

Telework: Tomorrow's Technology For The Arab Woman

□ Résumé

A juger par le rythme d'émigration de la jeunesse arabe et par le besoin des pays occidentaux en compétences TIC, il ne restera aux pays arabes que les populations qui sont relativement moins mobiles, les femmes. Or les femmes sont également garantes des générations futures. La double responsabilité d'être économiquement actives et familialement responsables peut devenir un défi tant le conflit travail-famille peut être aigu pour les femmes. Une technologie, le télétravail a le double avantage de promouvoir la femme au rang de participant tant dans le développement économique que celui social. Le télétravail a l'avantage supplémentaire de ramener travail et technologie au foyer, là où les enfants sont élevés et de créer une promiscuité avec la technologie ainsi que son utilisation non pas à des fins uniquement de divertissement (comme cela est le cas actuellement) mais également professionnelles.

Mots clefs: Femmes, monde arabe, télétravail, travailleur autonome.

□ Abstract

Given the level of emigration of Arab youths and the need for information and telecommunication technology skills abroad, the labor force that will remain in the Arab world countries will be made up of those who are the least mobile, namely women. Women will be responsible for the success of future generations. The dual responsibility of being economically active as well as holding down family responsibilities can be a daunting feat as the work-family conflict for women is increasingly acute. One technology, telework, is able to further women's status both in an economic as well as a social environment. Furthermore, telework has the advantage of bringing work and technology into the home, there where children are raised. This will lead to a level of comfort with technology not only in terms of leisurely activities (as it now stands) but as a professional tool.

Key words: Women, Arab world, telework, self-governing labor force.

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Introduction

The digital divide manifests itself in the lag of Arab¹ countries behind more developed countries as well as in the inequality between men and women. Unfortunately, other than the statistics and reports published by the United Nations, the World Bank, and the World Economic Forum, very few data are available which would allow us to fully grasp the extent of the lag.

Many differences between the lives of women and men exist. These differences are most noticeable in the participation in the labor force and in the level of adoption of information and communication technologies (ICTs). With respect to the use of ICTs in the Arab world a chasm exists not only between men and women but also between Arab women and women from other nations.

In general men are more likely to feel at ease with information technologies and hence tend towards gaming and programming. Women, on the other hand, when they do use computers, mainly use them as a communication tool. Furthermore, given their presumed lack of IT experience, their upbringing, and that the studies they most often follow are not IT intensive, women are less likely and less eager to adopt new technologies. Of the women who, in fact, attempted to use the Internet, some were either victim of or witness to offensive comments in interactive discussions and even electronic harassment. To counter this malevolence some women turned to using male names or aliases (Herring, 2003).

In 1995 the UNDP recognized that not in one society in our world did women benefit from the same opportunities as men. In every corner of the world, women are poorer, less educated and less valued than men (ILO, 2001). These disparities are present even in the West, especially with respect to ICTs (Hafkin and Taggart, 2002). For example, women represent but 26% of computer scientists in Canada (Dryburgh, 2002) and only 21% of students enrolled in computer science programs are women (Statistics Canada, 2001). Rather than stabilize or improve, this trend in certain cases seems to be worsening. In the US and Canada, the number of women in IT sectors is diminishing: in 1985, of those earning computer science college degrees 37% were women. This figure dropped to 28% in 2000 (Huyer, 2004).

In developing countries these inequalities hinder women's ability to take advantage of ICTs. It is these

ICTs which will eventually enable women to contribute to their nation's economic and social development.

If we recognize that a digital divide exists between northern and southern nations, between developed and developing countries, between knowledge economies and emerging economies, and even between the haves and the have-nots, we cannot disregard the transcending divide that exists in all the above categories. That divide is the one based on gender.

1. Two genders, two distinct uses of technology

ICTs offer a myriad of opportunities for women (Chen, 2004; Gurumurthy, 2004; World Economic Forum, 2005). The National Foundation for Women Business Owners (NFWBO) undertook a study in 1997, which was published the same year by IBM, which demonstrated that female entrepreneurs adopted the Internet and other technologies to enable their activities more quickly than their male counterparts². To illustrate, nearly 23% of female business owners had set up a corporate web site, while only 16% of male executives had done the same. According to the same study, 47% of women had signed up for Internet services while for men that figure was only 41%.

Although ICTs are relatively newcomers to the world of technology, a certain level of feminization of these technologies is occurring outside of the US. Generally speaking, women are the main end users of ICTs in lower skilled jobs such as those involving word processing, data collection and call center tasks³. On the other hand, women are fairly scarce in managerial positions and PC production (Hafkin and Taggart, 2002; ILO, 2001). Exceptions, even in developing countries, of course exist. Women are generally well represented in the ICT sector in, for example, India, Brazil, and Malaysia, the last being a Muslim but not Arab nation (Hafkin and Taggart, 2002).

A 2002 study by eMarketer and published in the New York Times showed that in an organizational setting men prefer email communication to the phone. The opposite was true for women. Herring (2001) found that women, in fact, prefer meetings held over the Internet rather than face-to-face encounters, given the dominant behavior of men in the latter. Consalvo (2002) reminds us that, from a historical perspective, the telephone quickly became a "female" medium.

¹ The Arab world is composed of 22 Arab League member countries: Algeria, Bahrain, Comoros, Djibouti, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Mauritania, Oman, Palestine, Qatar, Saudi Arabia, Somalia, Sudan, Syria, Tunisia, United Arab Emirates and Yemen.

² Nua Internet Surveys, October 14, 1997, www.nua.ie/surveys/index.cgi?f=VS&art_id=876844331&rel=true. Also see Janecke (1997).

³ Called the sweatshops of the digital era (ILO, 2001).

2. The gender-equality enabling nature of the Internet

In the US in 1999, slightly less women (48%) than men (51%) made up the number of Internet users. In 2001, however, the UNDP claimed that American women Internet users had reached 51%. In fact, the number of women Internet users in the US surpassed that of men as of the first quarter of 2000 (Rickert and Sacharow, 2000). At the time, the growth rate of women Internet users was increasing more rapidly than the 22.4% growth rate of the global number of Internet users (Rickert and Sacharow, 2000; Saunders, 2002b).

Although equality between the number of men and women users was reached, Saunders (2002a) stipulates that the percentage of men who connect to the Internet from their offices was still higher than of women who do the same. Hence, one can assume that the boost in the number of women Internet users was mainly from those who accessed the Internet from home. Equality between men and women Internet users, however, seems to have been reached only in a quantitative sense: even in the US women initiate 11% less navigation sessions, spend 18% less time on the Web and visit 13% less web pages than men (Cox, 2002; Saunders, 2002b). Analysts justified these tendencies by suggesting that, in general, women have greater family responsibilities and hence can devote less time to leisure activities such as browsing the Web (Saunders, 2002b). Therefore, women's lifestyles as well as family and social responsibilities dictate, to some extent, whether and how women use technology.

The issue is that other than in the US, it does not appear that women adopt ICTs to the same degree as men. A 2003 study by Nielsen/Netratings revealed that gender equality in terms of Internet users in Europe was far from being achieved. In 2002, but 41% of European internet users were women. This figure rose to 43% in 2003. At this pace, European internet user gender equality will be reached only in 2010, quite a bit later than in Arab nations.

3. Why do women lag?

In theory, several factors could help explain women's lag in adopting ICTs including illiteracy, and the time, cost and distances relative to urban centers where ICTs are more easily accessible. In developing countries, other factors such as language, social and cultural norms defining the role of women in society, woman's status vis-à-vis technology in general, and women's perception of information technology as a male-oriented domain may also play an important role.

Other factors, though difficult to provide statistical evidence, are also potential reasons for women's lag in adopting ICTs. Hafkin and Taggart (2002) were unable

to establish a link between women's use of the Internet and indicators such as (1) the level of women's illiteracy, (2) average GNP of women, (3) women's participation in managerial and higher-responsibility roles, and so forth. In some instances, in developing countries, high female Internet use may coincide with low overall Internet use. However, when the use of the Internet is primarily by the urban elite, women are generally well-represented and when the GNP is high the percentage of women using the Internet surpasses that of men. Hafkin and Taggart (2002) conclude that a low number of women internet users is not representative of Arab women in general. Gurumurthy (2004) reminds us of the multiple identities (class, ethnicity, caste, race, age, etc.) worn by women and of the likelihood that these interact with gender to define women's access to technology. This leads her to the recommendation of studying the complex intersections of gender and other social identities to better understand gender and ICTs issues.

4. Women in the Arab world

Though a gender digital divide may no longer exist for some countries, namely Scandinavian ones, the divide is thriving in Arab countries where the women in those nations are doubly hit: first, due to the lag of Arab countries in general (El Louadi and Everard, 2004; Hafkin and Taggart, 2002) and also because they are of the female gender which, on most of the criteria set forth by the UNDP in their 2002 and 2003 reports (see Table 1), was at the greatest disadvantage⁴.

According to the 2002 report, Arab countries have demonstrated the most rapid progress with respect to the state of women's affairs. The rate of women's literacy tripled between 1970 and 2003 from 16.6% to 52.5% and academic enrollments more than doubled. Today, women represent 70% of the student population in most of the Gulf countries, women judges in Tunisia number 25% (compared to 20% of federal judges in the US) and 10% of the members of the Moroccan Parliament are women (compared to 13% of the American Congress) (Al-Hamad, 2003).

However, only 27.3% of women make up the labor force, the lowest level worldwide. The average is 40.6%. In France, for example, women make up 45% of the labor force and in Indonesia, where there is the greatest Muslim population, women represent 38% (United Nations, 2004b). Of the twenty five countries which exhibit the lowest rates of female participation, 18 are Arab (see Figure 1 and Table 2).

⁴ Since 2002, the United Nations Development Program (UNDP) has undertaken, with the help of some forty Arab world experts, a series of studies to investigate deficiencies in the political and socio-economic systems of the 22 Arab states.

	Internet penetration (%) ^a	Pop. ^b (millions)	% Female pop ^b	Maternity leave ^d		Restrictions ^e		
				Paid or partially paid	Not paid	Can the number of hours worked	On the type of work	On mobility
Algeria	1.5	32.82	49.51	14 weeks	5 years	Yes	Yes	No
Bahrain	27.7	0.67	43.88	45 days	15 days	Yes	Yes	No
Comoros	0.8	0.63	50.38	-		Yes	Yes	No
Djibouti	0.8	0.46	48.54	14 weeks	-	No	No	No
Egypt	3.9	74.72	49.54	50 days	1 year ^g	Yes	Yes	No (2000)
Iraq	0.1	24.68	49.42	6 months	-	Yes	No	Yes
Jordan	7.9	5.46	47.61	10 weeks	1 year ^h	Yes	Yes	No (2003)
Kuwait	22.4	2.18	39.69	-	100 days	Yes	Yes	Yes
Lebanon	9.0	3.73	51.50	7 weeks	-	No	No	No
Libya	2.7	5.5	48.64	90 days	-	Yes	Yes	No
Morocco	0.4	31.69	35.61	1 year	2 years	Yes	Yes	No
Mauritania	2.6	2.91	50.51			Yes	Yes	No
Oman	7.5	2.81	43.90	-	6 weeks	Yes	Yes	Yes
Palestine ^c	3.6	3.51	49.12	10 weeks	-	Yes	Yes	No (2003)
Qatar	16.4	0.82	34.47	40-60 days	-	-	-	No
Saudi Arabia	6.9	24.29	45.09	10 weeks	-	Yes	Yes	Yes
Somalia	0.7	8.03	49.95			Yes	Yes	No
Sudan	0.9	38.11	49.38			Yes	Yes	No
Syria	1.2	17.59	48.78	105 days	1 month	Yes	Yes	No
Tunisia	6.2	9.92	49.57	30 days	-	Yes	No	No
UAE	29.6	2.48	40.51	4 months	2 months	Yes	Yes	No
Yemen	0.5	19.35	49.09	60 days	6 months	Yes	Yes	No
		312.36	47.43					

^a Internet WorldStats, Usage and Internet Statistics, www.internetworldstats.com/stats1.htm and www.internetworldstats.com/stats5.htm, last accessed 7 March 2005.

^b Source: CIA World Factbook (2003), all figures, except those of Palestine, which are from July 2002, are from July 2003.

^c West Bank and the Gaza strip.

^d Hijab et al. (2003) for Qatar, United Nations (2000a) for Iraq, Morocco and Tunisia, and the United States Social Security Administration and International Social Security Association (1999, Table 4.9). Maternity Leave Laws in MENA Countries, p. 119. United Nations (2000a). Women's Indicators and Statistics Database (WINSTAT), <http://unstats.un.org/unsd/demographic/products/socind>.

^e Hijab et al. (2003) and World Bank Labor Force Survey, Gender and Development in the Middle East and North Africa, Table 4.8, p. 113.

^f Cases where permission or authorization of a husband or a guardian is required.

^g If 50 employees or more.

^h If 10 employees or more.

Table 1. Socio-technical characteristics of the status of women in Arab nations.

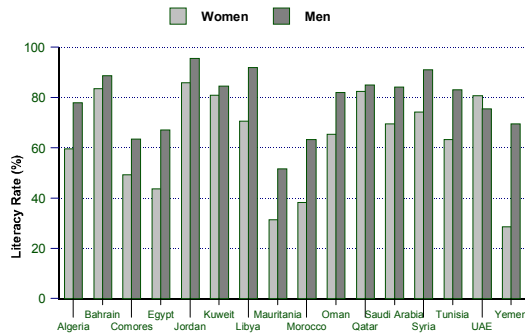


Figure 1. Literacy rates of women and men in certain Arab countries in 2004. (Source: UNESCO, The UIS literacy table (September 2004 release) applying to the reference period 2000-2004. www.uis.unesco.org).

In 2001, however, of the 65 million illiterate Arabs (of an estimated 280 million) two thirds were women (UNDP, 2002). More recently, the Arab League Educational, Cultural, and Scientific Organization (ALESCO) is alarmed that the number of illiterates in the Arab world is not decreasing. From 50 million (73%) in 1970, the number of illiterates aged 15 years and older reached 61 million in 1990 (48.7%) and is expected to reach 70 million (35.6%) in 2005.

Those that are most affected are women who make up close to half (46.5%) of the illiterates. With 70 million illiterates, the Arab region now counts a higher level of illiteracy than sub-Saharan Africa (34.6%). At the current pace of progress (1% per year), it will take the region more than three decades to overcome this curse. The ALESCO recommends that training must be undertaken at all levels and through all possible means, especially through ICTs, to enable learning to take place from the home, at a distance, at school and at college⁵.

5. The paradox between education and participation in the labor force

Noting the results reported by the UNDP (2003), Nadereh Chamlou, senior adviser to the World Bank, projected that if women had been allowed to participate in the economic life of their nations, greater growth would have ensued and revenue per person during the last ten years would have been 2.6% rather than 1.9% (see Figure 2)⁶.

In Egypt, Syria and Yemen, nations with significant agricultural industries, the proportion of women in the labor force compared to the number of women in total exceeds that of men. On the other hand, in Gulf coun-

tries, most women are employed in the services industry.

1	Pakistan	3
2	Saudi Arabia	11
3	Algeria	12
4	Iran	12
5	United Arab Emirates	12
6	Qatar	13
7	Palestine	14
8	Iraq	18
9	Oman	18
10	Jordan	21
11	Libya	21
12	Syria	21
13	Bahrain	22
14	Egypt	22
15	Guatemala	24
16	Tunisia	24
17	Kuwait	25
18	Morocco	25
19	Yemen	27
20	Lebanon	28
21	Sudan	28
22	Turkey	28
23	Paraguay	29
24	Dominican Republic	30
25	India	31

Table 2. Percentage of adult women in the labor force (1995-2002) in the 25 most disadvantaged countries. Source: United Nations (2004b), sorted by the authors.

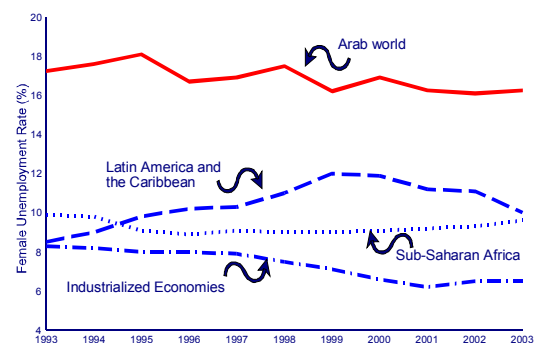


Figure 2. Female unemployment rates by region from 1993 to 2003. In 2003, 40% of the world's 2.8 billion workers were women, representing a worldwide increase of nearly 200 million women in employment in the past 10 years. In the Middle East and North Africa the female unemployment rate of 16.5% was 6% higher than that of men. (Source: ILO, 2004).

⁵ www.yabiladi.com/article-societe-333.html, last accessed 29 January 2005.

⁶ www.jordanembassyus.org/12102003004.htm, last accessed 1 January 2005.

In countries which have been able to develop activities other than agricultural ones (Morocco and Tunisia, for

example), women are especially involved in export and business industries. The proportion of women working in industry relative to the total number of women in the labor force is equal or greater to 10% in five countries: Bahrain, Jordan, Lebanon, Palestine, and the United Arab Emirates. In Qatar, that number reaches 98%. The proportion of men, however, varies between 23% and 57% (United Nations, 2004).

Most of the women who are not active in the agricultural industry are educated and work in the public sector. A good number also work in factories. In general, as long as the level of unemployment of men is high, women find it particularly difficult to access the job market, especially in jobs that are traditionally reserved for men (Roudi-Fahimi and Moghadam, 2004).

Educated Arab women prefer smaller families and are more concerned with family planning, no doubt because they tend to marry later and space out their pregnancies which results in fewer children. Therefore, for example, Moroccans with at least a high school degree have twice as few children as non-educated Moroccans (Roudi-Fahimi and Moghadam, 2004). This provides evidence supporting the hypothesis that women's education is a factor in the decrease of fertility. Unfortunately, although women who work are generally more educated than their male counterparts, unemployment rates among educated women tend to be higher as they often leave their place of employment to get married and raise children (World Bank, 2004).

Hence, there is a noticeable difference between indicators of the level of education and those of the employment of women. As articulated by Mustapha Nabli, chief economist of the World Bank for the MENA region: "There is a distinct gender paradox in MENA [...]By investing in women's education, MENA countries have increased aspirations and ability to earn incomes; but the low levels of female participation in the labor force means the region is not reaping the returns of this investment".

6. The Arab woman and ICTs

The diffusion of the Internet in the Arab world has mainly been made possible by the cyber cafes. The proportion of women among Arab Internet users was 4% in 1998 according to Nua Internet Survey⁷ and other sources (ILO, 2001; UNDP, 199, p.62), 6% in 1999 and then doubled to 12% in 2001 (Galabov, 2001). In the Gulf countries and the Middle East, this

proportion was 19-20% (Bouhabib, 2000) with the United Arab Emirate figures reaching 36%⁸.

One detailed poll conducted in 2003 by Alwaraq.com in the United Arab Emirates revealed that from a sample of 6,300 Internet users, 12% were aged between 11 and 20 years old, 39% were between 21 and 30 years old and 29% were between 31 and 40 years old. Only 18% were women. It should be noted however that, like women in other developing countries, Arab women who use the Internet are rare and come from the urban and educated elite. This, in so way, is representative of Arab women in general (Hafkin and Taggart, 2002).

Arab women are, to some extent, marginalized from the technological revolution as Arab countries tend to exclude a considerable share of their human resources in their economies of the future. Because of this, and the fact that women do not benefit from the same level of education or training as men, a good number of women who do in fact know how to read and write, do so only in Arabic, and therefore do not have access to ICTs that mainly use other languages.

In theory, the Internet could become women's technology of choice as electronic communication encourages gender equality unlike other more traditional means of communication such as face-to-face (Herring, 2001).

7. Telework

ICTs have enabled work to be carried out in a variety of ways. Some of these new ways could be most advantageous to women as, by their definition, they bring the work to women rather than require women to go to the work. Telework is one such ICT application that makes it possible for women to work from the home and to be able to maintain a better balance between personal and home duties and professional responsibilities (ILO, 2001; Tingey et al., 1996). This balance is by far more fragile for women than men (Saunders, 2002b).

Telework, or work at a distance, is a difficult term to define. Besides work being performed away from the office, telework also entails that the work is relocated. Telework can be carried out in the employee's home or in any other location away from the employer's site (Hafkin and Taggart, 2002). Telework is completed at

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www.nua.ie/surveys/index.cgi?f=VS&art_id=898267807&rel=true, last accessed 4 January 2005.

⁸ The Arab Advisors Group deplored that women were not sufficiently present on the Web. Otherwise the ad revenues of Arab portals, estimated at \$10 million at the time of the study, would have been greater. This association between women's presence on the Web and the amount of ad revenues of Arab Web sites probably stems from another study published in April 2001 revealing that 60% of women click Web ad banners (www.nua.ie/surveys/index.cgi?f=VS&art_id=905356651&rel=true, last accessed 18 June 2004).

a distance thanks to technological advances, such as those enabled through telecommunications.

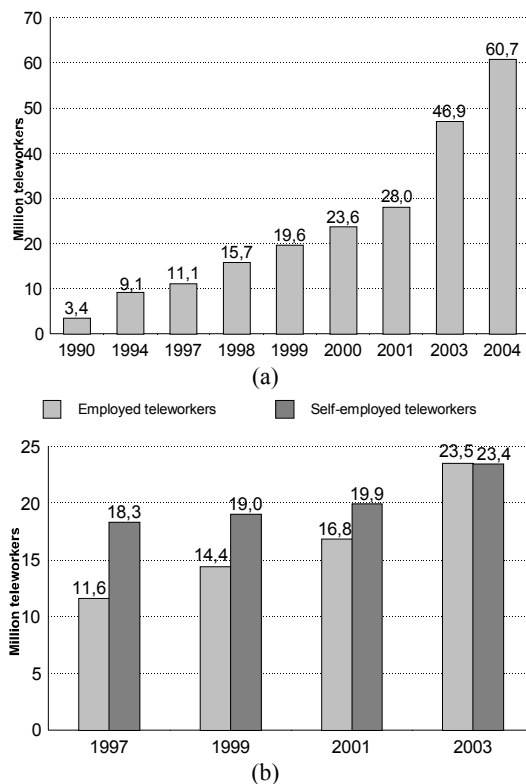


Figure 3. (a) Telework in the US. Data for the period 1990-1997 are based on surveys performed by Find/SVP. Data for 1998 are from Cyber Dialogue, www.cyberdialogue.com. Data for the years 1999-2004 are based on ITAC (revised and corrected by Langhoff, www.langhoff.com/faqs.html); (b) Telework is used by those who are employed and those who are self-employed. Data obtained by the American Interactive Consumer Survey allowed to number people who work at home during office administrative hours at least one day per month. Published on Sept. 4-5, 2003 by The International Telework Association and Council⁹, these results show that the number of teleworkers has been increasing at the rate of 40% since 2001; 42% working at home at least one day a week and 22% working at home daily.

The term telework was first used by Nilles (1975) to describe a work arrangement in which the work is completed in a remote location away from the employer and where employee and employer interact through information (PC, laptops, etc.) and communication (modems, electronic message, voice mail, call forwarding, audio conferencing, etc.) technologies (JALA, 1993)¹⁰. Already at the end of the 1980s, PCs

⁹ ITAC, see www.telecommute.org/news/pr090403.htm, last accessed 24 January 2005.

¹⁰ The first 'telecommuter' was the president of a Boston bank who, in 1877, linked his office to his home in

enabled executives to bring work home and to remain in contact with their offices through modems, faxes, and telephone answering machines. In 1996 the number of teleworkers in the US was estimated at 9 million with a 15% annual growth rate (Zeidenberg, 1996). Today, teleworkers number 44 million (ITAC, 2004). These numbers are on the conservative side (see Figure 3).

Telework has quickly become the accepted solution to highly congested traffic problems in large cities (hence the term telecommuting), to transportation costs, to energy savings, to lowering pollution levels, to reducing general costs, overhead costs, real estate, and work spaces (Bailey and Kurland, 2002). Telework has also been associated with various benefits, including greater work satisfaction and a reduction in work-family conflicts (Igbaria and Guimaraes 1999; Tingey et al., 1996). Considerable benefits were also reported by firms of good repute such as AT&T and IBM. AT&T, for example, accrued 150 million dollars in annual savings thanks to telework (Roitz et al., 2003), of which 100 million was attributed to employee productivity. According to an International Telework Association and Council report (ITAC, 2000), 75% of teleworkers maintain that they are 15% more productive at home than at work¹¹.

Just as the Internet in some regions of the world brought some equality among people (Consalvo, 2002), telework is another ICT that may render equality between genders, at least in terms of employment (Chen, 2004). A 1996 study revealed that women are considerably more inclined to engage in telework than men (Mokhtarian and Salomon, 1996). Furthermore, a 1997 study reported that heads of firms who were women more readily adopted ICTs than their male counterparts (Janecke, 1997).

If ICTs enable candid interactions, telework could represent the tool of choice for women which would allow them to maintain a certain level of professionalism without compromising social and cultural norms. This would hold even more true in Arab countries where women are either expected to remain in the home or, in

Somerville (Massachusetts) via a telephone cable (Langhoff, 2000).

¹¹ Proximity can explain the attraction for telework just as much as distance. Traffic congestion in large urban centers can make car commuting difficult. The Arab world is largely urbanized. The Middle East, for example, was 25% urbanized in 1960, 37% urbanized in 1970, 48% urbanized in 1980, and 58% urbanized in 1999. If the trend continues, the Middle East will be 70% urbanized in 2015 with some cities being hyper-urbanized according Cordesman (1999). At that time, nearly a quarter of the Arab population will be living in cities of one million inhabitants or more.

some cases, are not permitted to have direct contact with non-family related men or can not allowed to move about on their own, let alone travel (Daly, 1993).

American women find telework to possess many advantages, no matter in which industry. Women referred to family, personal benefits and a drop in stress as important advantages more often than men (Bagley et al., 1996). In most cases, telework was used in situations where women engaged in data entry, or collected, edited, reread or translated texts at home (Hafkin and Taggart, 2002).

In developing countries telework is rarely used in the home but rather in delocalized centers in commercial and urban centers. Women, in general, prefer to work outside the home though close to these centers (Hafkin and Taggart, 2002). Women in Morocco, Egypt, Tunisia, Jordan and Lebanon already exhibit their crafts (carpets, pottery, embroidery, etc.) which they sell using electronic means in the virtual souk¹². These initiatives are neither plenty enough nor sufficiently known.

The number of Internet users that have access from their home can be estimated at 29% based on data published by the UNESCO Observatory on the Information Society¹³. In Egypt, however, telephone numbers are provided to Internet users which then allows them to access the Internet from home (at a local calling rate) without having to use an Internet Service Provider (ISP).

Conclusion

The United Nations considers access to ICTs as the third most important goal for women's development, behind eradicating poverty and the struggle against marital violence. As a result, ICTs cannot remain neutral (Hafkin and Taggart, 2002): just as they can play an important role in the narrowing of the chasm which separates women from men, they can equally represent another way to marginalize women. If access to ICTs is directly associated with the social and economic development of women, it then becomes essential that women understand the potential that ICTs can offer them.

The belief that women are keen to use ICTs yet are not allowed to may need to be put into question. Is it an issue of bringing the ICTs to women or rather women to ICTs? The notion that ICTs are inherently masculine has often been invalidated. The telephone, for example, was once considered a communication technology for women (Consalvo, 2002). It has been argued that if the

Internet were to be feminized, it would be the start of civilization. ICTs are too often supposed, either by society or by culture, to be masculine in nature. Computers are still mostly considered a man's tool (Daly, 2003). It is not a question then of bringing ICTs to women, but rather that women will need to be brought closer to ICTs, regardless of governmental efforts and strategies undertaken by their respective countries.

Telework can only become a reality if several conditions are satisfied. Other than socio-cultural issues, efforts to democratize technology need to be continued but cannot take several generations. It is unacceptable that the Arab world has yet to reach the world's level, even if only in terms of IT equipment¹⁴. Bandwidth, for example, is either nonexistent or very expensive. In fact, a report by ITAC (2004) stated that bandwidth has given a boost to teleworkers: in 2003 4.4 million teleworkers used bandwidth from their home on a total of 41.3 million teleworkers. In 2004, this number rose to 8.1 million (on a total of 44.4 million), an increase of 84%¹⁵.

On another note, judging by the rate of emigration of Arab youths and the need of these by the West, only those that are less mobile, namely women, will be left in Arab countries (Hijab et al., 2003). In a study undertaken by the UNDP on emigration, nearly half (45%) of the youths who participated said that they wish to emigrate. If the most able and skilled men emigrate to escape dissatisfaction with their present plight and because the lure of foreign countries has become too strong to ignore, one can only conclude that women will need to step up to the front line. And this, not only in terms of ICTs.

But women who see telework as a panacea will need to realize that undoubtedly various challenges lie ahead. With telework, women's workload will potentially be increased as work responsibilities will be added to existing family duties.

It is undeniable that Arab women have an important role to play in their countries' economic and social development. Technological learning extends far beyond word processing and spreadsheet manipulation. Arab content must include women's interests and electronic commerce and exchanges can no longer be developed without input from Arab women. Since the beginning of humanity woman was critical to the procreation and the propagation of races, was "protected" and not permitted to engage in neither warring nor

¹² www.southbazar.com

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www.unesco.org/webworld/observatory/in_focus/05_0602_internet.shtml, last accessed 5 March 2005.

¹⁴ The UNDP report (2003) revealed that PC penetration in the Arab world was only 1.8% in 2002 whereas the world average was 7.8%. The region, with 5% of the world population, has only .7% of world Internet connections.

¹⁵ www.telecommute.org/news/pr090204.htm, last accessed on 29 January 2005.

hunting (except in some matriarchal societies such as the Amazons and the Touaregs). According to some, this is how men came to be warrior and hunter. Women could have easily taken on these roles. However, even without men women need to feed their children who will be the members of future generations. Therefore, if technology is able to break down the border between home and office, it may also potentially bring down barriers between generations. Hence, ICTs will no longer be considered only an adult's tool.

Future generations will benefit from the fact that technology is introduced into the home at an early age. As their parents (men and women) introduce computers into the home, children will be sensitized to data technologies, multimedia and information retrieval, just as they once were exposed to pens, books and satellite dishes. Those born into households where the telephone was already an accepted fixture did not need any training in using it. The same applies to those who were born into homes where televisions were the norm. How many of us ask our children to help us program a video, to switch channels in a new TV set or to re-program a digital satellite receiver? With the pervasiveness of telework, children will be born into an environment in which the presence of ICTs in the home, at school, and later at work will no doubt be standard.

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