Chapter Seven

THE INFORMATION REVOLUTION AND THE MIDDLE EAST

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In the last two decades, the information and media environment in the Middle East has changed dramatically. Partly through such recent high-tech advances as the Internet, and even more fundamentally through older technologies like satellite television, photocopiers, fax machines, and videocassettes, individuals and groups in the Middle East have far greater abilities to share ideas than ever before.

This change in the information environment has broad implications for the societies and politics of the region, and for U.S. policy. Increasingly informed public debate, the ability of actors living abroad to influence events in the region, and the spread of images from the West are challenging many long-held ideas and transforming the politics of the Middle East. These changes are likely to complicate U.S. policy and possibly military operations.

Yet limits to what is often termed "the information revolution" must also be recognized. Although more breathless proponents believe that advanced technologies such as the Internet will empower the poor and disenfranchised, in the Middle East those technologies are likely to be used only by the wealthy and well educated. Instead, "mid-tech" advances such as satellite television, videocassettes, and photocopiers are likely to have the most profound effect among broad populations.

This chapter analyzes changes in patterns of communication in the Arab world and their import for U.S. policy. It surveys how technol-

ogy is changing the information environment in the region, drawing special attention to the effects of mid-tech technologies that are inexpensive, easy to use, and ubiquitous in much of the region. It then examines the probable effects of those changes on politics, governments, and societies in the region, and concludes with a consideration of the implications of those changes for U.S. policymakers.

A RICHER INFORMATION ENVIRONMENT

In the last decade, almost every media form found in the Middle East has improved in the quantity, quality, and variety of information it provides. Competition for audience has increased in recent years, forcing outlets in every medium to address the needs and desires of their consumers more effectively.[1]

Newspapers

In the not-so-distant past, same-day newspaper and magazine readership in the Middle East was restricted to domestic publications, many of which were controlled by individual states. Although Lebanon had a tradition of a diverse press, it was the exception. Lebanese papers were often available in other Arab capitals, but they arrived days or weeks after publication.

The nationalization of independent newspapers in the 1960s, and the establishment of government outlets, meant that Arab newspapers in that period were often shrill and ideological regime mouthpieces. Instead of intelligent debate on the news of the day, the print media often featured fawning coverage of national leaders. Political leaders' meetings with foreign dignitaries were a staple of news coverage,

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[1]Most studies of technology and social and political change tend to be focused on wealthier countries, or suggest that technology will force poorer countries to follow the path of wealthier countries. The classic expression of this view is Thomas L. Friedman, *The Lexus and the Olive Tree,* New York: Farrar, Strauss and Giroux, 1999. A relatively early view of the role of computational power and the Internet in daily life is Nicholas Negroponte, *Being Digital,* New York: Knopf, 1995. A comprehensive view is Manuel Castells, *The Rise of the Networked Society, 2d ed.,* Oxford: Blackwell, 2000. One essay collection that deals especially with media in the developing world is Lloyd S. Etheredge (ed.), *Politics in Wired Nations: Selected Writings of Ithiel de Sola Pool,* New Brunswick, N.J.: Transaction, 1998.

but newspapers only rarely gave even a flavor of what was discussed behind closed doors.

Starting in 1976, Saudi investors created *Asharq Alawsat.* Edited in London and printed around the Arab world using satellite technology similar to that employed by *USA Today,* the paper represented an important step in creating a vibrant and viable overseas Arab press. With time, other international Arabic papers emerged in London, the most prominent among them being a reinvigorated *al-Hayat* (originally out of Lebanon, and now Saudi-supported), and the independent, pro-Palestinian *al-Quds al-Arabi.* These papers published news that was generally accurate and offered selective criticism of regional governments and figures.

Current circulation and readership for the papers vary. *Asharq Alawsat,* whose outside pages are printed on eye-catching green newsprint, remains basically a Saudi paper. The vast bulk of its roughly 250,000 daily circulation is in Saudi Arabia,[2] and its editor is a Saudi. Its editorial lines are thought to reflect Saudi official thinking, albeit sometimes only its most liberal strain. Because it is written and edited outside of the Kingdom, however, the paper has broader freedom than domestic papers in its discussions of controversial issues. Still, it avoids criticism of Saudi leaders. It has extensive cooperative agreements with several leading American newspapers, and sometimes draws criticism for running others' reporting on its front page instead of its own reporters' work.[3] Seemingly alone among the international Arab papers, *Asharq Alawsat* is a moneymaker, in part because of official Saudi encouragement of advertising

[2]Like all audience data from the Middle East, this number is difficult to verify. The problem has many parts: long-standing state sponsorship of media, lack of advertiser demand for accurate information, societal suspicions of poll-taking, poor demographic data necessary for accurate polling, especially weak data from the poorer and more populous countries in the region, and the lack of a large cadre of well-trained poll-takers. Beyond the question of raw audience numbers, the characteristics of audiences are also poorly understood. The huge gaps in our knowledge of audience data are outlined in Jon B. Alterman, "Counting Nodes and Counting Noses: Understanding New Media in the Middle East," *Middle East Journal,* Vol. 54, No. 3, Summer 2000, pp. 355–361.

[3]Author's interviews with Arab journalists, London, July 3, 2002, Washington, D.C., July 20, 2002, et al.

there.[4] The late Prince Ahmed Bin Salman, the son of the governor of Riyadh, was the principal owner until his early death in July 2002.

One counterpart to *Asharq Alawsat* is *al-Hayat.* Although its worldwide circulation is smaller—probably less than 125,000 per day—it enjoys broad readership among the intelligentsia throughout the Arab world and among Arab expatriate communities in the West. *Al-Hayat* has positioned itself as an intellectuals' paper, not only providing authoritative news coverage (often combining Western wire reports with local Arab reporting) and a variety of viewpoints but also covering the arts, poetry, and philosophy. The paper is owned by Khalid Bin Sultan, the son of the Saudi defense minister. The operation loses something on the order of $10 million/year, as neither advertising nor sales cover the costs of production.[5]

There are a variety of other expatriate papers. *Al-Quds al-Arabi* is an independent Palestinian paper with no visible means of support. It features some of the most critical reporting of Saudi Arabia to be found in the Arab world, and is thought to be funded through a wide range of subsidies from individuals and governments. *Azzaman* is published by former Iraqi information minister Saad al-Bazzaz, reportedly with Saudi support. *Al-Arab* is published by former Libyan information minister Ahmed Salhin al-Houni. The smaller papers all tend to be more ideological and more anti-American. They all operate on the basis of mysterious subsidies.[6]

Collectively, all the pan-Arab newspapers combined are unlikely to sell more than 400,000 copies a day worldwide (by comparison, *The New York Times* alone averages more than 1 million copies a day). But concentrating on raw numbers would be to miss their impact. The pan-Arab papers are a fundamental link between expatriate Arab communities in London, Paris, New York, Washington, and beyond,

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[4]Author's interviews with Arab editors in London, March 1998.

[5]Jon Alterman, *New Media, New Politics: From Satellite Television to the Internet in the Arab World,* Washington, D.C.: Washington Institute for Near East Policy, 1998, p. 10.

[6]While the source and amount of subsidies for Middle Eastern papers is a mystery, their existence is clear. Many papers have little or no advertising. According to one source, "independence" in the Arab newspaper business means having several sources of subsidy, so that one need not be wholly dependent on any one source. Author interview in Beirut, May 2001.

and the Arab world itself. They represent a zone of freedom and intellectual innovation that is hard to find in many Arab countries. Because of their relatively elite audience, international publications often benefit from a more lax censorship regime than Arab governments are willing to extend to their own domestic products.

The Arab newspapers also represent a regional intellectual voice, as scholars and opinion leaders from around the world come together to discuss common issues on their pages. Finally, international Arab newspapers play a significant agenda-setting role for the Middle East. Newspaper editors are far more likely to read broadly in the international Arab press than is the general population, as are high governmental officials. The same is true of leading university professors and businessmen. If an idea is to gain currency around the Arab world, stating it in the pan-Arab press is a good place to start.

The pan-Arab press, then, serves as a forum for the discussion of ideas in a region in which such forums are rare. While not of a uniformly high quality, its status as a genuinely international forum for the exchange of ideas gives it an important role in the intellectual life of the region. As there are few quality journals in the region, newspapers have emerged as a more important locus for discussion than would be the case in other societies and remain an important outlet for elite political and social debates.

Television

As television came to the Arab world in the 1960s and 1970s, it fell into the drab mode of state-sponsored media. News broadcasts invariably began with a series of stories on the president's or king's activities of the day; the author witnessed one broadcast in Egypt in 1995 which began with a soundless 17-minute segment of the president greeting visiting Gulf dignitaries at the Cairo airport. When there was actual news, the media often did not report it. In one of the most egregious failings of journalistic integrity, Saudi television did not report the Iraqi invasion of Kuwait for three days because it was unsure what the official line would be.[7]

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[7]See, for example, Abdelwahab El-Effendi, "Eclipse of Reason: The Media in the Muslim World," viewed at http://msanews.mynet.net/Scholars/Affendi/media.html.

The leap into Arab television began after the Gulf War, when CNN's coverage of the war created a thirst for timely, well-produced news of concern to an Arab audience. First into the fray was the Middle East Broadcasting Centre (MBC), which established operations in London in 1991. It is owned by Shaykh Walid al-Ibrahim, a brother-in-law of King Fahd.[8] MBC established a pattern for expatriate Arab broadcasters, broadcasting authoritative news by satellite to the Arab world. MBC also gave life to the idea of a pan-Arab newsroom, putting forth presenters and reporters from all over the Arab world. In addition to its news programming, MBC features music, Western comedies, and dramatic series.

Five years later, the network al-Jazeera took MBC's experimentation to another level. Established in Qatar with support from a dynamic new emir, al-Jazeera presented a combination of hard-hitting news coverage (boosted by an impressive network of local correspondents) and lively debate shows that became the talk of the Arab world. "Freed from the political constraints that often guide the Saudi-owned media, al-Jazeera pursued controversy with such programs as "The Opposite Direction" and "More Than One Opinion," which pitted secularists against Islamists, feminists against traditionalists, and even Israelis against Arabs.

Indeed, al-Jazeera's genesis was in part due to Saudi sensitivities. In 1994, a Saudi satellite service contracted with the BBC to produce Arabic television news, but the Saudis pulled the plug in 1996 after the BBC supplied content they found offensive. The operation shut down just as the Qataris were beginning to implement their plan for a regional television station, and many of the BBC veterans quickly shipped off to Doha where they reconstituted much of their organization.[9]

Al-Jazeera burst onto American consciousness in the fall of 2001, with its extensive (and sometimes frankly sympathetic) coverage of Taliban-controlled Afghanistan in the face of an American-led onslaught. Osama bin Ladin appeared to favor the station, which gave his statements extensive airtime. Indeed, most graphics of bin Ladin

[8]As stories circulated that the king himself sometimes called to request specific programming, some joked that MBC really stood for "My Broadcasting Center."

[9]See Alterman, 1998, pp. 27–28.

circulating since the September 11 attacks are taken from al-Jazeera video feeds and contain a graphic bar that says "al-Jazeera exclusive" in Arabic or English. Al-Jazeera's prominence brought increased scrutiny to the channel's overall tone, which many outside critics found wanting. As one wrote in the *New York Times Magazine*, "Although Al Jazeera has sometimes been hailed in the West for being an autonomous Arabic news outlet, it would be a mistake to call it a fair or responsible one. Day in and day out, Al Jazeera deliberately fans the flames of Muslim outrage."[10]

To be sure, al-Jazeera gives extensive coverage to the Palestinian intifada and provides ample platform for commentators (and sometimes reporters) who are skeptical of Western intentions. But al-Jazeera also takes seriously its slogan, "Opinion . . . and the other opinion." Despite its many shortcomings, al-Jazeera allows ideas to be aired that would have been immediately squelched in previous eras. Some of those are pro-Western, and some are anti-Western. Most significantly, al-Jazeera creates a marketplace for those ideas.

Although many of the most popular ideas on al-Jazeera are ones that are inimical to U.S. policy, the station has been notably willing to extend airtime to those with whom the bulk of their audience disagrees. For example, al-Jazeera does give extensive opportunities for American officials to speak directly to the Arab world, through both direct interviews and coverage of U.S. news. Secretary of Defense Donald Rumsfeld's address on the first anniversary of the September 11 attacks was carried live and unedited on al-Jazeera, for example, beaming it into millions of Arab homes during a prime viewing hour. Indeed, al-Jazeera featured extensive Washington coverage that day, bringing Americans to an Arab audience even when those Americans saw themselves speaking only to other Americans.

During coalition operations in Iraq, al-Jazeera joined most Arab stations in abandoning any pretense of objectivity. Presenters made asides, and reporters editorialized both through words and pictures. Debate on talk shows was most often deeply one-sided. But al-Jazeera also gave significant time to American views, covering coali-

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[10]Fouad Ajami, "What the Muslim World Is Watching," *New York Times Magazine*, November 18, 2001.

tion press conferences in Doha and increasing its coverage of Washington events. Its defenders argued that al-Jazeera was merely doing for the Arab side what Fox News and other American outlets were doing for the American side; it is too soon after the conflict to assess the veracity of the observation.

Other stations have taken different approaches to programming. The Lebanese Broadcasting Corporation (LBC) and Lebanese Prime Minister Rafiq al-Hariri's Future Television generally present entertainment-oriented programming. They feature young and attractive presenters interacting in flirtatious ways, and they stress music and game shows. Abu Dhabi Television has recently revamped in an all-news format and is attempting to go head-to-head with al-Jazeera. To compete with al-Jazeera, MBC is also planning to launch a 24-hour news channel headquartered in Dubai and employing a veteran al-Jazeera news director. A new youth channel headquartered in Dubai, Zein, hit the airwaves in February 2001, and so on. In all, there are something over 200 Arab satellite stations, all seeking an audience among the Arab viewing public.[11]

Most of the Arab satellite broadcasters, like MBC and al-Jazeera, are free-to-air. That is to say, one only needs to buy a satellite dish and a television, and there are no ongoing subscription fees. The cost of dishes is going down, and is now less than $200 for a single unit. In addition, widely available technology allows several users to share a single dish. Public accommodations such as coffee shops can buy dishes, thereby creating far wider audiences than would be otherwise possible.[12]

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[11]Although al-Jazeera has made a big splash and won accolades for its news coverage, viewers are clearly looking for something else from their programming. The most popular show in the Arab world today is an MBC-produced version of "Who Wants to Be a Millionaire?" produced out of the same studios as the original British production. The Arabic version has an Arab host, Arab contestants, and questions on Arab history and culture. It appears at the same time as al-Jazeera's flagship debate show, "The Opposite Direction," and has a decisive lead in viewership in that time slot, and it has spawned a host of imitators. Author interview in Dubai, February 2001.

[12]A recent shift toward digital broadcasting may be driving up the cost of watching while simultaneously lowering the cost of broadcasting. Digital signals require decoder boxes and proprietary "smart cards" to receive a signal, and although counterfeit versions of the latter can often be had at low cost, the former require an additional outlay. On the broadcasting side, digital signals mean multiple signals can use the

In the quest for an audience, channels have found that emotion is better than detachment. The Palestinian intifada is a staple of most Arab broadcasters, who report not from afar, but through field reporters and wire services to bring the violence into viewers' living rooms. The events of September 11 were another common theme, although much of the commentary focused on shifting blame rather than rooting out terrorists.

Precise details about who is watching satellite television are hard to obtain. Not much viewer polling is done, especially outside of the wealthy Arab Gulf, and even pollsters themselves warn that commissioned polling data often reflect the interests of the party commissioning the poll.[13] The stations themselves do not engage in organized viewer research, through either polling or focus groups, and new programming ideas appear to be the result of purely internal debate rather than research into viewers needs.[14] In addition, executives at leading satellite channels appear not to invest much energy into targeting specific segments of the overall audience. This situation is largely a result of the perception that advertising in the region is driven largely by political concerns rather than audience data.[15] Firms seeking the support of the Saudi government will support Saudi stations allied with the royal family and eschew advertising on al-Jazeera, for example. As a consequence, there is at least some self-censorship among broadcasters on matters of high interest to the Saudi government or other potential sponsors.

A Wide Spectrum of Content

Taken as a whole, there is no single perspective expressed in the Arab press. At one end of the spectrum are newspapers and television commentators that appear to be magically transported from the early 1960s. Beating their breasts, they rail against the United States and its client state, Israel. They talk of uniting the Arabs under a sin-

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same satellite transponder, driving down the cost of access time and increasing the capacity of individual satellites.

[13]Every discussion I have ever had with anyone involved in media research in the region has confirmed this point.

[14]Author interview in Abu Dhabi, February 2001.

[15]Author interview in Doha, February 2001.

gle banner to resist the West and all that it stands for. This has been the general tone of the Syrian domestic press and the Iraqi domestic press under Saddam Hussein, although individual writers and commentators from throughout the region espouse a similar line.

At the other end of the spectrum are those who decry much of the Arab idea as a failure. Some urge a turn toward Islam, and some urge a turn toward democracy, but what is characteristic of both groups is a sense that the 20th century Arab experiment was a failure and that the Arab world needs to reinvent itself to escape from a dead end. No outlets wholly endorse such a view, but writers and commentators who embrace some part of it can be found at all the major international outlets in the region, from al-Jazeera to *Asharq Alawsat*. These world views are fundamentally inner-directed, and in them the United States remains mostly in the background, as neither a model of emulation nor an object of derision.

The largest bulk of opinion falls somewhere between these extremes. Most Arab commentators, especially those courting a regional audience, consider themselves in some way to be Arab nationalists. Few writers are defiantly secular and most agree on some role for Islam in public life. There is little support for overall U.S. government policy in the region, and even support for discrete U.S. actions, such as operations to protect Muslim Kosovars, can be grudging and difficult to come by. If there is an overall thrust to the vision, it is that the U.S. government is hopelessly biased toward Israel and completely indifferent to Arab suffering. On a broader level, there is considerable concern that American culture, with its corrupting sexual attitudes, its individualism, and its ruthless capitalism, is overwhelming the region. These concerns do not provoke a uniform response; in many cases, they do not provoke a response at all. There is periodic discussion of using "the oil weapon," but such calls appear to be signs of frustration rather than future intentions.

The Internet

The Internet gets a great deal of attention in the world media, but it is still quite rare in most parts of the Arab world. While more than one in five residents of the United Arab Emirates (and perhaps as many as one in three Emirati nationals) have Internet access, the ratio declines to perhaps one in 25 Jordanians and something like one in 100

Egyptians. Typical access rates in wealthier countries such as Kuwait or Bahrain is approximately 10 percent of the population, and about 23 percent in Israel.[16] The Internet is available in some form in every country in the Middle East, although access has been severely restricted in Libya, Syria, and Iraq.[17]

Most of the wealthier countries in the Middle East (with the exception of Israel) have some sort of government monopoly over Internet access, while many of the poorer countries have created a market of Internet service providers. World Trade Organization rules will open up telecommunications services down the road for members and aspiring members,[18] and monopoly providers are already beginning to plan for when they will need to find a new business model.

The level of censorship of the Internet or monitoring is not clear in many countries. Egypt and Jordan proclaim policies of free access to the Internet, whereas Qatar and Saudi Arabia attempt to force users to go through proxy servers that restrict access to objectionable sites. Evasion of restrictions is widespread. In the words of one Saudi interlocutor, "The authorities have created a nation of hackers. They don't want us to see anything related to religion, or sex, or politics. That's what people want to see, so everyone gets around the restrictions. Hackers must be a higher percentage of the population in Saudi Arabia than anywhere else in the world."[19] Surveillance of Internet communication and usage habits is fairly easy at the system administrator level. If domestic intelligence services have either the capability or desire to do so, they have not gone public with it.

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[16]See http://www.itu.int/ITU-D/ict/statistics/at_glance/Internet01.pdf. The number for Bahrain is an estimate for Bahraini use; many Saudi subscribers access the Internet through Bahrain to avoid Saudi censorship, thereby inflating Bahrain's numbers.

[17]Presentation by Seymour Goodman, Georgetown University, April 21, 2001. The rates for the indigenous population versus expatriates is not known. In the Gulf, however, expatriates are typically more than half the countries' populations.

[18]Bahrain, Egypt, Jordan, Kuwait, Morocco, Oman, Qatar, Tunisia, and the United Arab Emirates are members of the WTO, and Algeria, Lebanon, Saudi Arabia, and Yemen are observer governments that are seeking admission. Membership entails the responsibility to change one's laws and domestic practices to comport with agreements reached within the WTO framework, although time is generally allowed to bring about such compliance.

[19]Author interview in London, February 2001.

The Rise of Mid-Technology

Many important technologies, like the satellite television phenomenon described above, might best be described as "mid-tech." These technologies are by no means new; in many cases, they are decades old. Examples of mid-tech devices are photocopiers (which have become ubiquitous even in villages), telephones, fax machines, and video and audiocassette players. Although many of these technologies do not require literacy, the general rise in Arab literacy of the last several decades increases the avenues for information distribution throughout the region. Because these technologies are so inexpensive and easily diffused, it is hard to get precise numbers for their prevalence. According to World Bank figures, in the Middle East and North Africa there are approximately 175 televisions per 1,000 people, making them seven times more common than personal computers.[20] The television advantage is even greater than it appears, since televisions and videocassettes are commonly viewed in coffeehouses and other public spaces.[21] Videocassettes of popular television programs are also a staple of regional video stores, providing low-cost rental programming and ensuring that programs have lives long after they have left the airwaves.

The mid-tech technologies described above are similar in that they all facilitate one-to-many communication. Many of them help reproduce a single message quickly and cheaply, which can then be distributed widely. Further, they are generally easily shared, inexpensive to use, and do not require a high degree of skill or training to operate. Another similarity is that they often operate completely beyond the control of an individual state. Mid-tech developments aid spreading messages across borders.

Mid-tech is a boon to those with attractive or memorable messages, from incendiary preachers to lascivious models. Groups that have exploited mid-tech range from such Western-based groups as Human Rights Watch to such violent Islamist groups as al-Qaeda. They have used the technology to communicate, to duplicate messages,

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[20]World Bank, *2001 World Development Indicators*, Washington, D.C: World Bank, 2001, p. 308.

[21]Author observations in Egypt, Jordan, Yemen, Syria, and Kuwait, 1990–2001.

and to build a sense of group solidarity. On the grassroots level, however, Islamists have been far more successful integrating technology into mobilizing communities. To date, we have not seen populations use mid-tech to articulate their grievances nearly to the extent that was expected in the academic literature.

Greater Information Diversity and Access

The technologies described above have created a richer information environment. State information bureaucracies used to enjoy near monopolies on promulgating political and even economic information within their borders, but monopoly has eroded. In the modern Middle East, information on politics, religion, society, style, consumer products, and other topics is increasingly available from several viewpoints. Sharp increases in literacy in the last two decades accelerate the process of information exchange still further, although literacy as a whole in the region remains low by global standards.

It is impossible to characterize the information pool except by its diversity. Increasingly, individuals have to choose among an array of alternative narratives on an ever-widening variety of topics. Some of the information circulating is accurate, and some is inaccurate. Some constitutes efforts at incitement, while some appeals for reconciliation. Some is religious, and some is avowedly secular. Some is stridently political, while some has absolutely no political agenda whatsoever.

Because of technological change, government censorship of political information is eroding. Governments may be able to block a magazine from circulating, but it is much harder to block faxes or e-mails and innumerable photocopies of offending articles. They can ban a subject from terrestrial television, but they often have scant ability to influence what appears on satellite channels broadcasting from another country. They can work with commercial printers to control the printing of books, but they are powerless to prevent individuals from making photocopies on cheap machines and distributing handbills at rallies or even on the street. It is true that a repressive regime, through a combination of direct efforts and brutal intimidation, can provoke people to self-censor. But the costs of doing so are high in terms of direct effort as well as the inhibiting effect such repression has on investment and economic growth.

One exception to this trend is that the government of Saudi Arabia retains unusual control over what appears in the mass-market media. Because Saudi consumers represent the most attractive target for regional advertisers, and because Saudis connected to the royal family directly own so many of the regional advertisers, the Saudis have a unique ability to shape stories of high interest to them. This ability is not total, and al-Jazeera and *al-Quds al-Arabi* have often loudly tweaked the Saudis to demonstrate their independence. Osama bin Ladin finds an outlet for his anti-Saudi message on al-Jazeera, and *al-Quds al-Arabi* sometimes airs the views of dissident Saudi Prince Talal bin Abdelaziz, who muses on Saudi democracy in its pages. Still, offending Saudi sensibilities is a business decision that is not entered into lightly, whereas broadcasters and writers need not care nearly as much for the sensibilities of surrounding states.

LIMITED ASSIMILATION OF HIGH-TECH

While mid-tech is rampant, high-tech faces significant barriers to widespread adoption. In the first place, the educational systems in the region stress rote memorization rather than problem solving. As a result, they do not prepare their students for information-rich environments in which mental agility is more important than memorizing facts.[22] Private education in many countries provides an alternative, but it is restricted to those with considerable means.

A second problem is that many Arab countries have been slow to develop the technical skills that they would need to support a more developed high-tech infrastructure. Interlocutors in the region noted that many computers are glorified desk ornaments, as they are not connected to networks and their users do not know the capabilities of the software. Maintenance is also a problem, as there is not a base of highly trained personnel. In the absence of an educational system

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[22]See UNDP, *Arab Human Development Report 2002*, chapters 5 and 6, and World Bank, *Claiming the Future*, Washington, D.C.: World Bank, 1995, especially pp. 38 and 40; also pp. 28, 72, 85.

that can turn out such personnel, or the economic resources to hire such personnel from abroad, technology efforts will falter.[23]

A third problem is the Middle East as a whole is a low-income region. Per capita incomes in the Middle East and North Africa are, on average, just over $2,000 per year, and in the most populous countries are scarcely more than half that. The United Arab Emirates has a per capita income nudging toward $20,000, but even mighty Saudi Arabia has a per capita income just under $7,000.[24] Despite falling prices, technology remains out of reach for many in the Middle East.

A final problem is that English-language literacy in the Middle East is limited. The Internet remains a largely English-based medium, and Arabic sites have been slow to take off, representing significantly less than one-tenth of one percent of all extant web sites.[25] It is hard to ascertain precisely how limited English-language proficiency is, in part because of the difficulty in defining what represents literacy in English, and in part because there are no good surveys that cover a broad spectrum of the region's population. While schools have inculcated a basic ability to recognize Latin characters among many in the primary grades, anecdotal observation confirms that only a small percentage of individuals have the level of English proficiency required to participate comfortably in language-intensive discourse.[26]

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[23]One American technology company had to cut back its investment in Egypt because it was unable to find a sufficient number of properly trained engineers in country. Officers of another company asserted that the skills can be found among Egyptian workers, but that the most skilled are likely to work overseas for higher salaries rather than stay in the region. Author interviews in Washington, D.C., and Dubai, February 2001.

[24]2001 World Development Indicators Database, World Bank. The figures above are 1999 numbers based on the Atlas method (rather than purchasing power parity). Since the equipment involved in information technology is composed of internationally traded, foreign-produced commodities, the Atlas method gives a better measure of affordability.

[25]See http://cyberatlas.Internet.com/big_picture/demographics/article/0,1323,5901_408521,00.html. Although it is possible to send e-mail in Arabic, doing so requires that computers at each end of the transaction are similarly configured. To get around compatibility problems, many Francophone Arabs send messages in French, and others send messages in either English or in Arabic transliterated into English text.

[26]According to an informal conversation with a U.S. government source in April 2001, the percentage in Egypt is probably below 5 percent of the population, and Egypt's population alone represents 25 percent of the entire Arab world.

None of this is to suggest that nobody in the Arab world can profit from technological advances. Indeed, in absolute terms, many such individuals exist. Often, they have received private school educations, and many have received additional education abroad. They are more numerous in the wealthy countries of the Gulf. As a percentage of the population, however, these individuals represent only a small number, especially in the poorer yet more populous states of Egypt, Syria, and Yemen.[27]

Especially in the poorer countries in the Arab world, then, the society breaks down into two primary groups. The first are those with the education, training, language skills, and capital resources to take full advantage of the information revolution. This group is often technologically savvy, especially among the young. Travelers to the Middle East will recognize them for their pagers, cell phones, and e-mail addresses on their business cards, as well as their general fluency in English. For this small, elite group, the information revolution allows opportunities for profit and enrichment.

Although such a group exists in every Arab country (and, in fact, may represent the majority of contacts of most U.S. nationals in a given country), in relative terms the group is often a distinct minority. The overwhelming majority of the population in many Arab countries is technologically unsophisticated, has a fairly low level of education, and is unlikely to profit from technological innovation. Television and videos may alter their consumption patterns, but technology, especially high-tech, is unlikely to alter their production patterns.

As a result of this gap, social mobility—never easy—becomes even more difficult, especially if private school education remains far beyond the reach of most and public school education continues to lag in teaching advanced skills. The well-to-do begin assimilating technical skills earlier and earlier in childhood, get an increasingly distinctive education, and learn foreign languages earlier and better than their countrymen. By adulthood, the gap between the technologically sophisticated and the great bulk of the population can become insurmountable.

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[27]Francophone North Africa is clearly an exception to this rule; whether the Francophone economy will prove large enough to carry along the countries that depend on it is unclear.

IMPLICATIONS

The changes in the information environment in the Middle East have broad implications for regional societies, regimes, and the United States. Publics' expectations of their governments may grow, while regime control of the public debate steadily erodes. To take advantage of these changes, the United States must anticipate changes in regional political dynamics and reconsider its tactics for swaying public opinion.

New Mass Politics

Elite politics have been unaffected by technological change. Politics relies on personal relationships, which are tied to regimes. Elites tend to be pro-regime in any event, and elites have long had access to alternative sources of information. Arab governments tend to seek to further coopt them through the new media, as when the government of Jordan seized on the advent of the Internet in the late 1990s to sponsor an "Ask the Minister" feature on NETS, a leading Internet service provider.

For most in the Arab world, technological change means that they are exposed to a broader variety of views than has ever been true before. As literacy and bandwidth both expand dramatically, publics are exposed to a broad, often unregulated, spectrum of views that range from secular to religious, from nationalist to global, and from material to spiritual. Under the new paradigm, information is demand-driven rather than supply-driven, and the universe of available views is far broader than ever before.

One consequence of this is greater political spontaneity. Whereas Arab politics have often been characterized by orchestrated demonstrations of solidarity, anger, sorrow, or joy, the regime's ability to orchestrate such demonstrations in the future will be greatly diminished. What we are likely to see is a more bottom-up expression of joy or rage. Arab leaders were caught unaware by the outpouring of public anger in October 2000, when satellite television stations repeatedly showed footage of the Israeli shooting of 12-year-old Palestinian boy Muhammad al-Durra. As demonstrators took to the streets not only in Cairo, but also in the normally quiescent Gulf region, governments had to move quickly to assuage public senti-

ment.[28] Unprecedented public protests erupted throughout the Gulf in March 2002, in response to Israel's reoccupation of parts of the West Bank, resulting in several attacks on U.S. embassies.

Another consequence of technological change is that consumption patterns among Arab publics are likely to shift toward Western products. Media penetration is likely to increase consumption of branded goods and boost demand for goods that were previously considered luxuries, such as consumer electronics, health and beauty aids, and packaged foods. Entertainment spending is also likely to increase as increased exposure leads to a greater demand for recorded products and licensed goods (as well as counterfeit copies of each). Such shifts are also likely to promote something of a backlash or, at the very least, calls for "authenticity." Many in the Arab world already believe that their way of life, their values and morals, are under Western assault through the media, and they are likely to use that same media to press their case for what they label "traditional values."

Indeed, there will be huge rewards in the next decade for those who use initiative, creativity, and innovation to seize control of the public discourse. As control of public opinion increasingly slips away from governments' grasp, those who can organize and mobilize will find a far more receptive environment than any time in the recent past. The information revolution presents new opportunities for individuals and groups with a good feel for the public mood to seize on these issues and promote political agendas independent of government wishes. Islamist groups in the Middle East are among the most modern of political organizations, both in their techniques of organizing and in the sophistication of their communications strategies. Two of the most popular clerics in the Muslim world, Sheikh Yusuf Qaradawi and the late Sheikh Muhammad Shaarawi, made their reputations not through dry scholarship but through their dynamic television personalities. In Egypt, the most popular religious personality, Amr Khalid, has little religious training. He has earned a wide following for his urging viewers to be sensitive to the spiritual in their everyday lives.

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[28]Author interviews in Dubai, Abu Dhabi, and Doha, February 2001; conversation with Arab embassy official in Washington, D.C., May 3, 2001.

Challenges for Regional Governments

The most important consequence of the information revolution for Arab governments is that it removes some of their traditional advantage in the public realm. While governments remain an overwhelmingly powerful force in most countries, the information revolution allows new challenges to governmental dominance and frees an even larger sphere of activity from governmental control, influence, and even knowledge. Governments have lost the near monopoly they used to enjoy over certain kinds of information, and as a result they have less ability to direct domestic politics. The traditional tools of government information ministries, censorship and propaganda, are withering, and governments must create new strategies and tools to cope with the new environment.

Another important consequence of technological change is that expatriates can play a much more intimate role in domestic politics than was true heretofore. As Ayatollah Khomeini's supporters were able to slip his message into Iran in the 1970s by cassette tape, expatriate leaders now enjoy myriad avenues to influence politics at home, and to do so in real time. As Iranian oppositionists used audiocassettes, today's political activists have ready access to faxes, satellite television broadcasts, videocassettes, and photocopies.

London has emerged as a hub for opposition movements to regional governments. It offers a permissive political environment, good infrastructure and technical training opportunities, access to Western news agencies, and significant operations by all of the regional news outlets. Organizations as diverse as the Bahrain Freedom Movement, the Committee for the Defense of Legitimate Rights in Saudi Arabia, the Iraqi National Congress, Amnesty International, and the al-Khoie Foundation have found a home in London that allows them to monitor and often influence daily political developments in the Middle East.

What all of this means is that governments can take much less for granted. Whereas they used to be able to rely fairly on tight control of the political space in a country, they now face competition in many areas. As a consequence, they will come under pressure to be more supple. Because they will be less able to control public sentiment, they will become more responsive to it. This is not to say that

electoral democracies will flourish in the Middle East because of technology. In fact, governments of some of the poorer countries may become more authoritarian in some regards, especially toward those who seek to use violence to displace the state. But governments will choose their battles with public opinion more carefully, and they will seek to integrate "bottom-up" influences where possible to prevent pressure from below from damaging the political system.

One example of this has been the Egyptian government's relative passivity in the face of some clerics' efforts to Islamicize Egyptian society and censor dissenting views. When religious students protested the government's reprinting of a novel some regarded as blasphemous in the spring of 2000, the government in the first instance used the uprising as a pretext to crack down on the pro-Islamist Labor Party but later fired the officials who had authorized the reprinting.[29] The signals are clearly intended to indicate responsiveness while delimiting political actions that go beyond acceptable behavior.

Finally, governments will come under increasing pressure to deliver economic goods to the broad population. Exposure to the international media, as well as to the advertising that sustains it, will induce many in Arab countries to demand better standards of living than they have enjoyed heretofore. As satellite television and videocassettes present vivid examples of living in material abundance, Arabs will increasingly blame their governments if the world gets richer but the Arab public does not.

In the longer term, technological change is unlikely to force a deep restructuring of Arab governance patterns. Authoritarianism has predominated in the region for decades, and seems poised to do so for the years to come. Indeed, much of the enthusiasm for technology sweeping away authoritarianism is based on a flawed understanding of authoritarianism as a simple top-down process rather than a delicate mix of cooptation and coercion applied by governments to their subjects.

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[29]See, for example, "Cultural Ambush," *Cairo Times*, Vol. 4, No. 43, January 2001, pp. 11–17.

Because of technological developments, states have lost many of the tools that had helped them lead public opinion in the past, and thus coopt their populations. States still hold the vast preponderance of power in the public sphere, but they have far less ability to define what happens in that sphere than at any time in the last century. In meeting this new kind of challenge, governments in the Gulf are in a somewhat better position than the governments of the Levant and North Africa. In general, they have emphasized cooptation over coercion, and they retain the deep pockets to make cooptation work. Also, with their smaller populations, they have found it easier to educate their citizens, and their ability to import labor for menial jobs has helped prevent the development of a large underclass. Consequently, Gulf states retain the potential to grow their way out of many of these issues, using the distributive power of the state to keep people vested in the system and to constantly improve the human capital within their borders.

At the other end of the spectrum, the governments of poorer and more populous states face new challenges. They lack the ability to coopt their citizens through money, and as they lose control of the media environment, their ability to coopt slips still further. Some regimes may respond by ceding public space to loud voices that do not immediately threaten the regime. Such a move could kick off a noisy debate between secularists and Islamists, for instance, while still keeping democratic change at arm's length. In addition, regimes that have relied on moderate repression in the past may feel compelled to use more repression and to act especially swiftly and strongly against groups that could potentially affect their hold on power. In this scenario, regimes may react to their declining control of the public sphere by taking harsh action against groups and individuals who present alternatives to the status quo.

Implications for the United States

The most important implication of the technological revolution is that the U.S. government should devote far more attention to monitoring mid-tech developments in the Arab world. Government translating efforts currently focus on national broadcasts and newspaper reports that enjoy a dwindling audience at home. It is imperative that the U.S. government have a good idea of what is happening

"on the street," actively obtaining and translating handbills and pamphlets, understanding what is rented in video stores, and closely monitoring what millions watch on satellite television.

Another imperative is that the U.S. government remain alert to the possibility of new political actors arising, especially outside of the elite circles in which many officials circulate. Non-elites are likely to continue to use technology to disseminate new kinds of messages to new audiences. Indeed, one should expect an almost Darwinian sort of experimentation on the popular level, as a bewildering number of groups resort to an array of strategies to see what works.

Politics will also become increasingly transnational, partly through expatriate participation in domestic politics and partly through an increase in transborder movements based on religion, ethnicity, or other factors. This is not all bad news. Many expatriate Arabs in the West are strong supporters of liberalization and pluralism in their home societies. Others, of course, capitalize on Western freedoms to agitate for less liberal societies back home.

Some allied governments may face unaccustomed difficulties in the new political environment, and instability may increase. Much of the leadership in many Arab countries has been in power for decades, and a combination of the duration of their rule, arrogance, age, and indifference may allow one or more of these regimes to be surprised by developments from below. While some of the new leaders like King Mohamed in Morocco and King Abdullah in Jordan have exhibited a keen understanding of how to use the media in new ways, many of their older counterparts have exhibited less skill in the new environment. Egypt's Information Ministry continues to seek to dominate the public space partly through its sheer size and partly through monopolizing the tools for creating media content, but informal discussions with Egyptians suggest that it is losing more and more of its audience every day.

The revamping of Voice of America's programming to become "Radio Sawa" is an important experiment, the results of which are too early to judge. Radio Sawa's music-oriented programming appears to have won a substantial audience among young people curious about Western music and culture. Radio Sawa has, until now, limited almost all of its news coverage to straightforward newscasts

for a few minutes of every hour. It is too early to tell if those broadcasts come to be seen as authoritative, or if they inspire others to greater journalistic responsibility. At the same time, questions remain if Sawa will remain popular if it expands its news envelope beyond its current limited scope.

The United States must recognize the limits to the assimilation of technology. Technological sophistication of a broad level is likely to remain low among most Arab nationals. If U.S. defense operations depend on counterparts with high levels of technological sophistication, they are likely to face continued difficulties. Although there will certainly be pockets of well-trained engineers and technical professionals, those skills are unlikely to be highly diffused among the general population in the near future.

For political leaders and rulers in the region who seek to work closely with Washington, a freewheeling press contributes to creating hostile publics who will increasingly hem them in. The rise of mid-tech is likely to be accompanied by a rise in anti-American rhetoric in the region, especially if current conflicts in the Arab-Israeli arena and in occupied Iraq persist. This is partly because opposition forces will seek to paint governments as American toadies and rally support behind nationalist slogans that reject foreign interference. It is also because calls for cultural authenticity will seek to reject Western cultural influence. Governments are increasingly unlikely to censor anti-U.S. protests, partly because doing so would be ineffective and inflame passions still further.

It will also be far more difficult for regional governments to engage in tacit cooperation with the United States. Increased flows of information will make arrangements for basing and access, traditionally kept secret and given little publicity, better known to regional publics. Long-standing but low-profile U.S. basing in Egypt and implicit security guarantees to the Gulf states are likely to come under more fire domestically. Behind-the-scenes support for the peace process or other unpopular U.S. initiatives also will be harder to secure.

Public reaction to the U.S. assault on the Taliban, as well as Israel's "Operation Defensive Shield," are instructive in many respects. In the former case, Arab anger was controlled, and it dissipated con-

siderably when images of celebrating Afghans filled the airwaves. Mitigating the Arab public's response was the short duration of hostilities, the fact that much of the fighting was carried out by Afghan troops and not American ones, that Afghanistan is not an Arab country, and an understanding that the United States had been attacked and lost more than 3,000 civilian lives. In contrast, Israel's incursion into the West Bank in March 2002 received extensive negative news coverage. Boycotts of American products quickly gained public support through newspaper ads, photocopies, and the Internet, especially among such nontraditional political actors as women and children. Although the results of such a boycott might be managed, it portends a broader politicization of the public that could pose a new kind of problem if the United States were directly involved in hostilities against an Arab country. Perhaps equally important, we can count on an Arab adversary seeking to appeal for Arab public support much more actively than has ever been the case in the past.

In the presence or absence of hostilities with the Arab world, the United States should increase its outreach to the Arab media. A cadre of well-trained Americans who can explain U.S. government positions and assessments cannot eliminate the potential difficulty of restive publics, but they can certainly help give allied governments far greater freedom of action with their own publics than they would otherwise enjoy. Although satellite television attracts huge and growing audiences throughout the region, only one U.S. official has been willing to appear on Arab satellite television, speaking in Arabic, to explain U.S. positions. Military action in Iraq produced more up-close images of warfare than we have seen in some time. Pictures from those embedded with coalition troops, combined with Arab networks' images from the Iraqi side, gave viewers on each side an idea of how the other side was covering the war. Still, this was a story told in pictures, and the images on each side were starkly different. In conflict situations such as this one, it is not clear how the United States might better influence the pictures and stories Arab viewers are watching.

In more placid times, managing Arab reactions remains an afterthought to many in Washington, partly because of an uncertainty as to *how* and *when* Arab public opinion matters. Budget cuts in the 1990s led many U.S. public diplomacy programs to shift their emphasis almost entirely to small elite audiences, leaving embassies

unconnected to and unaware of broader public trends except as expressed in local newspapers. Rather than simply assert a need to abandon elite audiences for a mass public, U.S. public diplomacy needs to differentiate between audiences and determine what is needed from each. In some cases, the goal is likely to be to persuade; in others, it will be merely to mute criticism. Rather than prescribe a single outcome or process for every situation, missions and services need to revisit the ways in which public opinion can shape or constrain host government action. The process is not a straightforward one, but one that must bring political officers and political advisers together with public diplomacy officers in the first instance to define targets and goals, direct state-of-the-art market research, and then feed the results back to the policy process. Any effort to persuade that neglects audience feedback is doomed to fail.

We are at a fascinating juncture in Arab history. Nations and populations remain distinct, but information flows across borders as never before. More than ever, publics themselves decide what they see, read, and hear. We cannot control what they think, but we can compete for their attention, and we should.