity for rural women and changes their status in the community. Often, these technologies are used by women's groups to raise local issues or collectively demand entitlements and services from the government and thus engage in transforming those institutions

that have kept them subordinated so far. Therefore, while these categories are conceptually useful in order to develop an in-depth and nuanced analysis of the nature of the empowerment that takes place, it is apparent that at the field level, a carefully planned ICT project geared towards women's needs can simultaneously deal with multiple empowerment possibilities.

The studies also establish that an explicit and concentrated focus on women's needs and contexts, and on gender issues, is essential to achieving positive empowerment outcomes for women. In all the presented cases, the local women were involved from the initial stages of the project, and despite minimal or no literacy skills and, in some cases, no prior experience in the kind of work taken up by the project, women were able to successfully take on their responsibilities after some training and support from the organisation involved. In fact, these projects have often created a whole new identity for women in their community, highlighting the unique potential of ICTs to create a new space for pushing forth the gender equality agenda and improving the status of women.

A significant element to be pointed out in this regard is that the projects described above are far from the quick fix IT solutions - an approach that seems to be the dominant *modus operandi* in the ICTD field in South Asia. In all cases, the IT element built on an existing structure of women's self-help groups, or similar community structures, wherein group identity and the common goal of working towards gender justice is clearly established amongst the members. In this context, bringing about ICT-based innovations can have a catapult effect in pushing forward the women's empowerment agenda.

Finally, it is important to note that, while there are a few exemplary models from the South Asian region of innovative uses of ICTs to empower women, for a region that accounts for almost a quarter of the world's population these examples are few and far between. For structural transformation towards greater gender equality to take place, larger and more systemic efforts are required, and public policy in South Asian countries needs to be oriented towards this objective. Initiatives such as the ones highlighted in this paper have to be institutionalised, as NGOs can only prove or demonstrate empowerment possibilities in their local contexts, and then upscaled regionally or nationally. The role of the state and of public policy therefore becomes crucial on at least three levels:

One, there is a need for ICT policies that can ensure universal access to connectivity, software, hardware, content and useful applications, which form the very basic requirement upon which ICTs can then be used towards empowering outcomes for women. A private sector led ICT vision does not hold the promise to achieve this, and it is important for the governments to consider the 'public goods' provisioning of basic ICT infrastructure, covering all the elements listed above.

Two, public policy should support community-based ICT projects that experiment with and demonstrate possibilities for women's empowerment, and this should be done with participation of NGOs and community-based organisations. The imperative of doing so is established in all the cases discussed above. The local projects should be informed by a gendered analysis of social and community structures and be closely aligned with 'non ICTD' development activity. Using market-centred approaches to development and advocating business models in all development activity are unlikely to produce the desired effect of change in gender relations in society.

And last, governments need to have policy processes in place that learn from these ICT projects, and have a mechanism built in towards scaling up of these projects through their integration into their wider

developmental activity. This requires close cooperation between ICT policy bodies of the governments, that tend to direct ICTD projects; various sectoral departments like education, health, agriculture and so on; and national women's machineries that can provide the required inputs from a gender perspective to the entire process. At the very basic level, such an elaborate policy response to the ICT opportunity for women's empowerment can be kickstarted only if the governments of South Asia understand and acknowledge at an ideological and political level that the ICT phenomenon is much greater than mere celebration of the market, in the expectation that the market will bring greater export earnings and a few more jobs.

Endnotes

- * The South Asian region consists of the following countries: India, Sri Lanka, Pakistan, Bangladesh, Nepal, Bhutan and the Maldives.
- 1 While the basic services referred to in this paper are electricity, water, education and health services, the same principles and arguments can be applied to ICTs, particularly, the Internet.
- 2 See, for example, Hameed (2006).
- 3 The explanations of all terms described in this section are based on the definitions of indicators provided in the 2006 UNDP Human Development Report, 'Beyond Scarcity: Power, Poverty and the Global Water Crisis'.
- 4 (note from the editor) Since the writing of this article, HIV prevalence estimates in India have undergone a significant downward revision as new, more accurate data has become available. Official estimates for 2006, released in 2007, put India's HIV prevalence rate at 0.36.
- 5 The data and the explanations of these indicators were obtained from the World Bank's 'World Development Indicators' of 2006.
- 6 Lower middle income countries, as defined by the World Bank, are countries with a GNI per capita of between US\$876 and US\$3465, and include, for example, Brazil, China, Egypt, Indonesia, Morocco, Peru and Thailand.
- 7 The price basket for fixed residential lines is based on a portion of the installation charge (one-fifth), on the monthly subscription charge and on the cost of local calls (fifteen peak and fifteen off-peak calls of three minutes each).
- 8 The price basket for mobiles is based on the pre-paid price for twenty five calls per month, spread over the same mobile network, other mobile networks, and mobile to fixed calls, and during peak, off-peak, and weekend times. The basket also includes the price of thirty text messages per month.
- 9 The price basket for the Internet is based on the cheapest available tariff for accessing the Internet twenty hours a month (ten hours peak and ten hours off-peak). The basket does not include the telephone line rental but does include telephone usage charges if applicable.
- 10 The term 'dollar' refers to the US dollar throughout this document.
- 11 In this paper, 'Rs.' or 'rupees' refers to the Indian rupee. One US\$ equals about Rs. 45. A salary of Rs. 30-40,000 per month roughly equals US\$ 10,000 per year.
- 12 See, for example, Bajaj (2006).
- 13 DWCRA (Development of Women and Children in Rural Areas) is a government of India community development programme.
- 14 Interview with Gangadhar Rao, District Informatics Officer, NIC, West Godavari District, Andhra Pradesh, India, November 2006.
- 15 Interview with Muthukumarswamy B., Project Executive, DHAN Foundation, Tamil Nadu, India, 2006.

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Author Profiles

Mridula Swamy has completed her masters in International Development from American University, Washington DC, USA, concentrating on gender and economic policy. Her masters thesis was a gendered analysis of the impact of trade liberalisation in South Asia, focusing specifically on women employed in the garment industry. Mridula previously worked as a consultant with the International Center for Research on Women, USA, and, as a volunteer, at the network for Dalit Liberation, Chennai, India. In addition, she has been involved in a variety of research projects, including a transnational research study on the development of culture, self and identity among the South Asian diaspora in the United States, an ethnographic study of poverty and drug violence in Brazilian slums, and an economic analysis of the migration patterns of rural women working in the urban informal economy in Hanoi, Vietnam. Mridula has engaged in a policy research initiative for the UNDP on engendering ICT policies in the Asia Pacific region. She has also assisted in the analysis of a research study on the partnerships in health between NGOs and the government, being undertaken by the Indian Institute of Management, Bangalore. In Mahithi Manthana, an ongoing field level project undertaken by ITfC along with Mahila Samakhya, Karnataka, she has designed and coordinated the baseline research activities.

Angela M Kuga Thas, a Malaysian with a Bachelor in Economics and a postgraduate Diploma in Education, advocates for women's empowerment and non-discrimination. Angela draws her knowledge and experience from her networking and previous work with IWRAW (International Women's Rights Action Watch) Asia Pacific on the CEDAW, and with other organisations on women's sexual and reproductive health and provision of microcredit. Angela is a founding trustee of Knowledge and Rights with Young people through Safer Spaces (KRYSS), an organisation which aims to enable young people to deal with identity-based discrimination and creative arts in its training and activities. She monitors the local media on sexual discrimination with a small group of fellow Malaysians, and her qualitative research (2004) is the first to focus on lesbianism in Malaysia. As a member of the Association for Progressive Communications Women's Networking Support Program, Angela has been particularly active in gender and ICT policy advocacy and has fostered synergistic collaborations through the inaugural Gender and ICT Awards with the Global Knowledge Partnership (GKP), the Malaysian replication of the Women's Electronic Network Training, and the development of the ICT and gender e-primer for the Asian Pacific Development Information Program. Angela also conceptualised and manages the Seed Grant and Small Innovative Projects Fund of the GKP and is advisor to its Youth Social Entrepreneurship Initiative fund. Angela is on the Advisory Council of the Global Fund for Women and is a member of the International Advisory Committee for BRIDGE at the Institute of Development Studies in the United Kingdom."

Deborah L.Wheeler is a PhD in Political Science and Middle Eastern Studies from the University of Chicago. Her areas of research include information technology diffusion and impact in the Arab World; gender and international development; and the Palestinian-Israeli conflict. She has published widely on the Internet and its impact in the Arab World, including most recently a book, 'The Internet in the Middle East: Global expectations and local imaginations in Kuwait' (Albany: State University of New York Press, 2006). Dr. Wheeler taught for 12 years before joining the Academy, including positions at the University of Washington, Penn State University, University of the South, and Earlham College. Dr. Wheeler has extensive travel and research experience in the Middle East, including extended stays in

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Editor Profiles

Anita Gurumurthy is a founding member, and currently, co-executive director of IT for Change (ITfC), an India-based NGO active in the information society and ICTD area at global, national and local levels. Anita's core interests have included research and policy advocacy on development and social change, with focus on areas such as gender, public health, globalisation and the information society. Anita is a member of the advisory committee of BRIDGE, a resource group on gender at IDS Sussex. Anita also serves on the International Advisory Committee of the research project on 'Public Access to ICT Impact', co-funded by the IDRC and the Bill and Melinda Gates Foundation. Her recent book, which she co-edited with colleagues at IT for Change and which has been published by Elsevier, is titled 'Gender in the information society: Emerging issues'. At IT for Change, Anita currently coordinates a policy research project titled 'Information Society for the South'. This project explores theoretical connections between the information society context and three critical development areas - social policy, governance and gender.

Parminder Jeet Singh is the co-executive director of IT for Change (ITfC), an India-based NGO active in the information society and ICTD area at global, national and local levels. At ITfC, Parminder coordinates 'Information Society for the South', a research and advocacy project, and leads 'Mahiti Manthana', a field project focusing on the use of ICTs by disadvantaged rural women's collectives. An important focus of Parminder's current research and advocacy work is governance reform in India. Parminder has led ITfC's efforts in advocacy since the world Summit on the Information Society (WSIS). He has been active in post-WSIS activities at the Internet Governance Forum, the UN Global Alliance on ICTs and Development (UNGAID) as well as the ECOSOC Commission on Science and Technology for Development (CSTD). Parminder has been the co-ordinator of the Civil Society Internet Governance Caucus and is presently a member of the Strategy Council of the UNGAID. He is co-author of the book 'Governance@Net: E-governance opportunities for India', published by SAGE.

Anja Kovacs is a feminist researcher and activist with fourteen years of experience in the field of gender, rights and vulnerability in research, teaching, advocacy and lobbying settings. Anja obtained her PhD in Development Studies from the University of East Anglia in Norwich, UK. Her dissertation focused on questions of agency and empowerment relating to women's participation in Hindu Right organisations in India. In addition, Anja has researched on issues relating to education, violence, political participation, employment, livelihoods and economic reform. She has conducted extensive fieldwork throughout South Asia, including in Afghanistan, Bangladesh, Nepal and India, and has also lectured at university in the field of gender and development, and has worked as an international consultant. Anja has been based in India since 2001. Currently, she is a Senior Research Associate with IT for Change, examining gender issues in the information society.

