

SCIENCE
& the Search for Meaning



Perspectives from International Scientists

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Templeton Foundation Press
Philadelphia and London

Templeton Foundation Press
300 Conshohocken State Road, Suite 670
West Conshohocken, PA 19428
www.templetonpress.org

2006 Templeton Foundation Press English Language Edition
© 2006 by Templeton Foundation Press
Original French Edition © 2005 Presses de la Renaissance

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Introduction translated by Caroline Rossiter; chapter 1, chapter 8, and chapter 13 translated by Tom Mackenzie; chapter 9 translated by Caroline West

Christian De Duve, "Mysteries of Life: Is there 'Something Else?'" is a slightly revised version of the original printed in *Perspectives in Biology and Medicine* 45, no. 1 (Winter 2002): 1–15. © The Johns Hopkins University Press. Reprinted with permission of The Johns Hopkins University Press.

Michael Heller, "Science and Transcendence," *Studies in Science and Theology* 4 (1996): 3–12, reprinted with permission from the European Society for the Study of Science and Theology.

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Designed and typeset by Kachergis Book Design

LIBRARY OF CONGRESS CATALOGING-IN-PUBLICATION DATA

Science et quête de sens. English

Science and the search for meaning : perspectives from international scientists / edited by Jean Staune.

p. cm.

Includes bibliographical references and index.

ISBN-13: 978-1-59947-102-0 (pbk. : alk. paper)

ISBN-10: 1-59947-102-7 (pbk. : alk. paper) 1. Science—Philosophy.

2. Science—Methodology. I. Staune, Jean. II. Title.

Q175.S359 2006

501—dc22

2006010778

Printed in the United States of America

06 07 08 09 10 11 10 9 8 7 6 5 4 3 2 1

Dialogue of Civilizations
Making History through
a New World Vision

AHMED ZEWAIL

The 2002 UNESCO conference, “Science et la quête du sens” in Paris, was devoted to science and the quest for meaning; the English title, “Science and the Spiritual Quest,” emphasizes the spiritual dimension, a realm beyond science. Similarly, this chapter,¹ which is based on my lecture given at the conference, is concerned with dimensions beyond science—our human existence in civilizations and cultures that may or may not be in a state of clash. As a scientist, I find these issues complex, but it is precisely this complexity that necessitates a new nondogmatic and rational approach in our quest for human understanding, our search for the truth and new knowledge through science, and our comprehension of the meaning and value of life through faith. My thoughts and reflections are guided by my experience so far in at least three civilizations—the Egyptian, the Muslim-Arab, and the American.

In thinking about the new century and the emerging world, some intellectuals have introduced concepts such as the “clash of civilizations,” as termed by Samuel Huntington, and the “end of history,” as expressed by Francis Fukuyama.² Both authors argue their cases with conviction; nonetheless, these ideas are controversial and debatable. As a scientist, I find no “fundamental physics” to these concepts. In other

words, it is not a fundamental principle of civilizations that they be in a state of clash with each other. Neither is it a fundamental principle to end history with one system over all other ideologies.

Here, I argue that the current world disorder results in part from ignorance about civilizations—lack of awareness or selective memory of the past and lack of perspective for the future—and in part from the economic misery and political injustices experienced by the have-nots, which represent some 80 percent of the world's population all across the globe and in *different* civilizations. These are the barriers for achieving the advanced state of world order and, if we can overcome them, we will reach the optimum—a dialogue of civilizations.

Dialogue or Clash?

According to the dictionary, civilization means an *advanced state* of human society in which a high level of culture, science, industry, and government has been reached. Individually, we are civilized when we reach the advanced state of being able to communicate with and respect others of different customs, cultures, and religions. Collectively, we speak of globalization as a means for bringing about prosperity in the world, yet globalization cannot be a practical concept if there are clashes of civilizations. Historically, there are many examples of civilizations that have coexisted without significant clashes.

The central argument in Huntington's thesis is that in this post-Cold War era, the most important distinctions among peoples are not ideological, political, or economic but cultural. He emphasizes the point that people define themselves in terms of ancestry, religion, language, history, values, customs, and institutions; he divides the world into eight major civilizations: Western, Orthodox, Chinese, Japanese, Muslim, Hindu, Latin American, and African.

I have several difficulties with this analysis, and perhaps the following questions and commentary may clarify my position. First, *What is the basis for these divisions of civilizations?* People belong to different cultures, nations have experienced (and continue to experience) differ-

ent cultures, and nations on the same continent may be influenced by different civilizations. In my case, from birth to the present time, I can identify myself as Egyptian, Arab, Muslim, African, Asian, Middle Eastern, Mediterranean, and American. Looking closely at just one of these civilizations, I note that the Egyptian people belong to a dynamic civilization with a multicultural heritage: Pharaonic, Coptic, Arabic, Islamic, not to mention the Persian, Hellenistic, Roman, and Ottoman influences. The same can be said of the European and American civilizations and others on different continents. The Western cultures of Europe, the United States, and Australia are far from uniform and homogeneous. Given the number of cultures within Europe and the United States, we should then expect a clash of civilizations within a single civilization, without having to look to the other seven. The forces uniting cultures and civilizations are not the result of simple divisions.

A second question is, *Is it fundamental that differences in cultures necessarily produce clashes?* Huntington contends that if the United States loses its European heritage (English language, Christian religion, and Protestant ethics) and its political creed (e.g., liberty, equality), its future will be endangered. From a personal point of view, I did not speak English when I came to the United States; I am not a Christian; and I was not taught Protestant ethics. Yet I integrated myself into my new, American culture while preserving my native culture(s), and I believe that both my “Eastern” and “Western” cultures have benefited from the marriage, without a clash. From a broader perspective, America’s strength has traditionally been in its “melting pot”; the country has been enriched—and continues to be enriched—by multi-ethnicity and the different cultures of its inhabitants. As a result, tolerance for different religions and cultures has become part of the American civilization. Provided the people can live in a constitutionally sound system of liberty and equality, intranational clashes are not fundamental; other problems are.

Turning to international relations, it is not obvious to me why civilizations have to acquire their power through imperialism at the expense of the others. Cultures and civilizations can be at their peak of achieve-

ment and yet coexist in harmony and even complement each other. The United States, Japan, and European nations are examples of this beneficial coexistence, created by building economic and cultural bridges. The key for achieving this state is to be part of a cooperative world system that represents and observes human liberty and fairness, and whose resolutions are enforced and implemented in a timely manner. This is difficult to achieve, granted, but I believe that visionary leadership can bring it within reach.

A final question is, *What about the dynamics of cultures?* Cultures are not static; they all change with time, and the degree of change is governed largely by forces of politics and economics. Let us consider my home country. Egypt's civilization was developed very early in human history and dominated the world for millennia, but lately the nation has become a developing one. This does not mean that Egypt has lost its civilization, but it does mean that, like others, it has changed with time due to many internal and external forces. In other words, the current state is not due to some intrinsic human or genetic flaw, but rather to the changing fortunes of time.

Other examples of cultural change in Europe and other parts of the world are well known, but the dynamics may be different—different in their time scales and the forces that provoke change. In all cases, however, the dynamics of change cannot be attributed solely to the intrinsic values of an isolated culture. We must take into account political and economic interactions within a culture and between the various cultures of the world. For example, the people of North and South Korea are of similar culture, but the notable disparity in progress between the two countries is due to economic and political factors; the same can be said of East and West Germany before reunification.

The above commentary does not address a problem that is fundamental and common to all cultures and civilizations—the population of have-nots, who have a dynamic of their own. During the European Middle Ages, the peak of Islamic civilization, the majority of Europeans were have-nots, but now most nations of the Muslim world are developing or are underdeveloped, with large populations of have-nots. Some

may believe that this is due to a flaw in the intrinsic values of the religion of Islam. It may be useful for me, as an educated Muslim (although I am not a scholar of Islam), to highlight some of the misunderstood principles of Islam and its dynamic civilization. This is also timely given the tragic events of September 11 (2001) in New York and Washington, D.C., their aftermath, and the association in many people's minds of these events with Islam.

Islam and Its Foundations

What is Islam? Islam is the religion and the way of life of about one-fifth of the world's population. There are 1.3 billion Muslims in the world today, 20 percent of whom are Arabs; 5 percent of Arabs are not Muslims. In 1970, there were 500,000 Muslims in the United States; now there are 6 to 7 million, 23 percent of whom are U.S. born. *Islam* is an Arabic word with a double connotation: "peace" and "submission to the will of God." Islam considers itself to be the continuation and the culmination of the earlier "God-sent" religions, Judaism and Christianity; the three are commonly called the monotheistic Abrahamic religions. God commands Muslims to respect all humanity, and Jews and Christians are referred to with distinction as the People of the Book, since they are fellow worshipers of the one God and the recipients of his scriptures (the Torah through Moses and the Gospel through Jesus). The prophet of Islam is Muhammad, who also is the descendant of Abraham through his first son, Ishmael.

Two concepts are basic in Islam³: the concept of the unity of God, and the concept of Islam as a way of life, including the civil and legal system. These two concepts are the core of the creed. The Islamic codes of morality are similar to those found in Christianity and Judaism. Muslims accept five primary obligations, commonly called the "five pillars" (*arkan*) of Islam. In practice, of course, Muslims can be seen observing them to varying degrees, for the responsibility of fulfilling the obligations lies on the shoulders of each individual. The pillars are the profession of faith (*shahadah*), prayer (*salah*), almsgiving (*zakah*), fast-

ing (*sawm*) during the holy month of Ramadan, and performance of the pilgrimage (*hajj*), the journey to Mecca, for those who can physically and materially afford it, at least once in one's lifetime. Muslims also accept *shariah*, the body of Islamic sacred laws derived from the *sunnah* (custom and religious practice of the Prophet), the *hadith* (documented sayings and teachings of the Prophet), and the Qur'an.

The Qur'an is the scripture of Islam, and Muslims believe it to be authored by God himself and revealed to Muhammad by the Angel Gabriel. The word for God in Arabic is "Allah" and it is used by all Arabs, even Arab Christians and Jews. The Qur'an was revealed in segments of varying length, addressing various issues and circumstances, over the span of twenty-three years, the period of Muhammad's prophethood. Because it is God's direct words, the Qur'an remains in its original language, word for word and letter for letter. Once rendered into any other form or language (even Arabic), it is no longer called the Qur'an, because the direct, divine words are replaced by human words, called interpretations or translations of the meaning. The literary style of the Qur'an is so powerful that to the early Arabs it was an inimitable miracle. The style appears to share features with poetry—again, the Qur'an defies description, being considered neither poetry nor prose but a class unto itself—and this poses difficulty for some non-Muslim readers who like Bible stories told in chronological order. There is one story in the Qur'an (of Joseph) that unfolds chronologically, and to these readers it may still seem poetic.

The Qur'an makes explicit statements about human existence, integrity, and on everything from science and knowledge to birth and death. "Read!" is the first word in the first verse of the direct revelation to the Prophet (Surat al-'Alaq 96:1), and there are numerous verses regarding the importance of knowledge, science, and learning; Muslims position scientists along with the prophets in the respect they are due. The Qur'an provides a general call to humanity: "Cooperate with one another in righteousness and piety, and do not cooperate in sin and transgression" (Surat al-Ma'ida 5:2).

Tragically, some fanatics and some in the media abuse Islam and dis-

tort the meaning of its principles through terms such as *jihad* and *terrorism*. The word *jihad*, for example, is now routinely translated as “holy war,” specifically the kind of holy war practiced by Muslims against unbelievers or infidels. This phraseology is far removed from the true concept of *jihad* in Islam. According to *Lisan al-'Arab*, the most authoritative Arabic dictionary, the word *jihad*, which derives from the root verb *jahada*, means simply to exert *maximum* effort or striving. The theological connotation of this maximum effort is that it is exerted in striving for betterment—in the struggle within oneself for self-improvement, elevation, purification, and enlightenment. For example, in Egypt, the word *mujtahid* as applied to students means a high achiever. There are other forms of *jihad*, including the use of economic power to uplift the condition of the needy, and the physical *jihad* in the struggle against oppression and injustice. The term is also used to denote a war waged in the service of religion. Physical *jihad* is limited by the following Quranic concepts: “Fight those who fight you, but do not transgress” (2:190); that is, war is justified only if it is defensive in nature. “But if they incline to peace, incline toward it as well, and place your trust in God” (8:61). War is not fought for the purpose of vanquishing or crushing the enemy; peace must be seized at the earliest opportunity. This stress is so important for Muslims that the normal greeting is “Peace be upon you.” Islam’s peace leaves no room for terrorism, which is the antithesis of *jihad*. Terrorism is condemned.

A Frustrated Civilization

In general, the West remembers little of the vital role of the Islamic civilization, one of whose centers was in Spain, when Europe was in the so-called Dark Ages. I doubt if the people on the streets of New York, Los Angeles, London, and Paris today are aware of how advanced Islamic civilization was. It provided the world with new knowledge in science, philosophy, literature, law, medicine, and other disciplines. Examples of profound contributions at the turn of the first millennium include those of Ibn Sina, renowned for his work in medicine and

known in the West as Avicenna; Ibn Rushd (Averroës) in philosophy and law; Ibn Hayyan (Geber) in chemistry; Ibn al-Haytham (Alhazen) in optics; Omar Khayyam, a renowned poet and mathematician; and al-Khwarizmi, known for his profound contribution to algebra (an Arabic word) and whose name is now commemorated in the word *algorithm*. Bernard Lewis described this civilization well when he traced the history of the region: "For many centuries the world of Islam was in the forefront of human civilization and achievement." He adds, "Islam created a civilization, polyethnic, multiracial, international, and one might even say intercontinental. . . . It was the foremost economic power in the world. . . . It had achieved the highest level so far in human history in the arts and sciences of civilization."⁴

I also doubt that people remember that tolerance was a predominant feature of this so-called Eastern civilization. It was during the peak of the Islamic civilization that Muslims, Jews, and Christians lived together peacefully in Spain and other areas of the Muslim world, and it was in the West that the Jews suffered most from discrimination and torture. Cairo was once the place where Maimonides, the Jewish philosopher, studied the ideas of Avicenna and read Aristotle's work, translated into Arabic by, among others, Christian Arab scholars. Using current events in the world today to ignore the contributions of Islamic civilization and to discredit Islam as intolerant is not conducive to world peace and progress.

Unfortunately, some of the problems facing the Muslim world are the making of Muslims themselves. Many in the Muslim world are not aware of the real message of Islam and some leaders and some fanatics use Islam to enhance their own power and political ambition. Moreover, some create new ideologies in the name of Islam and use their interpretations of the Qur'an in debates to drain the human and intellectual power of the society. I doubt if these people truly understand the meaning of enlightenment and the critical role it played in spreading Islamic civilization, not only among Muslims but also throughout the world at large for nearly a millennium. They also may have forgotten that the Qur'an emphasizes the responsibilities of individuals in im-

proving themselves and their societies, stating, “Indeed! God will not change the good condition of the people as long as they do not change their state of goodness themselves” (al Ra’d 13:11).

Today there is a state of discontentment and frustration in the Muslim and Arab world. These feelings are caused by domestic problems and by global or regional political and economic problems. Because of their glorious past, Muslims are asking, *What went wrong?* As evidenced by past achievements, Islam in its proper state is not a source of backwardness and violence. However, one cannot ignore the influence of modern colonization and occupation by Western powers, the disappointment in the alignment with the Eastern or the Western bloc (communism versus capitalism), which failed to yield prosperity, nor can one overlook domestic problems that often result from the ruling by nondemocratic regimes, in many cases supported by Western governments. Moreover, they see through the world media the dominance and prosperity of the West, the humiliation in Palestine, Bosnia, and Chechnya, and their unfavorable economic status in comparison with the rest of the world.

I do not agree with a conspiracy theory of the West against the East; neither do I believe that all the problems are caused by the West. But I do believe that the West should do more to help, as detailed below. Islamic civilization helped Western civilization in the past and it is reasonable to ask for reciprocation now. Furthermore, new methods for better communication are key to continued progress and coexistence. As discontentment and frustrations grow in the have-not world of more than one billion, the world faces increasing risk of conflict and instability, and such troubles will come from boundaries beyond the Arab and Muslim world.

The World of the Have-Nots

In our world, the distribution of wealth is skewed, creating classes within and among populations and regions of the globe.⁵ Only 20 percent of the population enjoys the benefit of life in the “developed world,” and the gap between the haves and have-nots continues to increase, threaten-

ing our stable and peaceful coexistence. According to the World Bank, out of the 6 billion people on Earth, 4.8 billion are living in developing countries; 3 billion live on less than \$2 a day; and 1.2 billion live on less than \$1 a day, which defines the absolute poverty standard; 1.5 billion people still do not have access to clean water, with concomitant risk of waterborne diseases; and about 2 billion people are still waiting to benefit from the power of the industrial revolution. The annual per capita gross domestic product (GDP) in some Western, developed countries is \$35,000, compared with about \$1,000 in many developing countries and significantly less in underdeveloped populations. This factor of up to 100 times the difference in living standards ultimately creates dissatisfaction, violence, and racial and ethnic conflict. Evidence of such dissatisfaction already exists; we have only to look at the borders of developed with developing or underdeveloped countries (for example, in America and Europe) or at the borders between the rich and poor within a nation.

Some believe that a new world order can be achieved through globalization to solve such problems such as population explosion, the economic gap, and social disorder. This conclusion is questionable. Globalization, in principle, is a hopeful ideal by which all nations may prosper and advance through participation in the world market. Unfortunately, in its present form, globalization is better tailored to the prospects of the able and the strong, and, although of value to human competition and progress, it serves that fraction of the world's population that is able to exploit the market and the available resources. Moreover, nations have to be ready to enter the gate of globalization, and such entry requires a passage over economic and political barriers.

Barriers to Progress

What is needed to overcome barriers to progress? The answer to this question is not trivial, because many cultural and political considerations are part of the total picture. Nevertheless, I believe that there are essentials for progress that developing and developed countries should seri-

ously consider. For developing countries, there are three essential goals: (1) *building the nation's human resources*, taking into account the necessary elimination of illiteracy, the active participation of women in society, and the need for a reformation of education; (2) *restructuring the national constitution*, which must allow for freedom of thought, minimization of bureaucracy, development of a merit system, and a credible (enforceable) legal code; and (3) *building the science base*.

This last goal is critical for both development and world participation. With a strong scientific base supporting improved education and research, it is possible to enhance the science culture, foster a rational approach, and educate the public about potential developments and benefits. The benefits of science and technology to society are obvious but, just as important, proper science education provides society with rational thinking and thought processes. If absent, a huge void in analytical thinking will be filled with ignorance and even violence. Science is the backbone of progress but, just as important, its knowledge preserves one of the most precious values of humanity—enlightenment.^{6,7}

The mindset that such a science base is only for those countries that are already developed is a major obstacle to the have-nots. Moreover, some even believe in a conspiracy theory that the developed world will not help developing countries and that they try to control the flow of knowledge. The former is the “Which came first, the chicken or the egg?” argument, because developed countries were developing before they achieved their current status. Recent success in the world market in developing countries, such as China and India, is the product of their developed educational systems and technological skills in certain sectors—India is fast becoming one of the world leaders in software technology, and products labeled “Made in China” are now all over the globe. As for the conspiracy theory, as stated above, I personally do not give significant weight to it, preferring to believe that nations interact in their mutual interests.

What is needed is acceptance of responsibility in collaboration between developing and developed countries. For the developed world, three essentials are identified:

- *Focusing of aid programs.* Usually, an aid package from developed to developing countries is distributed to many projects (in many cases, most of the aid is for military support). Although some of these projects are badly needed, the number of projects involved and the lack of follow-up (not to mention the presence of corruption) means that the aid does not result in big successes. More direct involvement and focus are needed, especially to help centers of excellence achieve their mission, according to criteria already established in developed countries.
- *Minimization of politics in aid.* The use of an aid program to help specific regimes or groups in the developing world is a big mistake, as history has shown that it is in the best interests of the developed world to help the *people* of the developing countries. Accordingly, an aid program should be visionary in addressing real problems and should provide for long-term investment to ensure true development.
- *Partnership in success.* There are two ways to aid developing countries. Developed nations can either give money intended simply to maintain economic and political stability or they can become partners and provide expertise and a follow-up plan. This serious involvement would be of great help in achieving success in many different sectors. I believe that real success *can* be achieved, provided there exists a sincere desire and a serious commitment to partnerships beneficial to all parties.

Global Returns

What is the return to rich countries for helping poor countries? At the level of the individual, there are religious and philosophical reasons that make the rich give to the poor—morality and self-protection motivate us to help humankind. For countries, mutual aid provides (apart from its altruistic and moral value) insurance for peaceful coexistence and cooperation for preservation of the globe. If we believe that the world is becoming a village because of information technology, then in that vil-

lage we must provide social security for the less privileged, or we may promote a revolution.

Healthy and sustainable human life requires the participation of all members of the globe. Ozone depletion, for example, is a problem that the developed world cannot handle alone—not only the haves use propellants with chlorofluorocarbons (CFCs). Transmission of diseases, depletion of natural resources, and the greenhouse effect are global issues, and both the haves and the have-nots must address solutions and consequences. Finally, there is the growing world economy. The markets and resources of developing countries are a source of wealth to developed countries, so it is wise to cultivate a harmonious relationship for mutual aid and mutual economic growth.

A powerful example of visionary aid is the Marshall Plan given by the United States to Europe after World War II. Recognizing the mistake made in Europe after World War I, in 1947, the United States decided to help rebuild the damaged infrastructure and to become a partner in Europe's economic (and political) development. Western Europe is stable today and continues to prosper, as does its major trading partner, the United States. The United States spent a mere 2 percent of its GNP on the Marshall Plan from 1948–51. A similar percentage of the \$6.6 trillion of the U.S. GNP in 1994 would amount to \$130 billion, almost ten times the \$15 billion a year currently spent for all nonmilitary foreign aid and more than 280 times the \$352 million the United States gave for all overseas population programs in 1991.⁸ The commitment and generosity of the Marshall Plan resulted in a spectacular success story. I can see this happening again for Palestine to build a peaceful and prosperous Middle East, and for Africa and Latin America.

It is in the best interests of the developed world to help developing countries sustain a high level of growth to join a new world order and global market. Some developed countries are recognizing the importance of partnerships, especially with neighbors, and attempts are being made to create new ways to support and exchange the know-how; examples include the United States and Mexico and Western and Eastern Europe. The rise of Spain's economic status is in part due to the partnership within Western Europe. By the same token, it is in the best inter-

ests of developing countries to address the issues of progress seriously, not through slogans, and with a commitment of both will and resources in order to achieve real progress and to take their places in the developed world.

Building Bridges

Building bridges between cultures and nations is not easy, but the circumstances of the modern world do not permit any culture or nation to remain isolated and insulated. In this century, we are fortunate in having the means to construct such bridges, the mobility to acquire the learning of other cultures, and the human contact that enhances tolerance of other cultures and religions. My own personal experience may be relevant. I am “bicultural.” By my fiftieth birthday, I had spent almost equal amounts of time in Egypt and the United States, in the culture of the East and in the culture of the West.

I consider myself fortunate to be enriched by these two cultures, with no culture clash—to gain education in one and contribute to human knowledge in the other, to foster an Eastern tradition in a Western society, and to help facilitate the interaction between the East and the West. This is not new in history. I can envision that the same thing happened when Alexandria, where I received my university education, was a beacon of knowledge. Its famous library, Bibliotheca Alexandrina, brought the West to the East more than two millennia ago.

Science is a universal culture. In the big picture, this universality unites scientists in their search for the truth, no matter what their origin, race, or social background. When I look back at the origins of the science of time and matter, which is central to our research at Caltech, I find a real dialogue. The Eastern, Egyptian civilization I came from was the first to introduce the astronomical calendar around 4240 B.C., measuring accurately the period of a day in a year and, by 1500 B.C., the period of an hour in a day. This was achieved by observing the event of the helical rising of the brilliant star Sothis (or Sirius) and introducing the new technology of sun-clocks or sundials, respectively.

The Western, U.S. civilization I live in gave the world the time reso-

lution of a femtosecond, a millionth of a billionth of a second, the speed needed to record atoms in motion. The concept of the atom, invisible until recently, was given to the world by Democritus of the Greek civilization twenty-five centuries ago. How wonderful and significant that civilizations of different cultures and times have introduced through science enormous benefits to all humanity. It was the rational tradition, in this case of science, that facilitated such building of bridges over millennia of time.

The complexity in world affairs is real and no one can claim that the solutions to world problems are obvious. Whether because of their glorious past or their present geographical and cultural richness, all nations have an important role in helping to solve world problems. As the sole superpower in the world today, the United States has a special role because of its economic, scientific, and military power, but all nations together have responsibilities for a peaceful coexistence in this world.

While the strongest country on Earth must play a fundamental leadership role in combating terrorism together with the international community, it must not lose sight of its leadership role in working for human rights and in reducing the gap between rich and poor, between haves and have-nots. The United States has the opportunity to lead the globe to become a *united* world, to get people all over the world to think of each other as fellow human beings. I vividly remember the American image in the 1960s of a man going to the Moon for the sake of humanity. As Neil Armstrong said in his first words on the Moon: "One small step for man, one giant leap for mankind." The Marshall Plan and the Peace Corps are two examples of visionary initiatives that are representative of that American image of doing great things for humanity.

True, the United States cannot possibly solve every problem in the world, but as the most powerful nation, it should stand tall as a leader and be a role model for others. People around the globe look up to America and many people wish to have an American system of freedom and values. America can be a real partner in helping solve many problems around the world. The reality of the American position was expressed by Zbigniew Brzezinski: "America stands at the center of an interlocking

universe, one in which power is exercised through continuous bargaining, dialogue, diffusion, and quest for formal consensus, even though that power originates ultimately from a single source, namely, Washington, D.C.”⁹

If history is a coherent and evolutionary process, as argued by Francis Fukuyama, liberal democracy may constitute the end point of humankind’s ideological evolution and the final form of human government, and thus it constitutes the “end of history.” The argument is supported by the success of the system’s economics (free market) and by the successful emergence of the system (democracy) over rival ideologies such as hereditary monarchy, fascism, and communism. This view is controversial, as many believe that Western democracy is not the only viable model of government for the rest of the world; other forms or combinations of systems may be appropriate for different cultures. However, whatever the nature of the system, I believe that human liberty and value, which are basic principles of democracy, are essential for leaps of progress and for the best utilization of human resources. These principles should be exported to the have-nots, but with an understanding of cultural and religious differences, not with hegemony.

Ultimately, with the power of science and technology, and with faith, we will unveil the true nature of our unique consciousness as homo sapiens, the significance of our genetic unity despite race, culture, or religion, and our need for appreciating binding human values. The greatest enemy of human aspiration is ignorance, whether it manifests itself in distorted views of faith, distorted views about other peoples, the failure to recognize the importance and use of new knowledge and new technology, or misunderstandings about nutrition and diseases. It is the source of virtually all human misery.

In this world, we need to build bridges between people, cultures, and nations. Even if we disagree on some issues, these bridges will help us recognize that we live on one globe with common objectives for peaceful coexistence. The key is not to ignore the have-nots, not to ignore the frustrated part of the world. Poverty and hopelessness are sources for terrorism and disruption of world order. Better communications and

partnerships will lessen the divide between “us” and “them.” We must not allow for the creation of barriers through slogans such as the “clash of civilizations” or the “conflict of religions”—the future is in dialogue, not in conflicts or clashes. We need visionary leaders who make history, not leaders who envision the end of history.

NOTES

1. I wish to acknowledge very useful discussions with Dr. Dema Faham and Dr. Gasser Hathout; Dr. Hathout provided the verses (from the Qur’an) on *jihad*. I also wish to thank Dr. Mary Knight for the careful reading of the manuscript, as well as acknowledge the concise write-up, “Islam: An Introduction,” written by the staff of Saudi *Aramco World* (January-February 2002); and, “Glimpses from the Quran,” published by the Islamic Center of Southern California (October 2001). Some parts of this chapter are based on presentations I have made in published papers in *Nature* (London), *Proceedings of the Pontifical Academy of Sciences*, and in *Voyage through Time: Walks of Life to the Nobel Prize* (Cairo: The American University in Cairo Press, 2002).

2. Samuel Huntington, *The Clash of Civilizations and the Remaking of World Order* (New York: Simon & Schuster, 1996); idem, “Keynote Address: Colorado College’s 125th Anniversary Symposium: Cultures in the 21st Century: Conflicts and Convergences,” February 4, 1999; Francis Fukuyama, *The End of History and the Last Man* (New York: Avon Books, 1992).

3. See Karen Armstrong, *A History of God: The 4000-Year Quest of Judaism, Christianity and Islam* (New York: Ballantine Books, 1993).

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