

Paths toward an Arab Knowledge Society

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The Arabic Science and Technology Gap and Its Economic Consequences in the International Development Race

During the first third of the twentieth century, self-critical Muslims asked themselves two critical questions: “Why do Muslims remain behind, and why are others progressing?”¹ The cause of this dilemma was the confusing experience of the Muslim world’s decline and subsequent colonial domination by the West, which hit the Arabs’ sense of self-worth in its core. Their repeated military defeats by Israel and dependency on foreign technical and financial development aid demonstrated their own deficits. They could barely tolerate these humiliations, particularly since they were in striking contrast to the Qur’anic revelation, which promises Muslims the leading role in the world. The history of Islam’s expansion during the first century of the Islamic era seemed to support this belief. However, its gradual decline was repressed,² and a fatal apologetic tendency (viz., the passionate attempt to prove to oneself and others that one’s own inferiority does not exist) became characteristic of the debates on how to find a suit-

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able way out of the crisis, as well as in the case of vital questions concerning socioeconomic development.³

In the 1960s, a central category of the Arabic worldview appeared in the highly emotionalized unity of the “West” and “colonialism.” This narrow perspective of “the Arabs and the West” obstructed the Arab world’s view of the Far East’s economic and technological dynamics. Up until the 1980s, few Arab economists in science and administration had any concrete idea of the education, research, and technology-based⁴ growth dynamic of the Asian “tiger states” and why they had been so spectacularly successful. This was largely due to the lack of personal vision, because the countries of East and Southeast Asia had little interest in those regions that were lagging behind in the development race. Nor did they feel obligated to offer seminar events, well-paid according to western examples, in order to remedy Arab perception deficits.

In other words, Arab economists only became aware of the [Asian] periphery countries’ dynamic by accident. Certainly, no learning processes designed to help the Arab world catch up (e.g., conducting case studies of specific countries, which could be done by students working on their university theses) took place. The responsible political leaders did not grasp the necessity of such studies, and, therefore, no research means were made available. The result was a second self-isolation that, in the 1970s, was becoming even greater.

After the industrialization strategies of staving off world markets and import substitution, this self-isolation now appeared in the form of a technological gap. The full extent of the R&D⁵ gap caught the attention of Arab governments only because of the oil-boom, when the OAPEC⁶ countries, in particular, unexpectedly found themselves exposed to a massive presence of East Asian periphery countries while building up infrastructural and large-scale industrial investments. However, oil revenues concealed the urgent need for massive investments in education and research in order to catch up with other regions. It was deemed sufficient to expand educational opportunities quantitatively, without regard to quality and job market requirements.⁷

Growing budgetary demands in the face of the OAPEC countries’ finite oil resources, as well as the unavoidable economic and political pressures for reform in the non-oil Arab states after the Soviet Union’s collapse, raised questions about a fundamental strategic reorientation. Added to this was the increasing international pressure from low-wage Asian countries to compete on the global level (particularly in such technologi-

cally undemanding sectors as textiles and food processing). Despite multiple stabilization and structural adaptation programs under the umbrella of the World Bank and the International Monetary Fund, no Arab country has succeeded in restructuring itself as an internationally competitive modern economy.

Moreover, the West classified certain Arab countries as important international partners and therefore, in essence, rewarded them with geostrategic pensions. This strategy, however, reduced their sense of urgency to undertake institutional and technological reforms. This was especially true when these long-term subsidies led to the political establishment's independence, as well as that of its security apparatus (viz., the army and the secret service), from the taxable earning potential of their national economies. Internationally agreed-upon economic reforms were not seriously implemented,⁸ and no substantial steps were taken to establish a qualitatively high-grade educational system and efficient R&D capacities. The results are reflected in the World Bank's socioeconomic cross-section indicators⁹: The Arab world occupies the second-to-last position of the world's development regions, the lowest one being sub-Saharan Africa.

The Arab Human Development Reports: Breakthrough toward a Self-Critical Stocktaking

The Arab Human Development Reports of 2002 and 2003 broke the pattern of resigned silence and diplomatic considerations by naming the central barriers to development in the Arab world in a previously unheard-of manner. Rima Khalaf Hunaidi, the report's main initiator, as well as assistant secretary general of the United Nations Development Program (UNDP) and director of the Regional Bureau of Arab States (not to mention a former member of the Jordanian cabinet), made several interesting points at an international political gathering.¹⁰ For example, he illustrated how the drafting of such reports, and their subsequent worldwide publication, would have been impossible if individual Arab governments had had any say in the matter. The UN organization conducting this study was required to give its protection to the team of authors, all of whom were of Arab origin.

Blocking reform is also associated with solidifying an authoritarian power structure in the area of economic policy. Meanwhile, we can observe dynastic succession patterns not only among monarchies (e.g., Jordan and Morocco), but also in formerly socialist presidential systems, where sons

are groomed to succeed their fathers (following the Syrian model: Egypt, Libya, and Yemen).

The first report, *Arab Human Development Report 2002: Creating Opportunities for Future Generations* (hereinafter AHDR 02), provoked widespread discussions in the Arab world, ranging from vehement rejection to euphoric agreement. As unconditional prerequisites for releasing the Arab world's blocked creative energies, AHDR 02 specifically mentioned freedom, knowledge, and women's empowerment. Encouraged and confirmed by the resulting resonance, the UNDP (like AHDR 02, with Professor Ferghany in charge) followed up with its *Arab Human Development Report 2003: Building a Knowledge Society* (hereinafter AHDR 03). In this report, the authors further elaborated on the "knowledge" factor already mentioned in AHDR 02. Two further reports on empowering women, as well as on reform and good governance, are planned, although considerable political resistance is already making its presence felt.

The former DSE (Deutsche Stiftung für Internationale Entwicklung [German Foundation for International Development]), now part of InWEnt (Internationale Weiterbildung und Entwicklung [Capacity Building International, Germany]), has developed a specific form of political dialogue. Its open-forum nature¹¹ offers the opportunity for the Arab participants, in particular, to candidly discuss among themselves, both on "neutral ground" and away from the otherwise unavoidable constraints and diplomatic considerations, the results and problems facing practical political implementation.

An Analysis of the Central Barriers to Development in the Arab World

AHDR 02 analyzed, in fascinating precision, what Arab regimes have demanded for decades but have denied just as persistently. As with previous promises by Arab members of the American-led anti-Saddam coalition during the Gulf war of 1990-91, none of the promises were honored. However, neither were they insisted upon by the western coalition partners.

The Arab world considers its human capital to be its wealth and hope. What is at issue is releasing this human capital from multiple handicaps, allowing free and fair elections, empowering the female half of the population, and maintaining freedoms within a frame of good governance.¹² The wave of democratization that caught on in most Latin American and East and Southeast Asian countries in the 1980s, and that has transformed the

Eastern bloc countries since the 1990s, has not yet reached the Arab world. As a result, effective democratic controls are missing.¹³

The demand for equal rights for women still meets with resistance. Opportunities for their political and economic participation, therefore, remain far below the international average. More than 59% of Arab women are illiterate, and maternal mortality is double that of Latin America and quadruple that of East Asia. Ten million Arab children do not attend school, a number that may rise by 40% by 2015. The low quality of education provided leads to the lack of a qualified workforce. Only 1.2% of the population owns a personal computer. In addition, the Arab world's expenditures for R&D – just 0.5% of the gross national product – are far below the average rates for the Asian periphery countries.¹⁴

Corresponding modernization deficits also impede economic development. The Arab world's participation in world trade with technologically more sophisticated products and services is overdue. Economic and sociopolitical concepts of [social] control are outdated. The result is a “lack of accountability, transparency and integration along with ineffectiveness, inefficiency and unresponsiveness to the demands of peoples and development.”¹⁵

Such findings are familiar.¹⁶ What is new is that the deficits of AHDR 02 and 03 are presented in an undisguised manner to a wide international audience. The necessary strategy is clear: At issue is building a knowledge society, along with its general conditions in regard to freedom, gender equality, and the development orientation of the actions of the government. Such an undertaking, if successful, will enable the Arab world to open up to the global scientific-technical exchange arena and to develop a sound global value system.¹⁷ AHDR 02 mentions the Arab world's need to catch up with international standards:

[H]ow much still needs to be done to provide current and future generations with the political voice, social choices and economic opportunities. ... It underlines how far the Arab states still need to go in order to join the global information society and economy as full partners.¹⁸

According to Hunaidi:

Lagging human development constitutes a major obstacle that prevents the Arab region from confronting the challenges of globalization. ... Bold thinking holds the key to realizing, as opposed to only conceiving of, grand visions for the future.¹⁹

The Goal of an Arab Knowledge Society

There has been no lack of grandiose visions by Arab states in the past decades, only of visions of a sober orientation toward their implementation. In this respect, AHDR 02 was a unique provocation that forced upon the ruling elites a debate, the likes of which had never been conducted in their part of the world.²⁰ The protection afforded by the UNDP's umbrella and the Arab authorship of the report made it more difficult to dismiss the document's critical findings along the usual apologetic lines of argumentation.²¹ As a result, critical Arab intellectuals felt supported.²²

AHDR 03 goes into even more detail about the three essential components emphasized in AHDR 02. At issue is overcoming the Arab knowledge deficit, a frank diagnosis of which has been published for the global public and has hit the Arabs' sense of self-worth the hardest. Once again, the Arabs' technology gap was made clear to many people due to the American military interventions in Afghanistan and Iraq.²³ The authors did not give in to any reflexes to repress:

At this precarious juncture, some observers questioned the wisdom of issuing further Reports, while others worried that special interest groups might exploit their outspoken approach, to the detriment of Arabs. The majority, however, argued forcefully that to leave the initiative to others would be the more ominous choice. Self-reform stemming from open, scrupulous and balanced self-criticism is the right, if not the only alternative to plans that are apparently drawn up outside the Arab world for restructuring the area and for reshaping the Arab identity. Turning a blind eye to the weaknesses and shortfalls of the region, instead of decisively identifying and overcoming them, can only increase its vulnerability and leave it more exposed.²⁴

Herein lay the central weak spot of the prior political reform programs in many Arab countries over the past decades, beginning with their rejection of constructive self-criticism as the first step toward problem solving.

The missing links are either buried in dust or smothered by ideologies, societal structures and values that inhibit critical thinking, cut Arabs off from their knowledge-rich heritage and block the free flows of ideas and learning.²⁵

AHDR 03 demands a strategic vision for a "creative Arab renaissance" based on five pillars:

1. Allowing freedom of expression and assembly in the name of good governance.
2. Implementing a qualitatively sophisticated education with a 10-year mandatory attendance for girls, as well as creating a system of adult education for both life-long learning and regular quality controls at all levels.
3. Embedding science into Arab society, expanding R&D capacities, and creating an all-Arab creativity and innovation network with connections to the international academic arena. With public welfare as its model, the state's responsibility for higher education should be supported. While the institutions do not have to be in the state's hands, they should not be at the mercy of unregulated profit seeking. One possibility would be to support partnerships among science, the economy, the state, and civil society in connection with an independent certification as regards quality assurance.
4. Shifting the economy in the direction of knowledge-based, technologically high-grade, and value-added goods and services for differentiated and sophisticated markets, as well as establishing stimulating structures that award the acquisition and application of know-how for productive purposes. At this time, income is often tied to favors dispensed by powerful people within the framework of patronage structures. Without their own knowledge base, Arab countries will remain passive consumers of the international knowledge society.²⁶ Presently, most Arab products are not competitive on the international market.²⁷ In fact, the entire gross national product of all Arab countries [when oil revenue is removed] lies below that of Spain or the Netherlands.²⁸
5. Developing an "enlightened Arabic model of knowledge" based on the open intellectual tradition of the cultural Arabic heritage. This heritage encourages cognitive thinking, problem solving, and creativity, and also advances the Arabic language, cultural multiplicity, and exchange with other cultures²⁹:

... returning to the civilised, moral and humanitarian vision of pure religion; restoring to religious institutions their independence from political authorities, governments, states and radical religious-political movements; recognising intellectual freedom, activating interpretative jurisprudence, [and] preserving the right to differ in doctrines, religious schools and interpretations.³⁰

A particular issue is developing an Arabic scientific terminology.³¹ Furthermore, AHDR 03 calls for promoting cultural diversity within the Arab world. Finally, there are calls for an Arab opening toward other cultures – also toward Asian cultures³² – through promoting translations and cultural exchange, the use of networks belonging to regional and international organizations, and increased Arab participation in the reform of the world order.

Knowledge closely approaches a religious obligation that Arabs ought to honour and exercise.³³

At stake, therefore, is liberating religion from political instrumentalization,³⁴ as well as recognizing and appreciating knowledge and exploratory research (*ijtihad*) in connection with the elementary human rights of freedom.

A climate of freedom is a necessary condition of a knowledge society,³⁵

and

There are no guarantees for freedom without the rule of law.³⁶

The roots of the Arabs' knowledge deficit are located in the phase of early childhood conditioning:

The most widespread style of child rearing in Arab families is the authoritarian mode accompanied by the overprotective. This reduces children's independence, self-confidence and social efficiency, and fosters passive attitudes and hesitant decision-making skills. Most of all, it affects how the child thinks by suppressing questioning, exploration and initiative.³⁷

Compared to other development regions, the school system lags behind due to continued high illiteracy rates for women, the lack of access to primary schools, diminishing enrollments for higher education, and declining national expenditures for education since 1985. The central problem is the decline of quality.³⁸

Further obstructions to knowledge diffusion result from the decreased distribution of media (e.g., 53 newspapers per 1,000 inhabitants, as opposed to 285 in developed countries³⁹), and – even more pressing – from media censorship. The limited perception of international intellectual trends is also reflected in the number of translated publications. Between

1980-85, very few translated books were published in the entire Arab world – to be precise, one book per million inhabitants, as opposed to 519 books in Hungary and 920 in Spain. Moreover, 17 percent of all Arabic book production contains religious content.⁴⁰

National innovation systems of the East Asian type are also missing. The importation of everything from technological goods to industrial plants that are ready-made, but quickly become obsolete without further domestic technical development, leads to a dead-end. Furthermore, Arab countries are unattractive to outside direct investment.⁴¹

The authors emphatically point to the Arab world's "golden age" of intellectual openness,⁴² as well as its high appreciation of knowledge and science, and assert that this tradition needs to be carried on:

An alliance between some oppressive regimes and certain types of conservative religious scholars led to interpretations of Islam, which serve the government, but are inimical to human development, particularly with respect to freedom of thought, the interpretation of judgements, the accountability of regimes to the people and women's participation in public life.⁴³

The challenges are laid out clearly:

Arabic culture, like other cultures, finds itself facing the challenges of an emerging cultural homogeneity and related questions about cultural multiplicity, cultural personalities, the issue of the "self" and the "other," and its own cultural character. These and similar questions raise apprehensions, fears and risks in the minds of its people. Concerns about the extinction of the language and culture and the diminution and dissipation of identity have become omnipresent in Arab thought and culture. The truth is that Arab culture has no chance but to engage again in a new global experiment.⁴⁴

The Arabs, so the message implies, cannot escape back into their glorious past and their inherited culture while trying to exist in a globalized world that penetrates all aspects of life. Some Islamic movements call for a policy of retreat, a hostile rejection of this global culture's values, ideas, and practices. But such a program can only lead to a weakening of Arab culture, not to its strengthening and further development.⁴⁵

A dissolution of inherited values also takes place from the inside. During the oil-boom, old values and achievement incentives were eroded, in particular, along with the appreciation of knowledge. The social standing

of scientists and scholars plummeted, and personal wealth, regardless of how it was acquired, became the determining factor. As AHDR 03 states: “Perhaps worst of all, the values of independence, freedom and the importance of a critical mind were also buried,”⁴⁶ and “Power and wealth weaken the ethics of knowledge.”⁴⁷

The general repression and frustration caused the most innovative people to emigrate. For example, during 1995-96, one-quarter of the 300,000 graduates of Arab universities who had earned their bachelor’s degree emigrated; during 1998-2000, more than 15,000 doctors left their Arab homeland.⁴⁸ Arab countries cannot afford to lose any more time, given the increasing speed of global scientific-technical processes. Reform apparently has to begin with the political systems. However, Arab ruling elites have a tendency to crush any criticism regarding the primacy of preserving their own power.

The Experience of a Political Dialogue

The Institutional Arrangement

Dialogue is by now part and parcel of development policy activities. Such events offer protected space for an unofficial exchange of ideas between representatives of politics, science, the economy, and civil society from developing countries and from Germany. The goal is to explore future developments, challenges, room for maneuver, and political opinions independently of the political pressures of the day and from all protocol constraints. As a result, informal discussions among representatives from developing countries are particularly stimulating and fruitful.

The authors of AHDR 03 also requested open dialogue and constructive criticism in their foreword. The Development Policy Forum of InWEnt picked up on this request and organized, in collaboration with the Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung (the Federal Ministry for Economic Cooperation and Development [BMZ]) and the UNDP, an international policy dialogue on “Building the Arab Knowledge Society: The Arab Human Development Report 2003: Consequences for International Cooperation,” held in Berlin on February 9-10 2004. The German side wanted to explore what role the German Entwicklungszusammenarbeit (Cooperative Development [EZ]) could play in building an Arab knowledge society.⁴⁹ On what level should the EZ start: the national, the regional, or the international? Where should foreign aid never be offered due to the sensitivity of the subject matter, such as in

the social, cultural, or religious fields? How can the Arab countries' resources be bundled together and brought into international networks, especially in the areas of higher education, science, and R&D? The dialogue was roughly structured in a way designed to address the three areas of primary, secondary, and tertiary education. Thematic guidelines that were too strict, it was thought, would limit the chances of an open communication process.

Basic Education, Literacy, and the Stimulation of Intellectual Curiosity

The main questions were: What political and practical conditions are necessary to eliminate illiteracy? What methods can disseminate education in the family and early childhood spheres? How should the relationship between the Arabization of education and the learning of foreign languages be shaped?

The discussion did not strictly limit itself to such suggestions by the organizers. Short prepared lectures dealt with the specific problems of reforming education, increasing quality, and introducing modern curricula according to case studies from Saudi Arabia and Yemen. Furthermore, the difficulties of transitioning from the teaching and learning styles of mechanical memorization to those of encouraging independent and innovative thinking were also discussed. The decisive role of the political will to reform so that all of society can be mobilized in the struggle against illiteracy was emphasized as well. The notoriously bad quality of teacher training and continuing education was debated, as was the necessity of enabling the Arabic language to develop a scientific-technical specialist terminology that can be understood throughout the Arab world; encouraging girls to attend school; and also prioritizing expenditures for building schools and producing qualified personnel.

Secondary Schools and Vocational Training

The organizers' main questions were: How can the secondary school system adequately prepare its graduates for the job market? Should informal training or extracurricular practical vocational training replace the secondary school system? What points of departure for foreign technical cooperation do the problem areas of teacher training, low teacher wages, missing teaching aids, and curricula offer?

In Arab countries, the proportion of secondary school students in relation to their age group in its entirety lies far below the average obtained in the Asian periphery countries. The problem of quality presents itself here – as a preliminary stage of university education – in a particular way.

Secondary school graduates who are considered brilliant due to their excellent report cards, which is the result of their ability to memorize barely understandable material, fail when they enter institutions of higher education that expect intellectual curiosity, problem-solving skills, and independent and innovative thinking. The Arab world is slowly becoming aware of the fact that East Asia's successful development is based on its systematic cultivation of education, research, and development. Arab countries have neither taken care of their human capital nor undertaken any reforms of the economy and the job market to encourage highly qualified employees to move into the highest productivity sectors. Attempts at moving toward the qualitative aspect were introduced by participants from Saudi Arabia and Syria.

A notorious weak spot in the education system of Arab countries is vocational training in the field of intermediate qualification. Generally, this is a branch of the secondary school. Aside from a few exceptions, such as the Kohl–Mubarak initiative,⁵⁰ the secondary vocational school curricula are impractical and bear no relation to the realities of the job market. On the one hand, these students are not considered talented enough to attend the public secondary schools that qualify their graduates to enter a university. On the other hand, they are not particularly appreciated by the business sector and thus frequently find themselves in a qualifications trap. In one survey, 44 percent of them expressed concern over their future chances in the employment market. Completing a secondary vocational school generally does not entitle one to enter an institute of higher technical study. For the latter, completing the public secondary school is, as a rule, required. Therefore, secondary vocational school graduates see themselves as losers.

A broad discussion arose about opening up the education system to such nongovernmental institutions as nongovernmental organizations (NGOs). However, newly established private enterprises for profit-making purposes, often without quality control from independent certifying agencies, frequently do not uphold their promises. In this regard, AHDR 03 calls for governments to be held responsible – however, without the requirement for governmental organizations, and with case-to-case nongovernmental carriers from the sphere of civil society minus private enterprise profit orientation.

According to the Syrian participant, the most important responsibility is undertaking a radical change in educational culture: moving from an educational culture of memorization to one of intellectual curiosity, analytical thinking, critical scrutiny, and creativity; in other words, one oriented toward problem solving and innovation. But such an undertaking would involve reeducating an entire generation of teachers along with replacing the curricula – both of which seem impossible to realize within a short period of time. However, if this is not done, an Arabic knowledge society will remain no more than an idealistic dream.

The exchange of ideas, especially among the Arab participants themselves, concentrated on the following problem areas: redesigning the curricula to prepare students for future challenges that cannot be anticipated at this time; negotiating adjustment flexibility; arranging general theoretical foundations as a basis for life-long learning; designing clear policies on teacher salaries, social status, and promotion prospects; discussing career perspectives for qualified personnel without formal high school graduation or post-secondary diplomas; and changing the list of qualifications that will be required in the future as a result of new information technologies.

Which of the previously conventional product lines in Arab countries (e.g., textiles and food processing) will survive in the world market's changing conditions? How will the push into producing more knowledge-intensive products and services succeed?

The Gulf states have specific problems in regard to their dependency on oil revenues, the low inclination of their younger generations to accept blue-collar jobs, and the companies' preferences for cheaper and, in many cases more qualified, foreign workers. The reorientation of Egypt's professional training system on the basis of the Kohl–Mubarak initiative seems to be successful. So far, 7,200 graduates are enrolled in 1,100 training companies in 24 Egyptian cities. The necessary legal, administrative, and entrepreneurial adjustments, which were considerable, should be informative when other Arab countries begin to make similar reforms.

The question of redistributing responsibilities in the education system between the state, the economy, NGOs, and foreign development cooperation remains open. The latter have to consider that education concepts represent a highly sensitive sphere that is interwoven with cultural traditions, values, and issues of power. Stable and acceptable reform concepts have to emerge from an internal process of discussing all of the social powers (e.g., culture, science, civil society, business, industry, and chambers of com-

merce), and, therefore, cannot be enforced externally. Generally, such reform concepts should reflect conceptual coherence and not just be an addition of diverse uncoordinated offers made by a given donor.

Higher Education, Research, and Transfer of Technology

The main questions were: How can cooperation between the higher education sector, the private sector, civil society, and the state be improved? What role can small- and mid-scale industries play in the area of R&D and as seekers of knowledge? What duties fall to private educational institutions today and in the future? What can we learn from countries that have implemented sponsorship policies for research and innovation (e.g., fiscal policy and other tools)?

The Arab Science and Technology Foundation (ASTF), located in Sharjah, UAE, offers an innovative beginning with its monitoring program. The Arab world contains 175 universities that boast more than 5,000 professors who have trained about 10 million graduates – about 700,000 of them engineers. Tens of thousands of them successfully work and conduct research abroad. However, the research output within the Arab countries is abysmal. The reasons for this are known: insufficient financing, desolate work conditions, the oppressive climate of intellectual restrictions, the arrogance of political power, and the lack of farsighted national and all-Arab research strategies even in the most inherently Arab areas of requirement (e.g., water supply and distribution, seawater desalination, environmental protection, the petrochemical industry, and international climate policies).

Despite their occasional enormous oil incomes, the oil states as well showed little interest in developing first-class R&D clusters because they did not grasp their strategic significance. The tolerance, not to mention the resolute promotion, of exceptionally intellectual minds met with resistance, given the more comfortable siphoning off of oil revenues without having to grapple with intellectually independent scientists and their demands.

A further weakness consists of the continued lack of any connection between the research activities in one Arab country to an all-Arab network, beginning with a binding scientific terminology that can be understood by all Arabs. For example, a lecturer from Damascus who is teaching information technology in Bahrain cannot make himself understood if he uses his personal translations of specialized English terminology. There, Arabic with English-based specialized terminology is in use. In Tunisia he would

also be misunderstood, for in that country, teaching occurs in French. But miscommunication could occur even in Aleppo, because even within Syria itself a unified Arabic IT-specialist language has not caught on, and everyone applies his or her own translations.

In addition, joint publications emerge almost exclusively between Arab scientists and non-Arab colleagues in the same specialist community, instead of between co-authors from within the same Arab subregion (e.g., North Africa, the eastern parts of the Arab world, or member states of the Gulf Cooperation Council), and even less between these subregions, which are, furthermore, inhibited by the English–French language barrier.

Moreover, there is a lack of communication between Arab researchers and potentially interested parties, among others in the economy, of strategic considerations for common R&D programs as well as cultivating scientific societies and professional journals. An Arabic R&D Internet portal would be important.

Poorer countries, such as Yemen, are thinking about the extent to which foreign education and research institutions can be successfully won over for cooperation. However, there is an awareness that the intellectual climate and predominant culture of bureaucratic control is not very attractive.

The German University in Cairo (GUC) represents a successful example of foreign engagement. It was established due to a new legal leeway in Egypt,⁵¹ in participation with the Ulm University, Stuttgart University, the Ministry of Education and Research, the German Academic Exchange Service (DAAD), the German–Arab Chamber of Commerce, and the Foreign Ministry, as well as private Egyptian sponsors. In 2003, it was formally opened by President Hosni Mubarak and Chancellor Gerhard Schröder.⁵²

While the natural and technical sciences in Arab countries are mainly handicapped by a lack of financing, the social sciences, arts, and humanities are subject to a special political control that leads to an anticipated self-censorship in the selection of research topics. Innovative questions arouse the government's suspicion. For example, an investigation of 2,000 Lebanese diploma exams concluded that only 16 percent of them reached international university standards. The majority avoided independent themes and restricted themselves to repeating familiar insights. As some of these graduates become teachers, a self-perpetuating process of blocking creativity is created and continues to spread.

Constructing a new education system in Iraq represents an acute problem, one which UNESCO and such bilateral science and cultural-political institutions as the DAAD and German universities are trying to solve. With

respect to the Euro–Mediterranean partnership, the TEMPUS–MEDA program for cultivating university cooperation should be mentioned. Unlike the East Asian states with their long-term R&D strategies, Arab countries are making no effort to offer attractive incentives to entice these highly qualified personnel and engineers who are working abroad to return home.

During the discussion, it was pointed out that a fundamental political change took place in Eastern Europe, and that these nations concentrated on the problems associated with the technical conversion of transforming the system. However, in the Arab world there is a struggle for reform in certain areas and a lack of progress in the area of indispensable political reforms. In the absence of the latter, the paradigm shift toward an Arab knowledge society is blocked. Universities are considered “dangerous places” by the rulers, who view them as meeting places for mostly young, rebellious troublemakers. As a result, they are subjected to especially strict governmental supervision. For example, a leading Egyptian social scientist was put on trial because he had accepted research funds from the EU. Furthermore, a university president was relieved of his job because one of his publications dealt with poverty, an issue that is publicly denied. This raises the question for Arab intellectuals of how to achieve reform without major upheaval.

In the Gulf states, there exist material and mental problems related to transitioning from a neo-patrimonial state of revenue distribution to a decisively achievement-oriented and internationally competitive economy. These problems stem from raising an entire generation in an environment in which the level of income is not strictly tied to individual performance. As stressed in AHDR 03, social status must be reconnected to education and professional qualification.

In the past, the cultural dimension was underestimated within the framework of Euro–Mediterranean cooperation as well. The focus was on creating a free-trade zone across a network of bilateral association agreements. Only in recent years has the significance of scientific and cultural cooperation been recognized,⁵³ and partially implemented, as in the TEMPUS–MEDA program. At issue is the resuscitation of the entire Mediterranean environment with its long phases of intensive cross-fertilization.

The Arab discussion participants consider the need for European assistance to be mainly in the form of helping NGOs in order to strengthen civil society and to work toward good governance. On the other hand, the governments often impose strict controls on local NGOs and prohibit them from initiating direct contacts abroad without official approval. How, then, can NGOs be strengthened from the outside if they are kept weak within their own countries?

Conclusions for International Development Cooperation

AHDR 02 and 03 have caused intense debates in Arab countries about future political options. Despite their almost nonexistent personal knowledge of the more successful Asian periphery countries and the strategies that they follow, Arab countries are becoming aware, with considerable delay, of the necessity to reorient themselves. The increasingly privatized economy senses, on a wide front, the decrease in their capacity to compete internationally, especially with the Asian periphery countries.

Both AHDRs offer a clearly structured outline for the pending steps needed to initiate reform. At the same time, it is becoming clear that the reforms would have to begin within the core of the political systems, although the ruling elites hesitate to allow any room for the degree of freedom that is indispensable for a knowledge society. Thus, statements of intent in this regard remain no more than lip service. In those Arab countries where a new generation has taken over, even the new young guard holds on to the primacy of maintaining power. The opportunities to be influenced by donors are limited, especially in such sensitive areas as education.

The Arab participants point to strategic EZ mistakes and changing EZ donor modes. On many occasions, grave social consequences were said to have been overlooked. Nevertheless, such problems as the growing unemployment of young people in North Africa and the lack of future prospects evade foreign aid. In addition, honoring the demand for wide-spread literacy programs for rural women and girls is a priority for the leadership of the partner countries that they have neglected for decades. Both are sensitive fields in which bilateral donors have no comparative advantages.

The demand for a more generous European immigration policy was also expressed in connection with the allusion that the West continuously siphons off highly qualified Arab human capital via the brain drain. A good starting point here, obviously, would be the attractiveness of work conditions in the home countries. A strong middle class, which could support the process of development, has not yet appeared in the Arab countries.

The German EZ requires an invitation by the partner country, which names its contextual priorities and decides which sectors and subsectors will be opened to foreign cooperation. Choosing the cooperating countries is done according to a catalogue of criteria.⁵⁴ Country-specific aid programs are arranged with the partner countries.

One sign of a deepening Euro–Arab relationship is the report, commissioned by EU Commission president Romano Prodi: *Dialogue between*

Peoples and Cultures in the Euro–Mediterranean Area. This report deals with the manifold tensions (e.g., globalization, EU expansion toward the east, Euro–Arab partnership agreements, migration problems, and a security policy). Prominent representatives of European and Arab cultural circles, from Fatima Mernissi to Umberto Eco, were called upon as authors to study the issue of a Euro–Mediterranean identity.

The report suggests a wide intercultural dialogue that includes such questions of the day as upbringing, the role of women, the image of Arab migrant families in Europe, and so on. Mutual relations are becoming more problematic due to, among other reasons, media-distorted perceptions and the withholding of rights, freedoms, equality, and dignity. The Prodi initiative is geared toward focusing the Euro–Mediterranean partnership on the human and cultural dimension, which represents the third and weakest “hive” of the Barcelona process (aside from the political and economic-financial areas). The significance of culture is misjudged and marginalized.

The report contains 20 concrete suggestions in three areas. The first issue is upbringing, which is taken as a starting point for mutual relationships and openness. An educational theory of diversity is required. A Braudel–Ibn Khaldun network is supposed to link the universities around the Mediterranean together. A second group of initiatives wants to strengthen the daily dialogue. For this, a study group is supposed to collect advice from all interested persons and initiate a dynamic process. A third group of suggestions seeks to protect the right of media freedom. However, at the same time the media have to be held accountable for providing accurate commentary and not serving as vehicles for negative stereotypes.

Endnotes

1. Arsalan (1939).
2. Smith (1959), 47; Braune (1960), 166; and Buettner (1979), 24.
3. Smith (1959), 76. This is also manifest in the Arab countries’ economic development plans of the 1950s and 1960s, which refused to undertake a self-critical and sober assessment of their own weaknesses, and instead based their planning on illusory and optimistic source values, which greatly contributed to their failure. Compare Weiss (1964), 190 f. and 252 f. An equivalent attitude resulted in the military misjudgments before the beginning of the 1967 war against Israel.
4. For example, South Korea’s building of about 20 technology cities, specialized by sector, in corresponding association with the relevant industrial sector.
5. Research and Development.
6. The Organization of Arab Petroleum Exporting Countries.
7. Compare to the interior view of Arab universities. See Weiss (1986), 377 f.; Weiss (1990).

8. Möller et al. (1980), 1 f.; Weiss and Wurzel (1998), 189 f.; and Wurzel (1990), 204 f.
9. Compare World Bank (2003).
10. Development Policy Forum, "Building the Arab Knowledge Society, *The Arab Human Development Report 2003*, Consequences for International Cooperation," organized by InWent (merged from the former Deutsche Stiftung für Internationale Entwicklung [DSE] and the former Carl Duisberg Gesellschaft [CDG]) in collaboration with the Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung (BMZ) and the United Nations Development Programme (UNDP), Berlin, 9-10 February 2004.
11. Compare "Wissenschaftlicher Beirat beim BMZ, Islamische Bewegungen und deutsche Entwicklungspolitik," *BMZ aktuell*, Bonn, November 1991.
12. AHDR 02, 1.
13. *Ibid.*, 2.
14. *Ibid.*, 3.
15. *Ibid.*, 5.
16. Compare, among others, Möller et al. (1980).
17. AHDR 02, 8: "Traditional culture and values, including traditional Arab culture and values, can be at odds with those of the globalizing world. Given rising global interdependence, the most viable response will be one of openness and constructive engagement."
18. *Ibid.*, iii.
19. *Ibid.*, viii.
20. AHDR 02 was downloaded from the Internet about 500,000 times.
21. For example, with the accusation of "Zionism" or "Orientalism."
22. AHDR 02 was introduced at several international conferences, among others, in Germany in July 2003 by Professor Ferghany at the Zentrum für Entwicklungsforschung (ZEF) in Bonn.
23. In this regard AHDR 03, p. iii states: "The region has recently encountered grave threats, and the dignity and rights of Arabs, especially the right of self-determination, have been grossly violated."
24. *Ibid.*
25. *Ibid.*, iv.
26. *Ibid.*, 163.
27. *Ibid.*, 170.
28. *Ibid.*, 173. The influx of oil revenues has cemented such achievement-limiting structures.
29. *Ibid.*
30. *Ibid.*, 12.
31. Among other things through binding linguistic commitments and the development of specialized encyclopaediae as well as appropriate linguistic foundations of scientific instruction. This is supposed to ease the transfer of knowledge into the sphere of ordinary speech. *Ibid.*, 12.

32. Ibid., 177.
33. Ibid., 13.
34. Ibid., 173. "The exploitation of religion for objectives removed from its sublime purpose and soul, can no longer be tolerated if Arab society is to free itself and build a living knowledge society. In Arab countries where the political exploitation of religion has intensified, tough punishment for original thinking, especially when it opposes the prevailing powers, intimidates and crushes scholars." Ibid., 165.
35. Ibid.
36. Ibid., 166.
37. Ibid., 3.
38. Ibid.
39. Ibid.
40. Ibid., 4.
41. Ibid., 6.
42. Ibid., 8. "Openness, interaction, assimilation, absorption, revision, criticism and examination cannot but stimulate creative knowledge production in Arab societies."
43. Ibid., 6. The authors united against the increasing pressure of Islamic fundamentalism: "Some political movements identifying themselves as Islamic have resorted to restrictive interpretations and violence as means of political activism. They have fanned the embers of animosity towards both opposing political forces in Arab countries and 'the others', accusing them of being enemies of Islam itself. This has heightened the tempo of conflict and friction with society, the state and the 'others'." Ibid., 7.
44. Ibid., 8.
45. Ibid.
46. Ibid., 10.
47. Ibid., 9.
48. Ibid., 10.
49. Compare Weiss (1996); Weiss (2000a), 2 f.; and Weiss (2000b).
50. In the framework of the Kohl–Mubarak initiative, the German dual education system (practical training in a company in connection with vocational school attendance) was introduced in Egypt.
51. Law 101/1992 allowed for private, but not profit-oriented, universities.
52. Initially in pharmacy and biotechnology, material sciences, information technology, media technology and administrative management.
53. Weiss (2000a), 2 f.
54. The German EZ has developed an elaborate catalogue of criteria that, among other things, is geared toward respect for human rights, the rule of law, democracy, a market economy, and the development orientation of state actions.

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