

CHAPTER SIX
BUILDING THE KNOWLEDGE SOCIETY
IN THE ARAB WORLD: A VISION AND A PLAN



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Introduction

In this chapter we aim to bring a set of elements together into a working plan based on the principles and action mechanisms required to close the knowledge gap in the Arab countries, bringing their people into the knowledge society as participants in knowledge production. It is true that the analysis of the preceding chapters has revealed the existence of some progress in certain aspects of the knowledge society. It has, however, also highlighted many gaps which must be dealt with seriously and resolutely. At this point, we will seek to put together a vision and a programme of action designed to make a contribution to filling the gaps in the landscape of Arab knowledge.

We do not wish to confront the knowledge gap by complacently repeating suggestions for self-reliance or dependence on the past and our existing knowledge reserves; the knowledge revolution requires us to transcend such reactions, for Arab society faces a major challenge in the field of knowledge, and concerted efforts are called for if we are to build the knowledge society.

If knowledge is to be acquired and a society built around it, if it is to be deployed in the service of development and progress, certain demands must be met. In this chapter, we will content ourselves with sketching a general architecture of our vision and making proposals intended to assist in closing the knowledge gap in the Arab countries. This architecture will allow us to construct a body of elements related to the enabling environment and the indigenisation of knowledge, as well as to assemble recent data that clarify the requirements for innovation in the field of knowledge, so that the best may be extracted to serve human development.

This proposed Arab plan is the result of the investigation and diagnosis we have undertaken in the Report. We do not claim that the demands and priorities we will put forward are either comprehensive or exhaustive, nor do we claim to hold a monopoly over the truth or the right answers in this field. We do intend to set down comprehensible and motivating markers to indicate the route.

As we have stated in the other chapters of the Report, the right to knowledge should be considered the cornerstone of human development. This right requires the generalisation of the benefits of knowledge and of participation in its reproduction according to the needs of our societies, and it is within this context that the body of elements of the proposed plan take form. The plan's higher aim is to spur public debate and positive movement towards a knowledge society built on solid foundations and under the firm control of Arab society through the partnership of its various components. Thereafter the strategies and mechanisms formulated and ranked by consensus can be adopted.

THE ARAB KNOWLEDGE GAP: DEFICITS AND HOLES

In the Report we have identified the nature of the Arab knowledge gap and highlighted a body of data and conclusions, the most important of which are:

- **An understanding of the defining characteristics of the knowledge society, which is under continuous formulation**, by an investigation of its most prominent components and problematics. In the first and second chapters, the Report has attempted to survey the difficulties of the subject and lay the groundwork for their solution by investigating the environments that assist

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Knowledge is freedom and development and there can be neither knowledge nor development without freedom

in the birth and formation of the knowledge society.

In its theoretical framework, the Report aims to survey the poles that define the boundaries of the knowledge society. It summarises these as three—technology, economy, and society—and highlights the interconnection and interaction among them. The report also points to the most conspicuous feature of the knowledge society, which is its relationship to networking and networks, which play prominent roles in the various aspects of the life of modern societies. Chapter 1 also endeavours to formulate an operational definition to help formulate specific choices as to indicators and indices for the knowledge society appropriate to Arab aspirations.

Chapter 1 also aims to construct the general theoretical frames of reference for the indicators, classifying the features ascribed to the knowledge society into two broad orders. The first of these is related to philosophical positivism and its quantitative predilections based on technological determinism. The second is the modernising and liberal trend contained in the systems of the international human rights conventions. The chapter puts forward a synthesis of a sample of new questions and challenges raised globally and in our Arab nation, which we assume is not isolated from the changes underway elsewhere at the beginning of the twenty-first century, with its defining revolutions in and transformations of knowledge. These include those related to the question of identity, political participation, gender, and the development of the Arabic language. Likewise, the chapter raises the need for a new code of ethics equal to the demands of this task and prioritizing humankind, and outlines the features of Arab solidarity and cooperation, in addition to the values of openness to, and intercommunication with, humanity at large.

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to the right to development. These two form the underpinnings of the concepts in question. Equally, this chapter sketches the major features of the knowledge society, to provide a framework for the diagnosis and study of our own situation. Based on this framework, this situation should be reconstructed in the light of local specificities linked to Arab reality and the efforts required to indigenise the mechanisms of the knowledge society in the service of the hoped-for Arab development project.

Chapter 2 concerns itself with a discussion of the enabling environment required in order to put the knowledge society in place. Such a discussion is a necessity given that the different manifestations of the knowledge society in the contemporary world have roots and foundations that are essential to its existence. The chapter goes on to address the issue of relationship of knowledge to freedom, starting from the assumption that knowledge is freedom and development and that there can be neither knowledge nor development without freedom. This link does not, however, imply that the two are mechanically and inseparably bound. The chapter also goes beyond this controversial diagnosis and surveys the general conditions that help to build the knowledge society. These are to be found in environments that assist in bridging the knowledge gap. These call for political and institutional, and equally cultural and intellectual, reform, in addition to reform of the media and renewal of communications and ICT platforms.

Arab societies cannot cross the thresholds of the knowledge society and launch themselves into knowledge production and creation without nurturing environments and supporting institutions. The experiences of states that have entered the knowledge society before us affirm this necessity. Hence the Arab societies are called upon to prepare the ground appropriately for the possession of knowledge and the absorption of its innovations and benefits.

This can only come about through the allocation of the necessary financial, human, and institutional resources, plus the development of a convincing vision of the role of knowledge today in achieving comprehensive development. Appropriate environments, institutions, laws, policies, and manpower are all requisites for the production of knowledge that contributes to human welfare.

• **An attempt was made throughout the following chapters of the report to survey and synthesise the evidence of the most important indices and indicators of the knowledge society in the Arab world** in relation to education, the condition of ICT, and innovation. Taken together, these chapters seek to address two issues. The first concerns the synthesis of the reality of Arab knowledge performance in these fields and the question of how to approach the large gaps that exist between what is happening there in our own region versus the accumulated experience of societies that have entered the knowledge society before us. The second is comprised of the need to understand the deficits and formulate the proposals that will help us to enter that same society, with all the baggage we have gathered during the second half of the twentieth century and the beginning of the third millennium, and with all the aspirations that motivate us today to improve our position on the new world maps of knowledge.

Chapter 3, which is devoted to education, reviews the knowledge capital accumulated by educational institutions in the Arab countries today in an attempt to comprehend its quantitative and qualitative dimensions at the various levels and stages of education. This capital is organised by generation (children, youth, and adults) and an analysis is offered of the structure of Arab knowledge capital and the gaps that differentiate it from modern knowledge capital, which has integrated the educational innovations that the new mechanisms, laboratories, and technology are starting to provide. The same chapter

also ponders the defects that typically accompany educational reform projects in the Arab countries and highlights some of the limitations and uncertainties of the Arab educational scene.

Chapter 3 also puts forward an analysis of the formation of knowledge capital through education. While most Arab societies have recorded a number of tangible achievements on the quantitative level in terms of educational opportunities for children and of gender parity, the qualitative performance of the children of the Arab countries as a whole is rarely comparable to that of their peers in the rest of the world. Large portions of the youth generation—more than 35 per cent in nine Arab countries—have not progressed beyond basic education. It is therefore difficult for them to engage with the knowledge-based economy, which demands theoretical and technological knowledge that can only be acquired at post-basic educational stages. Nor does the knowledge makeup acquired by many young people during secondary and higher education necessarily conform to the demands of the transition to a knowledge economy that is essentially dependent on the specialised sciences, modern technologies, communications revolutions, and openness to the advances made by knowledge. This situation forms an obstacle to the formation of even the lowest estimated critical mass of high performance human capital capable of discovering, creating, and innovating, and of leading the processes of ongoing development needed by Arab societies.

The Report confirms that the light of knowledge does not fall on all adults equally. Rather, it remains in all the Arab countries the prerogative of an elite, broader at times and narrower at many others. Today, the large variation in knowledge capital acquired through education appears not only among countries themselves, but also within each Arab country individually, between men and women, and between younger and older adults. Such divisions are also to be

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found between the city and the country and among the economic segments of society.

Chapter 4 deals with ICT as a central pillar of the knowledge society. It devotes attention to the state of this technology in the Arab countries as revealed by the data available in international reports, despite the major weaknesses of these. The chapter aims to address the demand for the revitalisation of the Arabic language to make it the nurturing vehicle required if the issue of Arabic knowledge and digital content are to be taken truly in hand, and one capable of formulating new symbols that will facilitate the operations of the digital industry and help to create Arab knowledge horizons that can deal collaboratively and advantageously with new knowledge systems. The chapter reveals the general importance of ICT in the health, economic, social and knowledge fields. It highlights the deficits and gaps that exist in the Arab countries and formulates a set of proposals and initiatives that will help to raise ICT in the Arab countries from its current level to one capable of operationalizing knowledge through institutions capable of ensuring that it is exploited to the utmost in the Arab countries' various areas of productive activity.

The Report makes clear that one of the chief features of the current era is the unprecedented interrelationship between the development of technological capabilities and the various aspects of economic and social development. However, a review of national plans in the Arab states, particularly those with middle and low incomes, clearly reveals obstacles that prevent the inclusion of technological development as high priority. The open policies required for the effective deployment and utilisation of ICT confront major obstacles arising in many cases from excessive government control and the complex relationship of technological development to many other issues. The Report affirms the necessity of focusing more research on the effects of technological progress on the Arabic

language and how new technologies may deal with it in terms of recognition, speech, and semantics, so as to preserve it and enshrine its role as a vehicle for culture, an axis for development, and a building block of human civilisation.

The chapter explains that an ideal utilisation of ICT in building the Arab knowledge society lies beyond the capabilities of the individual Arab states. Cooperation among concerned institutions must be strengthened on all levels. Success in acquiring and deploying modern technologies is dependent on the ability of multi-specialist teams to cooperate within each Arab country and with regional and global partners. National policies and regional initiatives designed within this frame must take account of the tools provided by ICT, such as virtual research labs and open source methodologies.

Chapter 5 deals with innovation in the Arab world, starting with a review of the concept of innovation that expands the indicators developed by certain international reports in this respect. The chapter conducts its review according to three major axes. The first relates to policy for innovation in scientific and technological knowledge. Highlighting the innovation gap in these arenas and clarifying the limitations of existing Arab research centres, it contends that the latter are incapable of participating actively in building the knowledge society or of coordinating and cooperating either among themselves or with leading international institutions in this respect. The second axis treats the specifics of Arab creativity in the arts, literature, humanities, and social sciences from a new perspective, making clear that the concept of creativity goes beyond the concept of inventiveness, which is linked to technology and its tools and underlining the contribution of imagination and thought to the creation of realms and concepts that enrich the life of the emotions and fertilise the mind. The third axis of the chapter discusses the question of revitalising Arab performance in innovation and puts forward a set of

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proposals intended to give impetus to innovation and link it to production.

The chapter highlights the fact that Arab research will never gain a noteworthy position in the third millennium as long as it remains outside the global context of research and innovation. Scientific and technological discoveries are accelerating and proliferating within a broad spectrum of specialisations and applications. This makes it impossible for any of the world's countries, whatever their human and material resources, to pursue them all at the same time. Thus the global trend is to establish major societal and scientific groupings and engage with them, to expand networking for scientific research, and to form partnerships for the implementation of projects and exploitation of their outputs.

The chapter also takes it as a given that, in the face of the plethora of requirements to achieve a qualitative breakthrough on the level of research and innovation, serious political decision-making capable of engaging with the march of research and creativity is a fundamental principle that must be openly adopted at the level of the state, and indeed at the Arab regional level, in active partnership with the institutions and sectors of society.

• **Throughout, the Report has consistently highlighted the importance of the epistemological intercommunication with the self and with the world.** Such intercommunication will help to build to new reality of knowledge in the Arab world that draws on both its own reserves of knowledge and the gains in knowledge to be derived from contemporary knowledge revolutions.

The Report considers that a positive openness to the knowledge revolution, and the benefits arising from it in the fields of development and the expansion of people's options for decent lives, are an essential foundation for the project of the transfer, indigenisation, and innovation of knowledge. There is also an assumption that the existing Arab knowledge deficit will lead to our continuing general

backwardness. For this reason, the Report is insistent that the principle of intercommunication with the rest of the world must be an inherent feature of all aspects of knowledge in the Arab world, including education, technology, and general culture. It must be stressed that the defence of intercommunication means neither dependence nor selectivity. Equally it does not mean borrowing. At its most basic, it is a desire and aspiration to prepare the means to bring into being a knowledge-enabling environment and the indigenisation and creation of knowledge. This must occur through the assimilation of contemporary knowledge values and their development in the interests of the Arab individual, in order to support his dignity and realise his well-being.

THE KNOWLEDGE GAP CAN BE OVERCOME

The chapters of the Report reveal important aspects of the reality of Arab knowledge performance. They also examine the general principles that have guided the chief positions and conclusions resulting from this analysis. Having tried to identify the general features of the Arab knowledge gap—be it in terms of the enabling environment or the actual production and deployment of knowledge—we may now formulate a strategy that will help us to narrow and close this gap in such a way as to enable the Arabs to join the knowledge society, and to do so in positive fashion.

"In the twenty-first century, classification will be on the basis of information: societies with knowledge and others without."

His Highness Sheikh Mohammed bin Rashid Al Maktoum.

Arab knowledge underdevelopment, observable in the areas of both acquisition and production, widens the existing knowledge gap. As is the case with the other peoples of the world, the Arabs over the course of their history have built up a vast stock of knowledge that expresses

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The positive achievements in the Arab region are constrained by many societal, cultural, and political restrictions, most of which can be ascribed to the limitations placed on freedom in its broadest sense

their ways of life and their skills in work and production. The existence of a knowledge gap today means that, despite this, Arab societies have been unable to access the gains made by technological progress, and unable to indigenise new media and mechanisms capable of taking advantage of new forms of knowledge in the development field. This lack extends to the social and cultural milieus. Despite the many cultural bright spots in the Arab region in its modern era, this achievement must seem modest and timid in comparison with the achievements of other regions of the world. At the same time, it is constrained by many societal, cultural, and political restrictions, most of which can be ascribed to the limitations placed on freedom in its broadest sense and on productive intercommunication with the self and with the world.

Careful observation of the state of knowledge in the Arab world, as set forth in the report, calls us to speed up the preparation of the appropriate means to consolidate the foundations for building the knowledge society. In particular, the acceleration in the rates of global progress in technology, culture, economy, and society calls on us to engage, without hesitation, in an attempt to seize the reins of knowledge. This means providing it with enabling environments, supporting its general diffusion—through advantageous partnerships—and making available its tools and technologies, with the aim of effectively deploying them in the service of human development and the defeat of the aspects of underdevelopment prevailing in our societies.

The new possibilities for permanent human development furnished by the

BOX 6-1

Rationalist Critique and Historical Vision

The only way to participate in the battle over the Arab present is through our shared endeavour to defeat the crisis in our thinking and our reality. We are suffering from a crisis of underdevelopment and of dependence. It is a crisis of knowledge, of development, of governance, of stark divisions between levels of wealth, civilisation, living standards, democracy, and culture, a crisis in the relationship between political society and civil society and a crisis of exploitative foreign hegemony over our life potentials and the bases for our social, cultural, and national development. In the end, it is a crisis of thought resulting from these interrelated crises and of our lack of a comprehensive strategic vision to change and renew reality.

This is not to deny the efforts, achievements, and innovations in the different intellectual, social, productive, literary and artistic fields to which hundreds of Arab cultural figures have contributed. I am talking here about the prevailing structures in our thought, reality, and institutions generally [...]

We will only transcend our backwardness and dependence through a rationalist critique and historical vision of the roots of this backwardness and dependence as they exist both in our thought and our reality.

We will only transcend our backwardness and dependence by taking intellectual ownership of the facts of the new scientific revolution—the information revolution—without waiting to complete our belated, limited, and abortive attempts to take intellectual ownership of earlier scientific revolutions.

We will only transcend our backwardness and dependence through a comprehensive development project for the Arab nation with economic, social, educational, cultural, media, and moral dimensions, a project that rationally and critically incorporates our Arab and Islamic heritage and adds to it, and that rationally and critically takes account of the facts of our present era as well, and brings something new to it.

We will transcend the past, attain liberation, and achieve progress by being conscious of the facts of our reality and trying, with consideration and respect for the difference and diversity of our particularities and specific conditions, to forge unity without at the same time closing ourselves off to the world around us in the name of national unity and identity. Our identity is not a self-sufficient, readymade essence but a continuous process and a project ever open to renewal. Thus we must remain open to the world, so as to enrich and deepen our identity and to participate as an active player [...]

We must remove the fetters on the freedom to think, criticise, and differ, and to form various popular and community bodies and organisations that provide outlets for the vital, productive, and creative actors in society, be they women or men, and give them the legal right to participate in fateful decisions, to oversee their implementation, and to defend their interests and rights.

Authority does not trump society; the political does not trump the ideological; the ideological does not trump the epistemological; nor are we making from the epistemological an elitist, condescending enlightenment divorced from the spirit of rational, objective criticism and the desire for change and revitalisation.

When all is said and done, the issue is not simply an ideological project for renaissance—many indeed are projects like this in our lives and recent history. The issue, rather, is one of a strategic, foundational, theoretical, epistemological vision deriving from the facts of our reality and age and their needs and challenges, a vision armed with knowledge and a conscious popular collective will on the level of the Arab nation as a whole and on that of each Arab country individually.

It is not a utopia but a necessity innate within the available possibilities, one that is waiting only for the consciousness, will, organisation, and initiative at the heart of our civil societies to make it a reality.

Source: Mahmud Amin al-'Alim, in Qadaya Fikriyya no. 15, 16 July 1995.

knowledge society must be considered to be one of the greatest incentives to closing the knowledge gap. Currently available ICT, for example, provides the opportunity to diffuse forms of knowledge that will help to build an economy based on knowledge, an education for all linked to the different stages of life, and technologies in many fields such as medicine, treatment, and agriculture. All of the latter are knowledge mechanisms that cannot be divorced from the prospects for comprehensive development, with all the latter's promises of well-being for humanity.

A PROPOSED VISION FOR BUILDING THE KNOWLEDGE SOCIETY

Confronting the complex knowledge gap in the Arab world requires a vision that comprises key features for work and action. This proposed vision should build on existing achievements in order to narrow this gap, since some Arab societies have indeed taken steps towards joining the knowledge society.

This proposed plan, whose general features we shall attempt to formulate, should be in harmony with the understanding of the knowledge society as we envision it, going beyond technological determinism to bring to the forefront the overall human dimension, and others associated with aspiration, will, criticism, and history; in this way, we shall avoid reductionist, positivist perceptions that seek to standardise human knowledge. Before sketching the major features of this plan, let us stress that it is both based on defined principles and also is a form of long-term action and initiative whose central aim is in harmony with the Report's conception of the aims of the knowledge society to build overall human development.

This vision is a structure identified through doing and translated through action. Before any of this, however, it is an aspiration. It is an initiative intended to observe the reality of knowledge in the

Arab region and aimed at the formulation of strategies that will help to indigenise that knowledge and equip the Arabs to reach the threshold at which innovation and creation begin. At its deepest level, this vision falls under the rubric of efforts aimed at intercommunication and indigenisation, and subsequently of production and innovation. These efforts form the axes of the vision, for its goal is a further expansion of Arab knowledge performance in pursuit of the desired aim of a knowledge development that will place us at the threshold of social and economic development. The desire for such development formed the cornerstone for our initial deliberations on the topic of the knowledge society.

The general spirit of this proposed plan resides in a set of pre-requisites and principles. It also includes major fronts and axes for action. It explains priorities for the action and movement needed to prepare for the steps which, we assume, will translate its features, and which, we hope, will help to sketch out the landmarks marking the route to the knowledge society.

PRINCIPLES AND FOUNDATIONS FOR MOVEMENT TOWARDS THE CONSTRUCTION OF THE KNOWLEDGE SOCIETY IN THE ARAB WORLD

The proposed vision is based on three major foundations, to be understood as forming an interrelated whole, as follows:

BROADENING THE SCOPE OF FREEDOM

The Report has highlighted the fact that freedom and knowledge are inseparable, as are knowledge and development, in spite of the many forms that this linkage takes. As a consequence, when we make the principle of freedom a requirement for action, we aim also to defend another duality, namely the inseparability of freedom and

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One of the key foundations of the vision necessitates permanent positive interaction between the strategies and mechanisms of the drive for development and action to establish the knowledge society in the Arab region

creativity and innovation. Accordingly, freedom in all its manifestations is a principle central to knowledge and a pillar that must be in place if we are to reach the threshold for the realisation of human welfare. Hence to call for an expansion of the scope of freedoms and a reduction of the restrictions and limits upon them is to call for Arab society to equip itself to engage with the knowledge society.

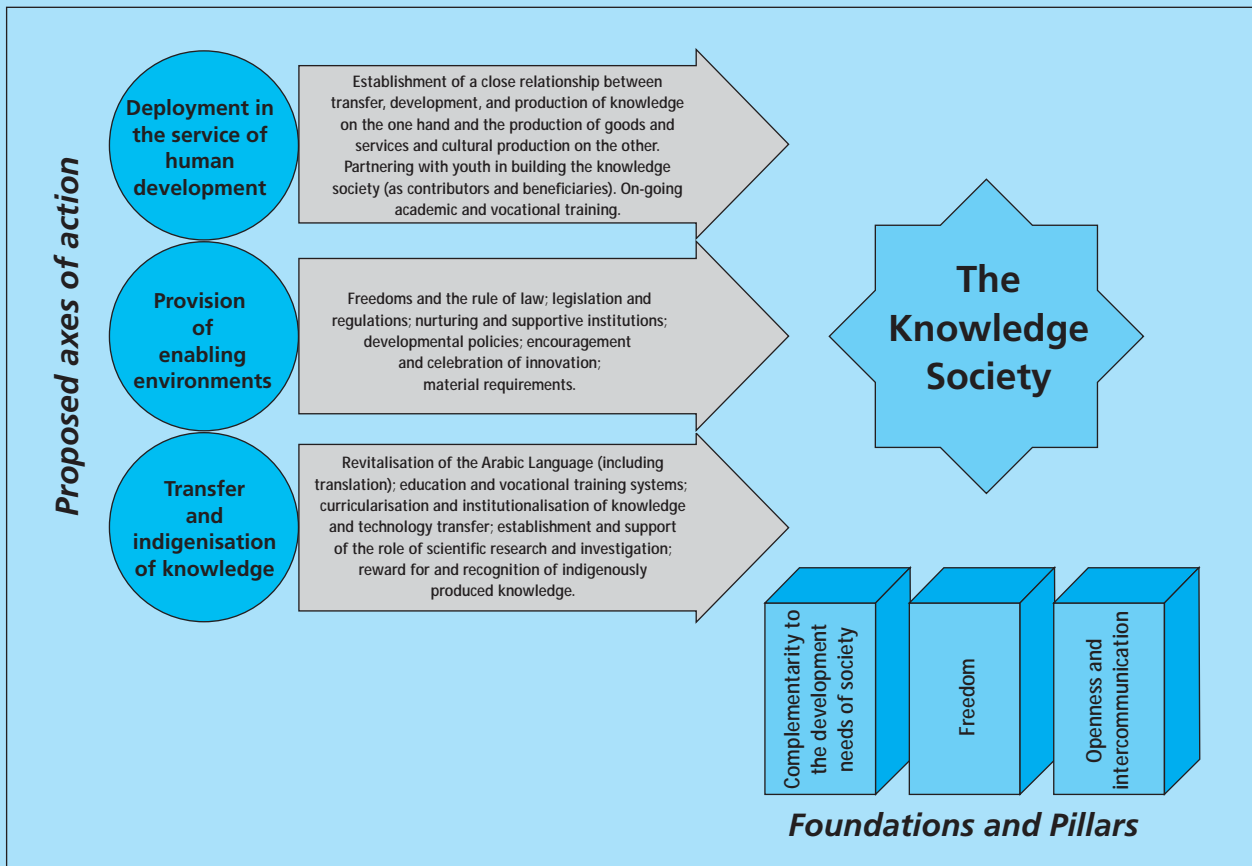
'Freedom' here has a meaning far wider than that of its political or economic significations. Freedom, in the context of being one of the foundations for the building of the knowledge society, is a horizon that equips society to participate collectively in building the path to knowledge and engaging in the production, deployment, and expansion of the Arab individual's gains in overall human development.

POSITIVE INTERACTION WITH THE GROWING NEEDS OF SOCIETY

Starting with the organic connection between knowledge and the developmental needs of Arab societies—whether in the economic, social, or cultural development spheres—one of the key foundations of our vision decrees the necessity of permanent positive interaction between the strategies and mechanisms of the drive for development and action to establish the knowledge society in the Arab region. This permanent interaction built on the accurate identification of developmental needs places the efforts to establish the knowledge society within their correct framework. That framework consists of which is that of support and agitation for human development and of expansion of

FIGURE 6-1

Mechanism for movement towards the Arab knowledge society



the Arab individual's options to reach the better conditions that she or he deserves. This continuing positive interaction between development and knowledge will also inevitably lead to more accurate targeting of the efforts to set up the knowledge society and to the rational use of the available energies, and in consequence to greater benefit being derived from them. There is no benefit in a science which has no use, or in knowledge which does not correspond with the needs of the society in which it has been nurtured. Clearly, it is essential to provide the appropriate mechanisms, and these can be provided and will operate, as we envisage, only in the presence of a genuine political will and a climate of freedom.

OPENNESS AND INTERCOMMUNICATION

While the first pillar invokes the demand for freedom as a central principle in all activities aiming at the revival of knowledge in our society, and the second rests on the initiation of action derived from the reality of the needs of human development in Arab society, the third comprises two other positions that complete the above. The first relates to openness, the second to intercommunication as a central tenet in the field of knowledge.

The word "openness" stands in opposition to "closure," which is synonymous with stasis. Transcending the flaws in knowledge in the Arab world requires arming oneself with the principle of openness to the achievements and lessons of contemporary knowledge. 'Intercommunication' alludes to joint action oriented to the absorption of the benefits and revolutions of knowledge without giving excessive approval to the out-dated reserve of heritage. We in the Arab world are required to support our old epistemological reserve and general popular culture with that built up by the contemporary revolutions in knowledge. If we fail to do this, we shall continue to talk about an intellectual reserve that preoccupies itself fruitlessly in dealing

BOX 6-2

The Legitimacy of Ambition

When one faces the future, seeking to pull the present towards it and give it an upward and efficacious trajectory, ambition would seem to be an essential quality. At the instant the self takes its aspirations seriously, transforms them into a practical project, and insists on shifting them from imagination to reality, it is transformed into an entity with ambition that places its present on the line between success and failure. What ambition adds to aspiration then

is the will to action, and not merely some specific form of desire. I mean that desire—however strong, profound, burning, or fixed on lofty goals for a near or distant future—does not on its own create ambition. Thus ambition is aspiration borne by a practical will insistent on its realisation. For without aspiration—that is desire directed towards a possible ideal or, at least, towards a state better than that existing—there is no ambition in the first place.

Source: Nasif Nassar, 2008. *Al-Dhat wal-Hudur (Self and Presence)*. Beirut: Dar al-Tali'ah, pp.548-9.

with facts that the passage of time may have caused to lose their relevance and that fall into the category of antiquarian knowledge. While this may provide sustenance for the memory and the soul, it may not enable us to understand what is happening in the world and to absorb innovations in knowledge, or help us to achieve comprehensive human development.

Intercommunication, as we understand it, is a process of partnership and reconciliation with the world and the self so that our own knowledge can be reconstructed in the light of the revolutions in knowledge and sciences as they occur in the modern world. We see it as a process of partnership and interaction because it constitutes one of the means for transfer and indigenisation that lead to the knowledge society, as well as contributing to the production and innovation of knowledge.

PROPOSED AXES OF ACTION FOR THE CREATION OF THE KNOWLEDGE SOCIETY

Responding to the chief current requirements in the arena of knowledge in the Arab world, the proposed vision depends on three major axes. These encompass the provision of the necessary enabling environments, the transfer and indigenisation of knowledge, and the

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Freedom and institutionalisation are complementary

deployment of knowledge at the service of sustainable human development and the well-being and dignity of the individual Arab. Fundamental to each of these axes are specific sector-based programmes connected to the propulsion of our societies towards seizing ownership of the knowledge society. It must be stressed here that the axes are composite, based on results and conclusions of the observation of the state of knowledge in its various domains as formulated within the Report.

THE FIRST AXIS: THE CREATION OF ENABLING ENVIRONMENTS

The construction of the Arab knowledge society mandates first the preparation of appropriate enabling environments. This is because such a society is nurtured and developed in the shadow of these environments, which embrace the expansion of the scope of freedoms, the establishment of nurturing institutions, and the shaping of legal systems to give backing to the props and vision of the knowledge society. This also mandates the creation of incentives and initiatives to help revitalise spaces for innovation, by fostering traditions that celebrate innovation and innovative people.

The enabling environment is one condition for the achievement of the knowledge society. Without it, the continuity and development of any results achieved cannot be guaranteed. Institutions and legislation are thus the basic guarantee for all areas of innovation in the knowledge arena. Provision of a climate of freedom also equips actors in the field of knowledge to give and innovate more. Freedom and institutionalisation are complementary. The impoverishment in the sphere of innovation in scientific research in the Arab world reflects the absence of the institutions that should furnish the conditions necessary to implant the mechanisms of innovation in our countries. While in knowledge societies today we speak about laboratories and

joint research workshops mediated by the new forms of ICT, the few, isolated, collective scientific laboratories in our universities have yet to reach the level of institutionalisation that would ensure that the means, tools, and incentives of research become permanent. Equally, existing relationships of cooperation among Arab universities reveal the absence of any clear plan for fruitful cooperation capable of halting the waste of capacities arising from the ongoing brain-drain of Arab researchers and experts.

By way of example, the enabling environment for ICT requires concern for most basic forms of human capital, due to its importance in terms of technical and administrative skills and knowledge, in addition to its role in education, scientific research, and technology.

THE SECOND AXIS: THE TRANSFER AND INDIGENISATION OF KNOWLEDGE

Entering the knowledge society cannot be achieved without the transfer of its tools and technologies and their diffusion through the various structures of society. In the Arab world, the transfer and indigenisation of knowledge are a historical process that requires stamina and a will to work on numerous fronts. The development of the Arabic language, the revitalisation of Arab thought, and the adoption of the historical and comparative pre-requisites of modern thought can be considered priorities in the process of indigenisation and implantation and in preparing society to learn from the achievements of the knowledge society. To development of the Arabic language it will be necessary to pay greater attention to translation, for example. Here the cross-fertilisation required by the knowledge society occurs between languages, innovations, and modes and methods of thought—hence its importance as a process of interaction that reinforces intercommunication

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and the distribution of the benefits of knowledge. Translation contributes to the development of indigenised intellectual production and opens it to the possibility of looking at phenomena and reality from new angles.

Indigenisation is not, therefore, simply transfer. It is a composite operation that combines transfer, translation, education, training, and all activities that transform what is transferred from an imported action into a well rooted action. New environments give this action other features that make it conform with and appropriate to existing needs. Indigenisation, without exaggeration, is a way of qualifying ourselves to reproduce, and also to engage with, the circles in which innovation occurs, for innovation is contingent on indigenisation, and indigenisation is contingent on the enabling environment. Equally, reform of the rules of language, reform of educational systems, and synthesis of the gains of ICT all represent key mechanisms on the axis of indigenisation. All of the foregoing is to come into being within a defined vision and as a result of a defined action, a vision that seeks to make knowledge a contributor to human development.

Indigenisation is a very complex process that calls for the establishment of new structures in the social milieu and massive material resources, in addition to new skills and new patterns of labor. All of these mandate the nurturing of new mentalities capable of adapting to new mechanisms of labor and production. It follows that in the medium and long term, the breaking of frozen patterns of labor and their replacement with new rhythms of intercommunication and achievement are guaranteed. This implies that the subject should not be viewed from a perspective from which transfer is seen as sufficient and which ignores the importance of tailoring what is being transferred to its new milieu. The process of adaptation can occur only if means are found that keep pace with and are responsive to the requirements and platforms of the knowledge society.

THE THIRD AXIS: DEPLOYMENT OF KNOWLEDGE

This axis follows the realisation of enablement and indigenisation. It is related to the deployment of knowledge and its technologies in society, the economy, and the various areas of life. It means linking the new knowledge gained with the arenas of production and progress in society, for new forms of knowledge enable us to build the new economies, which have already begun to form spaces for various kinds of labor and production and to accumulate innumerable material and moral goods. Deployment is reflected in societal development and contributes to the participation by different societal groups, particularly youth, in the advantages offered by the expansion and innovation generated by the mechanisms of the new knowledge technologies in the field of labor and production. When deployment of these knowledge mechanisms begins in the economies that now dominate today's world, it becomes possible for our own societies, through their economic actors, to engage with, for example, the economic networks, electronic markets, and methods of financial intercourse required by today's new global economy. By this means, we shall become able to join the transnational economic cycle through the media made available by ICT, with all their advantages and disadvantages.

AXES AND BASES: INTERSECTION AND INTERACTION

The axes that we have listed as separate entities should be considered as interrelated and interactive, and not as discrete areas. Rather, these axes intersect as they form and coalesce. As between enablement, indigenisation, and deployment, enablement communicates, indigenisation consolidates, and deployment expands. The outcomes of all these processes is that the people of the knowledge society are nurtured and new entrepreneurship and commodities

Indigenisation is not simply transfer. It is a composite operation that combines transfer, translation, education, training, and all activities that transform what is transferred from an imported action into an implanted action

Indigenisation is a way of qualifying ourselves to reproduce, and also to engage with, the circles in which innovation occurs, for innovation is contingent on indigenisation, and indigenisation is contingent on the enabling environment

Priorities are subject to a great degree of flexibility since they are open to numerous possibilities and could be adjusted to different realities. They are measures that start from the acceptance of the general vision set out above, and attempt to find routes to modify them based on the varied environments of Arab reality

It is no longer possible for today's societies to draw up development plans without reference to the knowledge gains in various activities and practices on the local, regional, or international levels

are born. The rhythm of labor in the knowledge society is fast and continuous. If we are conscious that the challenges facing us in the Arab world pertaining to the knowledge society are major and complex, then taking the road of the aforementioned axes and engaging with them is also included among these complex activities. Hence our insistence on the intersection, interrelation, and interaction among them.

ASPECTS OF ACTION TOWARDS BUILDING THE COMPONENTS OF THE KNOWLEDGE SOCIETY

We now move on to identify a set of suggested actions and sketch the broad outlines for adopting and translating the preceding vision and ambition. From the start of our presentation of the axis of priorities we have affirmed that what we are putting forward remains bound to the requirements of current Arab reality in the knowledge arena as it has been propounded in the preceding chapters of the Report. Here we aim to formulate precise suggestions, capable of application when the will is available and the resolve becomes firm enough to undertake this move.

It is difficult to rank these issues in order of importance, by virtue of the different positions of the Arab countries on the scale measuring their mastery of the systems and foundations of the knowledge society. We have therefore decided to set them down according to the timeframes realistically needed for their application and the absorption of the features necessary to build up momentum. There are three timeframes:

Immediate, covering the current and present.

Medium-term, which covers a timescale determined by the facts of each country individually, according to its specifics and the ways it deals with the innovations and tools of the knowledge revolution.

Long-term, which looks to the horizon of ongoing and long-term activity

for the consolidation of the values and mechanisms of the knowledge society.

The ongoing nature of the task has been alluded to in discussing a number of the axes in recognition of the interactive nature of these goals and the necessity of renewal and review.

Needless to say, this chronological elucidation does not exclude intersection, interrelation, and reformulation so as to equip actors to find the appropriate programmatic formulas and the suitable and appropriate ordering of priorities for action. Priorities, thus, are subject to a great degree of flexibility since they are open to numerous possibilities and their pace could, as we have explained, be tuned to different situations. They are measures that start from the acceptance of the general vision set out above, and attempt to find routes to modify them based on the varied environments of Arab reality. Thus any of these elements and actions can be dealt with either on the level of the single state or the region, or on the level of the Arab world as a whole, in a way that suits that state of the region's level of knowledge performance.

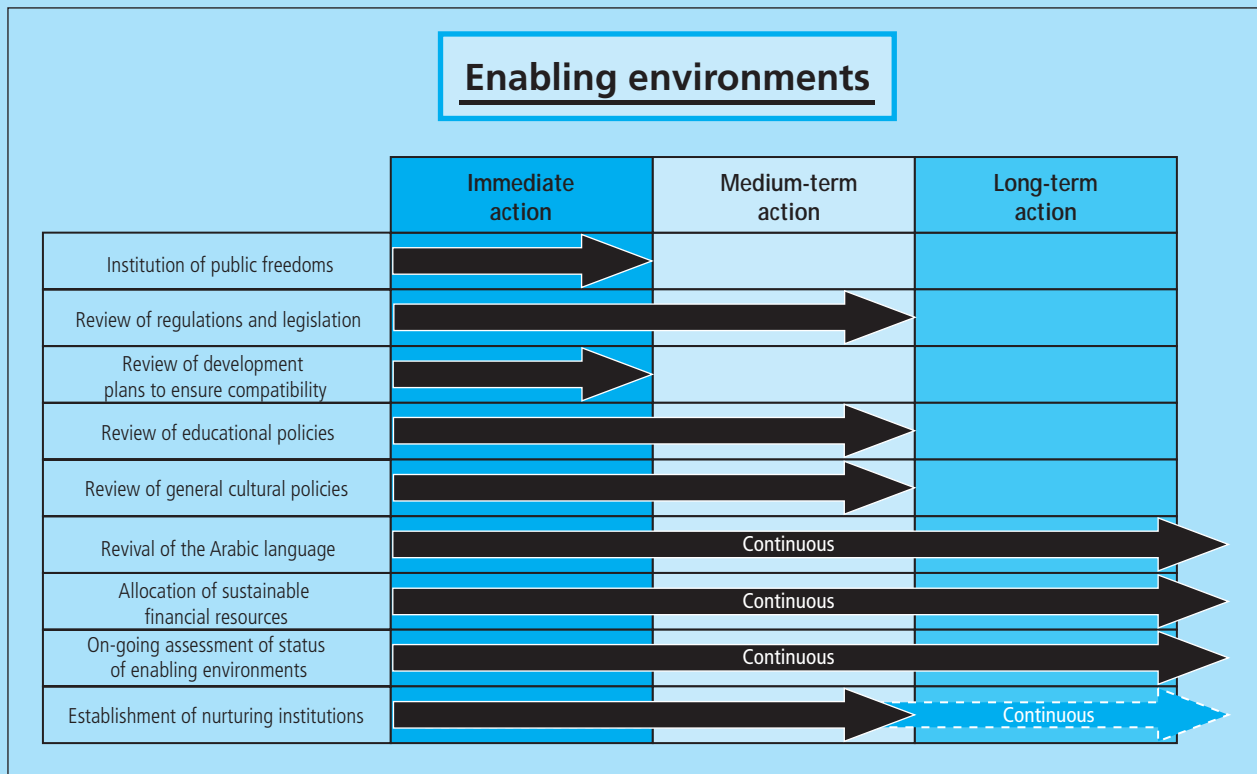
ACTION IN THE AREA OF THE ENABLING ENVIRONMENT

We take as a starting point for the programme of suggested actions a sketch of the major features of the field which is supposed to form the incubator appropriate to the knowledge society. We consider that, in the immediate term, the preparation of this environment requires facing up to the Arab present by, in particular, expanding the sphere of general freedoms and reviewing existing development plans to find ways to harmonise them with the demands of the knowledge society.

These two steps have special significance, for freedom is the hoist by which knowledge and development are raised. Also, when formulating development plans or reviewing those that exist, it should be borne in mind that it is

FIGURE 6-2

Priorities for action to build the elements of the knowledge society in the Arab world



no longer possible for today's societies to draw up such plans without reference to the knowledge gains in various activities and practices on the local, regional, or international levels.

In the medium term, the proposed priorities are related to educational and cultural policies, and also to institutions and legislative frameworks. Preparing an environment to make and frame the knowledge society requires re-examination of all related policies, including general cultural policies and existing educational policies. It also calls for a review of the reality of the institutions and legislative frameworks consistent with efforts aimed at supporting entry into the knowledge society. When we know that Arab culture in general is suffering from the dominance of certain stagnant forms of thought and based upon perceptual styles ill-suited to the requirements of the age, the need for plans that take into account the prevailing

and dominant cultural reality in the Arab region becomes apparent. Hence, the need to expand the circles of enlightenment and to form spaces for free thought continues to call for mechanisms for their diffusion and generalisation within Arab societies. Certainly, this is no easy task. Nevertheless, it is possible to orient the channels, institutions, and platforms that practice cultural work so that they formulate, diffuse, and generalise new intellectual values. Educational institutions, for example, play a central role in this respect. We have, therefore, linked cultural policy to educational policy in our review due to the profundity of the relationship between them.

Preparing organisations, institutions, and laws to support and embrace motion towards the knowledge society is a priority capable of furnishing the enabling environment with frameworks for action that are independent of the involvement

Preparing organisations, institutions, and laws to support and embrace motion towards the knowledge society is a priority capable of furnishing the enabling environment with frameworks for action that are independent of the involvement of individuals and create accumulation

If we admit that language is a vehicle—as well as a medium—for culture and knowledge, then we must consider the development of the Arabic language as of high priority in the area of preparing an enabling environment for the knowledge society

We connect indigenisation with the principle of inscribing local, specific, and intrinsic character, so that transferred information becomes part of the structure of the society to which it has been transferred

of individuals and create accumulation. The institutional nature of knowledge acts sidelines transient characteristics, and grants them the solidity that allows them to gather and develop successes as they proceed.

To the overviews we have mentioned, we can add that regarding the priority of developing the Arabic language. This intersects with both educational and cultural policies. The development of the Arabic language and the upgrading of its formal aspects and grammar has become an urgent matter, especially in light of the upheavals being experienced in the ICT field, where an operational language has formed that is composed of a set of symbols related to instruments and devices of the highest precision. This has led to the creation of a language within the language. It has also led to the widening of the existing linguistic divide between our language and the new forms of knowledge and their technologies. If we admit that language is a vehicle—as well as a medium—for culture and knowledge and that the linguistic actor has the capacity to build an operational language that produces knowledge and can share in its creation, then we must give development of the Arabic language high priority in the preparations for an enabling environment for the knowledge society.

We add to this the necessity for immediate, medium, and long term action in two matters of the utmost priority. The first is related to the allocation of sustainable financial resources, and the second concerns the need for ongoing assessment of the state of the enabling environment, and even the state of knowledge in its various dimensions and elements. Action in these areas will enjoy special significance because financial resources are the foundation stone of the plans necessary to allow the enabling environment to take off and realise success for its programmes. The second point addresses the need for ongoing review and assessment to reveal the degree of progress in the enabling environment and the degree of

success of the framework provided by these environments and of building the institutions that ensure the transfer and indigenisation of knowledge.

ACTION IN THE FIELD OF TRANSFER AND INDIGENISATION OF THE KNOWLEDGE SOCIETY

We should point out here that the word indigenisation has a range of synonyms. There are synonyms that employ geographical, agricultural, or psychological metaphors such as transfer, implantation, or absorption. Each of these ascribes to the signification of indigenisation a specific meaning, or variety of meanings, which expand its general semantics, particularly when what is intended, in the context of the present Report, is an allusion to material and also other, symbolic, elements. “Material elements” here refers to the platforms and tools, while “symbolic elements” refers to pure information transferred from the environment where it originated to other spaces for reproduction.

No one should think that the issue is purely mechanical. We connect indigenisation with the principle of inscribing local, specific, and intrinsic character both during and after the process of indigenisation, so that transferred information becomes part of the structure of the society to which it has been transferred and it does not remain simply a piece of information that has been copied and is alien to its new environment. Indigenisation is the absorption and testing of what is transferred. In the proposed strategy, it is a composite and ongoing act. It is an act and an activity that we assume launches itself immediately and takes on specific forms over the medium term. However, it is not an act that ceases when knowledge assumes a productive and creative presence within Arab society. Rather, it continues as a realisation of the principle of intercommunication with the self and with the world. Before reviewing, therefore, some diachronic

priorities in the area of movement towards indigenisation of knowledge, we confirm that openness and intercommunication together form the major principle in the field of indigenisation, given that intercommunication depends on openness, and openness aims to prepare the apparatus appropriate for the transcendence of existing limitations. Hence, the use of all means conducive to support of this choice and that stimulate transfer will help speed up the pace of indigenisation. Creating, for example, research centres, openness to global sources of knowledge, and concern with training and qualifications are all key steps on the road to implanting the elements that will set in motion the development of knowledge in our society. The steps we have just indicated may perhaps fall under the rubric of the framework of immediate action. They also impinge on the medium-term context, and

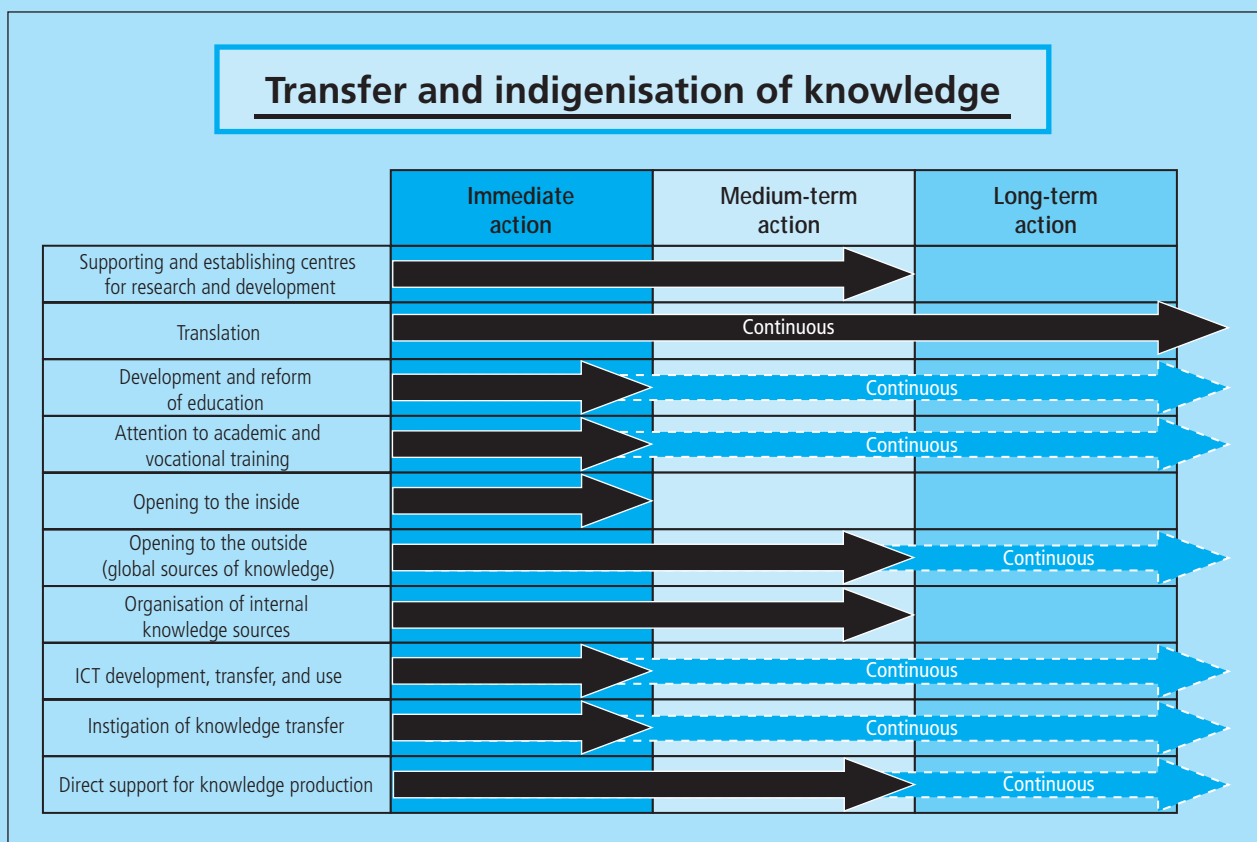
are priorities for the long term, which is to say for the transitional periods required to close the Arab knowledge gap in all its dimensions and fields.

The implantation of ICT mechanisms and the expansion of ICT usage levels form a groundbreaking and exemplary step in this regard. The reform of individuals' mental perspectives, which is linked to the reform of education and the development of culture in society, also forms an essential means for the consolidation of indigenisation. The knowledge revolutions in today's world rest on significant precedents in terms of the conception of man and nature. In our Arab culture, we still lack these precedents. This serves to entrench the knowledge gap and make the paths of indigenisation more complex. Indigenisation, for example, can happen through reform of education, and likewise requires

The knowledge revolutions in today's world rest on significant precedents in terms of the conception of man and nature. In our Arab culture, we still lack these precedents. This serves to entrench the knowledge gap and make the paths of indigenisation more complex

FIGURE 6-3

Priorities for action to build the elements of the knowledge society in the Arab world



The major challenge lies in changing the general culture of society and the priorities of officialdom throughout the Arab world, so that there is a universal conviction that building solid knowledge capital requires the creation of learning curricula in accordance with a solid educational philosophy and a clear vision

the promotion of translation, which gives Arab thought the opportunity for cultural cross-pollination through which to reformulate itself in light of the gains and achievements of modern knowledge.

Thinking about knowledge indigenisation in the Arab world calls for work on two levels: the institutional, which is included in the framework of the enabling environment, and the systemic, which takes into consideration the various dimensions of society. We thus face a project on the level of society as a whole, and not a project specific to a particular sector or interest. Given that the current picture of Arab knowledge performance is characterised by the absence of a comprehensive perspective, this sort of action will benefit us by linking together the different components of the knowledge field. Indigenisation the spirit of the new initiative, expanded reliance on ICT, and the building of institutions of creativity and innovation will serve as hoists to raise the level of knowledge, skills, technologies, and the various material and non-material resources that, we assume, will multiply within a knowledge society that aims to overcome the challenges of human development.

Some Arab countries of limited financial

means will undoubtedly find it difficult to make a rapid transition towards the knowledge society. Quantitative expansion in some fields of knowledge requires not only the availability of large financial and material resources; the major challenge is latent in the availability of qualified human resources capable of developing policies, strategies, plans, and educational curricula, implementing these, and evaluating them. The need to place investment in human educational resources at the top of the priorities for action throughout the Arab world is consequently obvious.

The above must be accompanied by attention to the quality of education and its outcomes and to ensuring its quality at its various stages. In this context, we envisage that attention should be given to ensuring quality in higher education and its fit with societal needs, given that it forms the main locomotive for responding to the requirements of the knowledge economy and in securing comprehensive integrated development.

The major challenge here lies in changing the general culture of society and the priorities of officialdom throughout the Arab world, so that there is a universal conviction that building solid knowledge capital requires the creation of learning curricula in accordance with a solid educational philosophy and a clear vision. The consolidation of a culture of productivity, efficiency, and quality, a culture of responsibility and accountability, and a culture of information and decision-making based on reliable knowledge are all particularly important in this regard.

Confronting these challenges will undoubtedly require the reinforcement of intercommunication and cooperation among Arab states to a much greater extent than is now the case through relevant regional and international organisations. These states are still working in isolation, each failing to take advantage of the expertise of the others and only rarely turning to the examples of successful practices dotted here and there on the Arab educational scene.

BOX 6-3

The Indigenisation of Science

Science is not the sum of knowledge and results acquired and transported from one place to another. Rather it is the effort for indigenisation that springs from the need of society itself; it is a spirit and a method, i.e., standards, values, and interactions. It is not to be possessed by derivation, borrowing, transportation, or purchase, but by effort, the effort to implant, indigenise, and deploy, taking into consideration local environmental and societal needs and the possession of the ability to formulate scientific, technological, and national policies. Science and technology have a structural systemic dimension whereby they interact with

the surrounding environment, and so the measure of their progress is the level of self control that this environment achieves [...]

Science and technology are not commodities that can be exchanged and imported. They are, before anything else, the organisational process of indigenisation that implants traditions of creation and innovation in the systems and institutions of society, for technological progress does not lie in the acquisition of imported hardware, but in the creation of local skills that can secure an industrial efflorescence with deep roots in society.

Source: Salim Yafut, *Makanat al-'Ilm fi al-Thaqafa al-'Arabiyya (The Place of Science in Arab Culture)*, Dar al-Tali'a, Beirut, pp.39-41.

*ACTION TO DEPLOY
KNOWLEDGE*

Action on the axis of knowledge deployment—with its various fields and activities—is linked to action on the two previous axes, of enablement and of indigenisation. Perhaps this division is an outcome of methodological necessity, for enablement is indigenisation and indigenisation is deployment. The process of building knowledge and a knowledge society in the Arab world is composed in interrelated fashion of the three axes under discussion. We should not expect indigenisation to bring about deployment; rather, we should practice deployment through indigenisation. Similarly, the enabling environment lets us achieve indigenisation. However, division of the composite and interactive project in the proposed plan is included within the implementing mechanisms, which we assume will be continuous.

Perhaps the acts of enablement, indigenisation, and deployment taken together absorb other linked processes, even though they may occur, collectively or individually, according to a methodology of separation.

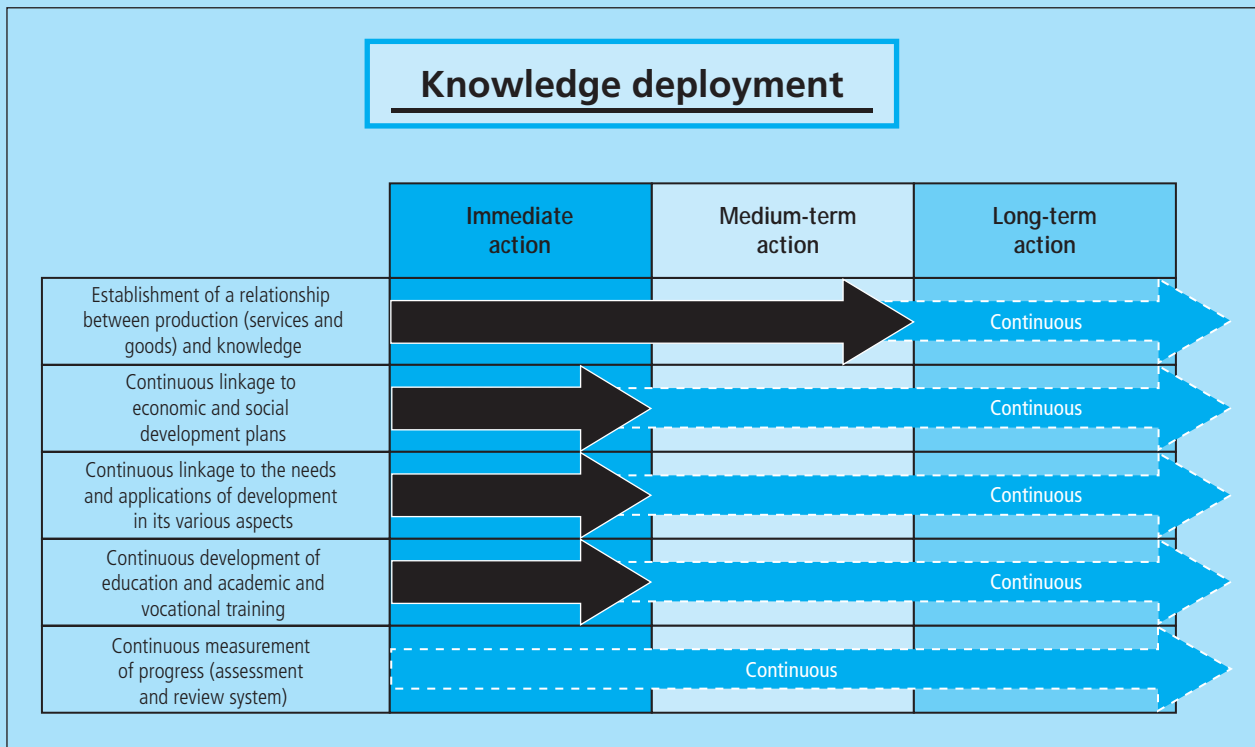
There is an element that regulates the different actions. This is related to the principle of openness to the knowledge gains of the age, intercommunication with its achievements, and preparation of the material, institutional, and educational apparatus to qualify our societies to close knowledge gaps and enter the new knowledge society.

In the sense of this axis, the word “deployment” means the use of new mechanisms, information, and approaches to work, deriving from the knowledge revolution in the economy and society. Its resonances, however, may fall short of comprehending the entirety of the task with which it is charged. From this follows our insistence that what is meant

We should not expect indigenisation to bring about deployment; rather, we should practice deployment through indigenisation

FIGURE 6-4

Priorities for action to build the elements of the knowledge society in the Arab world



Deployment is linked to the creation and reproduction of methods capable of turning the knowledge society and economy in a direction that confronts the needs and satisfies the growing desires of people

by deployment transcends the merely mechanical and imitative use of tools to assist knowledge and the service economy. It is linked to the creation and reproduction of methods capable of turning the knowledge society and economy in a direction that confronts the needs and satisfies the growing desires of people in a world marked increasingly by the phenomena of consumption. In response to these desires, the rhythm of production is rising, and companies, entrepreneurs, and minds are in competition to create markets that follow particular cycles in order to accommodate the increase in production.

Most of the actions in this axis are split between the medium and long term and operate in the field of planning and implementation with regard to economic, social, and cultural development, the strengthening of ties between production and knowledge, and the fields of academic and vocational training. Here, aim is to make us capable of successfully deploying the fruits of the knowledge society and economy in the service of human development in its broadest sense. One of the most important of these

goals is the establishment of a strong relationship between production and society's developmental needs on the one hand, and knowledge on the other, since it is no longer possible for new modes of the service and commodity economy to develop—in societies whose needs and aspirations are developing at break-neck speed—without being based on gains in knowledge. Economic movements in the tourism sectors, in market creation, and e-commerce, for example, have begun today to create economic, social, managerial, and financial spaces whose laws and prospects of liberalisation we cannot yet regulate. There must, therefore, be greater deployment of these methods and mechanisms if we are to empower ourselves to enter the new fields of the knowledge society and economy, with all the horizons that this opens for work and development.

A further action whose effect will likewise be felt over the long term with regard to knowledge deployment is the strengthening of channels of support for criticality in Arabic culture. The achievements of the new knowledge and the new methods for the deployment of

A further action whose effect will be felt over the long term with regard to knowledge deployment is the strengthening of channels of support for criticality in Arabic culture

BOX 6-4

Scientific Progress and Social Progress

It cannot be denied that any society can only overcome poverty, ignorance, and disease by means of the acquisition of modern science, hence science has basically come to mean the increase in the returns of human labor [...]

There is [...] a real question posed by the scientific revolution's relationship with the social revolution: is the first conditional on the second—as asserted by Marxists and other social scientists? Or is the first capable of suppressing the second—as hoped by the conservative and liberal leaders of the West?

This is a major problem, but an accidental one, if that is the right expression. The political and social revolution removes the barriers and obstacles without itself solving the tangible existing problems. Revolution does not make the poor rich, educate the ignorant, or cure the sick, but it opens the way to the science that alone can undertake these tasks.

Revolution distributes inherited good: science alone creates new good. Revolution generalises pre-

formed culture: modern science alone expands the horizons of knowledge and increases the number of specialisations. It is true, therefore, that in all circumstances and conditions, scientific progress and social progress are in balance. However, in the light of current global conditions, what is the use of saying that science will in the long term solve all human difficulties? Today's world is divided into cultural and national blocs, and debate must therefore be confined to the scope of each bloc. With respect to the Arab bloc the question posed is, what is the role of modern science in the Arab conception of the present and the future—bearing in mind that this general formulation comprises many subsidiary issues, most important among which are the role of science in Arab society and thought, the share of the Arabs in scientific progress in the past and present, the contribution of science to the solution of Arab problems, and the current Arab concern for science.

Source: 'Abdalla al-'Urawi, *Thaqafatuna fi Daw' al-Tarikh (Our Culture in the Light of History)*, Arab Cultural Centre, Beirut, 1983, pp.116-17.

knowledge technologies and their methods create many of the positive aspects of our age. These have reduced the stagnation of knowledge that dominates many aspects of life and thought in Arab reality. We assume that the new plans in the programmes of education and cultural media will in their turn engage in practices that enable the consolidation of new traditions of thought, work, and production.

The priorities for action on the deployment axis are to be carried through with an awareness of the difficulty of reaching the goal of human development. Actions in this field are to be directed towards the expansion of levels of Arab knowledge performance and its generalisation to the various productive and developmental sectors. They are also to be directed to opening up of the formulation of social and economic development plans using the means and tools provided by today's knowledge revolutions. Human development strategies require a multiplication of efforts, deepened intercommunication and openness, an inflow of resources, institution building, and the spread of a culture of rationality and success at work, in the family, at school and university, within factories and on worksites.

TOWARDS A NEW MECHANISM TO MEASURE ARAB KNOWLEDGE

Since we are suggesting work along a number of lines and directions, we cannot ignore the importance of finding a practical mechanism to measure progress towards the knowledge society that helps society as a whole. Such a mechanism would assist decision makers and specialists to recognise the stages of knowledge acquisition that have already been traversed and identify the gaps in them, so as to reach a more precise definition of markers of progress. Within this context, finding an integrated system to monitor the reality of knowledge in the Arab world today is a basic need. Indeed, in the Arab present, it forms the first step

towards a revival in Arabic knowledge performance and the acquisition of the principles of innovation, since programmes cannot be devised without measuring the gaps and knowing the degrees of imbalance that prevail in the various fields of knowledge.

THE ARAB KNOWLEDGE INDEX

There is no way to revive knowledge without a careful and objective check of the range of defects and gaps that have begun to broaden in the absence of a clear plan to overcome knowledge flaws in our society. We call, therefore, for the creation of a new index designed to give a more accurate picture of the state of Arab knowledge by transcending the traditional perspective of measuring knowledge production on the basis of indices that do not conform to the reality of Arab knowledge. We conceive of the proposed index as being distinguished by its exhaustive investigation of the state of information in circulation and by its formulation of indicators able to collate and interpret the various relevant interactions existing within the conditions of Arab knowledge.

Creating such an index will require collective work in which the various concerned societal bodies should participate. Should this be the case, the new index will emerge from the very core of Arab reality and agreement will be achieved on adopting it in analysis and approach and, consequently, on the formulation and application of policies and plans.

The index is a central step in preparations for the building of the Arab knowledge society, in that the foundations will be laid, the data compiled, and the indices devised in the framework of intercommunication with the self and its knowledge conditions, without ignoring the benefit of previous experiences in this field. This is because the creation of a proposed Arab knowledge index does not mean forsaking the gains built up by

We call for the creation of a new index designed to give a more accurate picture of the state of Arab knowledge

The index is considered a central step in preparations for the building of the Arab knowledge society: the foundations will be laid, the data compiled, and the indices devised in the framework of intercommunication with the self and its knowledge conditions, without ignoring the benefit of previous experiences in this field

experiences prior to ours so much as it means building an index that responds to the requirements of Arab reality and seeks to give knowledge a status that will equip it to act as the locomotive for renaissance and development. This suggestion should not be considered utopian, albeit utopias have their significance. Rather, it is included within the plans to help overcome the Arab knowledge gap through a step by step process of construction that assumes that an Arab knowledge index is only a first step on a long path.

CONCLUSION

The various proposals included in this vision and related to the establishment of the knowledge society in the Arab world are in alignment with the spirit and choices of human development

The various proposals included in this vision and related to the establishment of the knowledge society in the Arab world are in alignment with the spirit and choices of human development. At the same time, mention must be made of expanding the significations of the features associated with the knowledge society. Those linked to the containment of technological determinism and of the transformation of ICT into a replacement for the mechanisms of critical knowledge and historical investigation, which evokes both the total human dimension and historical specificities, are of particular importance here. In the measures for action that we have laid out in general fashion in the previous pages, we have been content to point to the major landmarks on the path leading to the highway of the knowledge society.

From time to time, along the three axes whose priorities for action we have been concerned to expound, we have paused to consider examples drawn from certain key sectors without going into detail. The Report considers that current knowledge performance has in common shared requirements, which may be subsumed under the major heading of the knowledge gap, which we consider to be dissimilar in the different parts of the Arab world. This calls for greater understanding of the Arab knowledge reality in each country

separately in order to sketch the specific features in advance of the kind of action required according to the size and nature of the gap.

In the vision and plan proposed here, we have been content to remain at the general and common level. We have identified the demand for a comprehensive perspective on the knowledge society. We have also sketched the essential requirements for integration with the knowledge society, namely, human and material resources, working tools, and horizons to which to aspire. The centre of gravity of this report has been the defence of the principle of "intercommunication" through partnership and productive and creative integration. The Report's vision has been translated into an achievable proposal and includes markers along the route to intercommunication, a route that will lead to integration into spaces of knowledge that fly the flag of humanity and human intelligence in the name of partnership and creativity.

***“And I say that life is indeed
darkness save when there is urge,
And all urge is blind save when
there is knowledge,
And all knowledge is vain save
when there is work...”***

GIBRAN KHALIL GIBRAN