

Epistemological Bias
IN THE PHYSICAL AND SOCIAL
SCIENCES

The book cover features a central teal-colored rectangular area. On the left side of this area is a stylized, white, semi-transparent image of a human head in profile, facing right, with a brain-like structure visible inside. The background of the teal area is a complex pattern of white and light blue lines, resembling a circuit board or a neural network. The title 'EPISTEMOLOGICAL BIAS' is prominently displayed in the center of the teal area. 'EPISTEMOLOGICAL' is in white, uppercase, sans-serif font, and 'BIAS' is in a much larger, bold, red, uppercase, sans-serif font. Below the title, the subtitle 'in the Physical & Social Sciences' is written in a smaller, red, lowercase, sans-serif font. At the bottom of the teal area, the text 'Edited By: Abdelwahab M. Elmessiri' is written in a white, sans-serif font. Below this, in a very small, red, uppercase, sans-serif font, is 'THE INTERNATIONAL INSTITUTE OF ISLAMIC THOUGHT'. The entire teal area is flanked by two vertical white bars on the left and right sides.

**EPISTEMOLOGICAL
BIAS**

in the Physical & Social Sciences

Edited By: Abdelwahab M. Elmessiri

THE INTERNATIONAL INSTITUTE OF ISLAMIC THOUGHT

IIIT Books-In-Brief Series

EPISTEMOLOGICAL BIAS in the PHYSICAL and SOCIAL SCIENCES

Edited by

Abdelwahab M. Elmessiri

Abridged by Alison Lake

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IIIT Books-In-Brief Series

The IIIT Books-In-Brief Series is a valuable collection of the Institute's key publications written in condensed form designed to give readers a core understanding of the main contents of the original. Produced in a short, easy to read, time-saving format, these companion synopses offer a close, carefully written overview of the larger publication and it is hoped will stimulate readers into further exploration of the original.

Epistemological Bias in the Physical and Social Sciences, of which Elmessiri is the editor and author of the first paper, is an anthology of writings on the subject of Bias originally published in Arabic by IIIT and subsequently translated into English. This Books-in-Brief version is an abridged edition of the English translation.

The collection of papers making up the anthology, explore and critique an issue widely accepted in the Muslim academic world as an essential and defining aspect of academic knowledge despite being a western philosophy of science and thought. This is the dominance of philosophical positivism, and a near total adoption as well as unquestioned acceptance of paradigms, terminologies, and research models that are in fact alien to the socio-economic-religio realities of the Muslim world. So how credible is their application and viability? For Elmessiri, the question of bias in methodology and terminology is a problem that faces researchers east, west, north and south; however, it faces Third World intellectuals with special keenness, because although they write in a cultural environment that has its own specific conceptual and cultural paradigms, they nevertheless encounter a foreign paradigm which attempts to impose itself upon their society and upon their very imagination and thoughts. Why not establish a new science, ideally suited for the purpose, with its own mechanisms, methodologies and points of reference to deal with epistemological biases and open up the gate of *ijtihad* with respect to them?

The papers aim to discover some of the biases latent in our terminology, methodologies, research tools, and conceptual principles, and to propose alternative ones marked by a greater degree of independence and neutrality. This is not to belittle the human value of the West's creative contributions but to emphasise the danger of making it the ultimate point of reference and then trying to continuously play 'catch up' with it.

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Epistemological Bias in the Physical and Social Sciences

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INTRODUCTION

This book explores an important but neglected academic issue: the widespread adoption and acceptance of paradigms, terminologies, and research models alien to the socio-economic-religio realities of the Muslim world. Researchers everywhere face the question of bias in methodology and terminology, but this problem is especially acute among Third World intellectuals. Although they write in cultural environments with their own specific conceptual and cultural paradigms, they also encounter a foreign (Western) paradigm that permeates their societies and thought processes.

These paradigms have advantages in the West's economic and political domains but do not always connect with the reality of non-Western peoples and can therefore have a distorting effect. Scholars who abandon indigenous paradigms and biases of their own particular existential and historical situations adopt Western paradigms in the process, and start to view themselves from a Western point of view, even when it is biased against them. Any community becomes threatened when it adopts imported alien paradigms and points of view, sometimes without profound knowledge of the epistemological implications of such paradigms.

With the rise of Arab nationalist thought, talk about identity and cultural specificity has intensified, but without comprehensive and methodological study. The current lack of neutrality in the Arab social sciences could be remedied by establishing a new science with its own mechanisms, methodologies, and points of reference to address epistemological biases and invite *ijtihad*, or interpretation.

Bias is the combination of latent values underlying a paradigm and the procedures and methodologies that guide researchers. These values,

sometimes in the form of models or conceptual metaphors, also connect with research methodologies and are very difficult to separate. “Progress” refers to a metaphor that compares the movement of history to a straight line leading to a definite point, versus cyclicity.

Many implicit epistemological metaphors come biased and ready-made from the West, and limit freedom of research and thought. In identifying and addressing epistemological bias we may create an alternative paradigm. This book’s case studies address this issue and explore latent bias in a particular field; cite specific examples; explain how these biases work and orient research; and cite examples that have been overlooked owing to the bias of the prevalent model, and that can only be observed via a new methodology expressing a new paradigm.

In these studies, researchers would describe their own biases and propose alternatives in an attempt to increase inquiry concerning Western culture and its epistemological paradigms. These alternative paradigms would not necessarily replace prevalent paradigms but would function as more complex means to study Arab/Muslim societies. It is also hoped that the new paradigms would enrich prevalent ones and widen their parameters, transforming them from closed paradigms based on modern Western assumptions into open-ended universal paradigms. An independent Arab/Muslim paradigm would not imply denial of Western cultural values. The new paradigm might either widen the parameters of the concept of progress or dispense with it altogether. A more complex and objective method of observation could be developed and address the problem of Arab researchers’ use of Western-biased methodology and tools.

This book seeks to emphasize the creative, revolutionary character of rebutting bias and to help readers recognize and surmount it. Hopefully the science (*fiqh*) of bias will contribute to the defense of the specific, the particular, and the human against the deconstructive, the abstract, the general, and the non-human.

Chapter One

The Gate of Ijtihad: An Introduction to the Study of Epistemological Bias

Abdelwahab Elmessiri

Human life consists of gestures, deeds, behaviors, incidents, and thousands of other taken-for-granted acts. Apart from involuntary functions such as breathing, every action is a significant outcome of a conscious or unconscious choice, and reflects a person's culture and perceptions. Through the eyes of a society or individual, for example, inner defeat can transform everything into a sign of downfall, whereas for another society or individual, inner victory transforms the same objects into signs of triumph. Such an example demonstrates the significance and variance of bias.

Every human behavior is culturally significant and represents some epistemological paradigm and perspective. A paradigm is a mental abstract picture, an imaginary construct, and a symbolic representation of reality that results from mental reconstruction and deconstruction. The mind assembles some features from reality, rejecting some and keeping others, rearranging them in order of priority and to correspond to reality. The paradigm can exaggerate those elements it deems essential and underplay all others. Each paradigm is epistemological with its intrinsic and fundamental criteria, beliefs, hypotheses, and answers.

Bias, the advocacy of a particular point of view, is associated with the selective human mind and its process of perception. Bias is organically integrated with language and culture, and is language-specific, making language a biased tool. Bias is inevitable and arises from human uniqueness and freedom of choice. Despite its limits, human language can achieve successful communication to help overcome bias and build epistemological paradigms although they arise from a particular cultural experience.

Some biases are explicit and conscious, whereas others are implicit and unconscious. Unconscious bias happens when someone internalizes an epistemological system with its premises and priorities, and unconsciously sees the world only through it. Bias appears in many other forms and is not always logical in its manifestation.

Bias toward the Western cultural paradigm is one of the most widespread forms of bias worldwide. Those who abandoned our heritage did so without realizing the implication of this behavior and without any creative critical study of each heritage and culture. The Islamic world, which entered into a bitter conflict with this cultural formation from the start, was ultimately divided between Western imperialist powers. Recently, catching up with the West has motivated all so-called revival projects in the “Third World,” including the Islamic world. This can be seen most clearly in secular liberal thought, where the “Renaissance” meant primarily the importation of Western thought and theories and the adoption of the Western cultural paradigm. Arab and Muslim societies, therefore, were to be “reformed” to meet that paradigm’s standards.

Such efforts have over time caused bias among Arab intellectuals for Western heritage and neglect of their own heritage. Such educated people occupy important offices and are dangerous because they reshape the value system along Western lines and propagate the paradigm. A cultural paradigm usually embodies a full cognitive paradigm containing a value system. The modern Western paradigm, which is utilitarian and rational-materialist, underlies such examples and most of human knowledge, sciences, and attitudes. It manifests itself in human terminology, axioms, research methods, and procedures. This materialistic paradigm is the most dominant because Western imperialism has internationalized its own cultural paradigm and imposed it on numerous societies, causing the misconception that the Western paradigm is universal.

This paradigm is based on centralist assumptions about a universe that is immanent, not transcendent. Second, human and natural phenomena form one continuous whole, the same laws applying to both in equal degree. Human beings are thus an inseparable part of the material-natural order. This view produces bias toward the material and natural at the expense of the immaterial and human, as well as towards the perceptible, the measurable, and the quantitative against the imperceptible, the qualitative, and anything that cannot be measured. Western societies are considered the peak of this universal, evolutionary, unilinear, and natural process and are, therefore, a model to be imitated. However, many such assumptions have been proven invalid. It has been discovered that natural resources are limited and the human mind is finite.

Some mechanisms can help us surmount such biases. Knowing that bias is inevitable is the first step toward overcoming it. Our theoretical effort to discover bias must include the whole theoretical structure of Western philosophy. A more radical, complex, and comprehensive outlook should be based on the assumption that no single historical or cultural course exists. We should be open to different world civilizations and benefit from their cultural and intellectual traditions that could deepen our understanding of humankind, society, and nature. While eliminating bias we should form an alternative paradigm that benefits from all previous human experience, not excluding the Western.

A proposed alternative paradigm and scientific approach would stem from our indigenous Islamic heritage; work toward a comprehensive theory; start from the knowledge that humans occupy a central position in the universe; include a non-materialist category; operate in a generative (non-cumulative) manner; and allow for incomplete certainty and continuous *ijtihad*.

Chapter Two

Bias in Western Schools of Thought: Our Heritage as the Starting Point for Development

Adel Hussein

The Arab and Muslim world has entered a phase of critical revision of our traditional concepts and positions on the intellectual and theoretical levels. The social sciences long relied on stock theories that prevented our scholars from formulating their own critical observations through practice. In the epistemological realm, the predominance of Enlightenment notions meant “secularism” prevailed in social affairs. The Western approach aimed to merge social and natural sciences, and we in the East adopted the same approach. Yet for the social sciences to acquire academic legitimacy and recognition as being objective, universal, reliable, and scientific, they must be founded on solid knowledge based in all human societies and their respective histories.

In the limited (Western) scope of social sciences, theoretical models largely focused on conflict between labor and capital and secular concepts and ideas of materialistic progress. In fact, the problems and challenges faced by Western civilization in the contemporary era can

no longer find solutions on the social and economic levels of Western civilization, a phenomenon that has yet to be fully studied and analyzed. We face different questions and challenges from those in the Western experience and require the development of schools of different thought and methodologies.

Throughout the last two centuries the standard thesis has been that classical science is originally European, emanating directly from Greek philosophy and science. Economic discourse justifies a superior power over the world, which then becomes economically dependent on an international division of labor. All forms of social organization and political management outside the West are considered inferior and incapable of renewal and development. This resulting dogma justifies imperialism and Western hegemony in its worst forms.

Independent practitioners of social sciences in our Eastern societies have grown increasingly cautious about importing the intellectual dependency in Western social theories. This critical view has been reinforced by the detection of bias and prejudice of Western studies regarding our history and heritage. Many empirical studies demonstrate the real value of our achievements and have identified some specific characteristics of the course of our own history. An independent theoretical practice that relies on empirical results and is supported by a general critical approach is preferable.

Western schools of thought confirmed that human beings are by nature worldly (secular) and place physical self-interest above any other consideration. This viewpoint emphasizes technological and industrial development as a way to gratify this materialist self-interest. In this process, we do not reject some Western theoretical constructs but must sort out what is Western, what is universal, and what is consistent with our own value doctrine. Many such concepts, for example, relate to secularism and might not be consistent in our society and economic system. Our society's essential influence and ultimate point of reference come mainly from Islam. Formulation of the future under the influence of Islam and its cultural heritage is the responsibility of independent theorization or contemporary fiqh and ijtihad.

For developing countries, self-confidence in dealing with dominant nations is the most important value regarding independent economic and cultural development. Serious adoption and implementation of this aim will mean a radical revolution in all aspects of life. Development policies will have to be structured to cope with this process.

An overall strategy of gratifying basic needs with the ultimate goal of independence can likely integrate the following six principles: the relationship with the outside world; self-reliance; the role of the state in supporting independence; strategy in maximizing economic surplus; distribution; and development as a complex process. The social side of development relies on mobilization of the masses. Our main means of realizing this independent development is through a concept of social action that seeks to mobilize diverse and competing energies within a specific society-nation via appropriate institutions.

Great revolutions are usually fueled by a solid doctrine, and Islam, in particular, embodies such a doctrine. The independence model implies an unrelenting confrontation with major powers on the cultural, political, and economic fronts, but the model instead embodies a minor struggle against interests that run radically counter to our own.

Chapter Three

Theories of Political Development: A Case of Biased Discourse in the Political Sciences

Nasr M. Arif

Any academic work is expressive of the culture of the society in which its author's mind has been shaped and informed. Therefore, full detachment cannot be achieved. Epistemological inputs are bound by time and place. Self-centricity is central to bias and to evaluating the Other according to the criteria of the perceiving self. Theories of political development that are considered the essence of the concept of development encompass all relevant theories in the domains of social, economic, and cultural development. The following analysis will address the methodological and philosophical bases of most theories of development in the social sciences. The concept of political development and its roots can be used to see if bias has rendered these theories partial and exclusive or if these theories are universal and applicable to most human societies despite their differences.

Science is characterized by the study of specific human or natural phenomena regardless of their details or geographical locations. According to Western thought, science is an intellectual activity that deals with the actual and objective state of things. A close examination

of the origins and development of Western social sciences and humanities reveals that they consider theirs the best approaches to understanding and controlling human reality. Since the Renaissance, a steadily growing academic trend has focused on the study of “non-Western societies.” The purpose of such studies may have been academic but their disciplines are still flawed and devoid of creative scholarly production, despite the development in the tools, methodology, and discourse of Western social sciences.

Several sciences devoted to the study of non-Western societies may have aspired to detach the West from the East in order ultimately to control it. Anthropology sought to control the non-Western world and undermine its culture and civilization with the aim of annexing it to Western culture. The theories of cultural and socio-political development coincide with the political objectives behind all other theories of Western sciences devoted to the study of the non-Western world. Orientalism arose when the “Other” specifically meant Islam or the religious East. In the post-colonial period, a new pattern of domination aggrandized the West as the ideal human and social model to be followed by other societies. Credible academia cannot study those societies with the same analytical categories used in the study of Western societies; rather, independent sciences are needed for the study of such societies.

The Western societal model projects the simplistic ethnic viewpoint that reduces humanity to “them” and “us.” This approach has led to the promulgation of vague concepts that claimed to represent those “Other” societies, without effective criteria or basis for analysis. Those who define the “East” this way risk a grave simplification of a number of diverse civilizations and cultures. Other concepts dealt with the Other by describing it as backward, primitive, agricultural, non-industrial, and Third World. The countries under study have hardly any historical or cultural relationship and instead have been forcibly categorized by the West as one, despite their internal diversity.

Since the advent of Orientalism, Western thinkers have consciously or unconsciously projected the experience of their own societies onto the non-Western world by classifying history into ancient, medieval, and modern; promoting Western political science’s concept of state; seeing a linear development of human societies across ascending stages; and projecting Western ideals and objectives on other human models. This bias of self-centricity strips the Other of the right to exist and tries to expel it from the framework of science or history. Biased science

imposes its own categories, concepts, and methods. If we consider the literature of political development in general, we find that the process of negation and replacement emphasizes the negation of traditional culture, institutions, and economy by replacing them with modern culture, institutions, and economy.

Bias often determines the method of analysis, ways of interpretation, and findings of academic research. As such, the impartial researcher can never define bias, let alone neutralize or remove its effects. The definition and neutralization of bias must comprise two fundamental methods of dealing with socio-political phenomena. The determination of bias in theories of political development is the essence of change and social evolution, and this process requires a methodological approach.

If the researcher applies these approaches, the next step is to neutralize bias in his/her own studies. There remains a basic factor that can only be controlled by learning the ethics of the scholar and the learner, for scientific research must be founded on honesty, moral probity, and adherence to the criteria of rightness and justice.

Chapter Four

Modernizing vs. Westernizing the Social Sciences: The Case of Psychology

Rafik Habib

Communities everywhere work to boost their technological performance and scientific activities, but emphasize performance more than testing scientific concepts and methods. Third World countries use science to measure the level of progress, and Muslims' desire for progress is achieved by absorbing and/or imitating scientific patterns prevalent in other, more advanced communities. The scientific paradigm adopted by advanced nations acquires legitimacy and importance by its ability to modify the environment in a manner acceptable to the people living in those parts of the world. In the Arab world and elsewhere, people import scientific innovations into their lives along with the lifestyle and ideals that accompany them, thus augmenting the need for more imported technology. Science should not be taken as an aim per se, but as a means of improving the quality of life by modifying the environment.

Imitation can never pass for an original achievement. Muslim countries have been able to import the formal and applied aspects of modern science but not its positive social role. Copying others lacks an essential aspect of true progress: the ability to develop new models of science and the patterns of life that reflect Muslim cultural identity.

True advancement in Western philosophy and theology did not gain momentum until the West learned to outgrow Arab thought. By contrast, the Arab world today has not transcended its awe of the thoughts and cultures of other countries. This obsession with the Other has outstayed its welcome and the imitative phase has become ineffective, serving only to prolong and reinforce the current state of backwardness. The Muslim world has complacently admitted many foreign concepts and values over a long period, emasculating its own identity, and losing genuine criteria for sound judgment.

Science is imported and consumed like any other commodity, and these points equally apply to the social sciences. While knowledge about physical and chemical facts can be safely transmitted from one community to another, knowledge about social facts cannot. Adopting and applying foreign knowledge entails adopting a whole lifestyle and social reality not rooted in the indigenous society. With social science, the risk is compounded because Muslim countries copy the functions and applications of scientific knowledge as well as the entire knowledge corpus. The findings of psychological and sociological research lose their significance when transported across the borders.

It would be more pertinent to consider the concepts or criteria used for research rather than accept them as objective and free of cultural bias. The existing fanaticism about the utopian nature of scientific objectivity subjects any attempt to institute a specifically Arab approach to science to serious criticism. Social science can easily become an effective tool for reinforcing cultural, behavioral, and moral dependency.

Particularly in the Third World, the adoption of the American model results in reinforcing American values among developing communities. Where media publicity and economic domination may fail, a transmitted program of scientific application may succeed. The result is a distorted image of a disintegrated individualistic society that lacks competitiveness, initiative, and productivity.

In the view of Mohammad Shakroun, the Arab individual is a

“collective” being, while imported science tries to turn Arabs into individuals who strive to compete. This creates a dilemma that forces Arabs to abandon their “collectiveness” in favor of an imported individualism. A radical empirical approach, on the other hand, can approach each society according to its own intellectual and cultural tendency and norms, values, and ethical judgments.

Arab communities are still at a preliminary stage of scientific progress. They need a speedy recovery program with radical changes. The present conflicts in many Eastern societies are not ideological but rather concerned with the demands of daily life and peripheral systemic details, with local differences in each society. Cultural progress and development result from intellectual and ideological creativity, which is contingent on scientific revolutions within the social structure.

When transmitting science from a foreign source, the Arab world just copies static intellectual frames that it esteems more than its innovators. Psychology in the Arab world is individual to the core. However, American psychology, from which we have copied a good deal, has outgrown this stage to a new stage characterized by a social and historical emphasis. Logically, psychology should develop in the importing countries because it requires a substantial degree of modification and reformulation to cope with the new social environment, but this is not the case. The combined problem of adhering to a sacrosanct empirical objectivity and the fall of ideology has resulted in halting the scientific movement in the Arab world and the Third World today.

The alternative of hope is a dynamic outlook and serious attempts at change, visualized as a set of radical mental operations that may lead to an acceptable and appropriate solution. This could be achieved wherein the Arab world would outgrow the present state of scientific and intellectual adolescence and cultural fanaticism; develop its own concepts and methods and use them flexibly to rephrase theoretical methods and approaches; witness its own scientific revolution through new findings and discoveries in theories, method, and thought; and completely envisage the new scientific perspective and a substitute ideology, leading to an alternative cultural state and a new cultural stage.

Chapter Five

Bias in Curricula and Course Contents

Hoda Hegazy

Educational institutions are considered the prime media for transmitting a cultural tradition. Such institutions must select from a limitless amount of data and ideas, and define for students a set of values that society at large has adopted. This matter raises a methodological issue: selecting from the body of knowledge a limited number of subjects students should learn, then deciding on the proper content to be taught at different educational stages. Curricula are usually formulated and set based on factors such as a society's prevailing ideology, educational philosophy, value system, and concept of human nature. Developing a curriculum necessitates a process of inclusion and exclusion.

School textbooks are therefore not "neutral" or "objective" and reflect the values and beliefs of their own societies. Therefore we should define the epistemological paradigm that underlies curricula when courses are prepared for instruction. When a perspective or paradigm is adopted, certain questions and issues are raised to the exclusion of others. On the other hand, when engaging in a comparative approach, only complete wholes can be subjected to comparisons, rather than two different systems or structures.

For example, Max Weber's work *The Protestant Ethic and the Spirit of Capitalism* addresses what he considered the specifically Occidental phenomenon of rationalization. Occidental capitalism, if we accept the Weberian viewpoint, is specific to Occidental civilization. It was appropriate for Weber to use Occidental capitalism to further explore his culture but to use the same set of terms to explore the specific nature of another culture is misleading.

The level of research in the area of Islamic civilization was until recently monopolized by colonialists or zealous missionaries sure of their cultural and religious superiority and unaware of their epistemological biases. Only recently have we begun to read works by European social scientists who look at Islamic civilization not as an antique to be admired or condemned but as a social process susceptible to the universal laws of change. A general language and analytical categories

are needed, external to all systems and structures but applicable to all. Rather than capitalism, rationalization might be a more general and appropriate term regarding the study of Islamic civilization.

A course on the subject would deal with relevant issues and ask questions such as: Can Islamic society adopt science and technology without losing its unique identity? How can Islam mobilize the masses to achieve the transition from societies based on agriculture and low levels of technology to those bent on mastering nature? In this way, the whole structure, approached from within, can begin to yield its secrets and give us its laws, which will no longer be considered defective or wrong. When evaluating, we should not accept as a criterion the degree of proximity to Occidental civilization. The totality of human-kind's experience in the East and the West, past or present, should be the only standard.

Chapter Six

An Exploration of the Nature of Human and Artificial Intelligence & the Qur'anic Perspective

Mahmoud Dhaouadi

The ongoing controversy over artificial and human intelligence (HI) is characterized by open disagreement regarding whether artificial intelligence (AI) can become equal or superior to human intelligence. The gap between HI and AI is bound to remain considerable in the short- and long-term, as demonstrated by human cultural symbols and the Qur'anic vision of HI. Humanity's ability to manipulate cultural symbols, upon which the HI phenomenon depends, is a unique human characteristic. This uniqueness is the direct result of a divine decision, not of evolution. This uniqueness contains mysteries hardly accessible to humans. Hence, how could researchers include them in the design of AI machines?

In the last two decades, research in the field of AI has progressed on the theoretical and applied levels. In the field, neurophysiologists and various social scientists have also studied HI and AI. As AI infrastructures continue to expand in modern and postmodern societies, specialists in other areas will also have to become involved. AI research helps relieve individuals of many tedious tasks, while the increasing

speed and quality of actions will likely characterize those societies that have entered the Information Age.

The issue of HI remains central to opponents and proponents of AI and researchers must ask why HI is superior to AI and what HI has that AI lacks. Answering such questions will lead to a better understanding of ourselves, HI, and designing more intelligent machines.

Some researchers believe AI will only match HI if biochemical hardware is used. Others think that machines should be designed to function like the human brain. Digital infrastructure is suggested as a way to allow machines to think and possess conscious intelligence. On the other hand, intuition, mood, and emotions have no place in the AI scheme, preventing a rational thinking machine from thinking in the human sense.

The phenomenon of culture distinguishes humanity from other species and from AI machines. There is a consensus among scholars of culture that humanity's use of symbols is human culture's most striking feature. Behavioral social science theories and paradigms should consider that the human species is cultural-symbolic by nature, and that its ability to use cultural symbols makes it radically different from all other species and AI machines. For a true understanding of HI, the realm of human cultural symbols must be studied.

The ability to manipulate cultural symbols in the creation of thoughts and ideas is fundamental for the acquisition of reliable knowledge about the processes of cognition and semantics. The partial absence of a corpus of solid knowledge on cultural symbols constitutes the missing link in the ever-growing body of knowledge on HI and AI. Building a solid foundation in this domain is imperative for researchers to explain the shortcomings of machines regarding learning. Such disinterest is a major weakness that confuses researchers' understanding of HI's originality.

Modern psychological and sociological studies have highlighted the negative effects of social deprivation on human intelligence, indicating that intelligence is strongly dependent on the cultural symbols that permeate the socialization of human beings to take place. Contemporary studies by cognitive scientists of culture, the mind, and human ideas have adopted two points of view: the enlightenment rational/scientific point of view and the romantic rebellion point of view. These

views are very relevant to the AI debate. The latter group says culture, the mind, and intelligence should not just be measured by the yardstick of empirico-positivism, reasoning, logic, and rationalism.

AI's inferiority compared to HI is due to its narrow logical-rational-logarithmic structural design that does not account for points raised by the romantics. Therefore, how credible is the empirico-positivist paradigm, as two of its fundamental elements are logic and rationality? Humans are more than just logical and rational thinkers, and HI's superiority comes from intangible and subjective traits. HI is a complex phenomenon so AI/HI research should not follow a rigid and narrow formula.

Revealed texts are hardly consulted regarding HI, due to the West's experience of the Renaissance, which bypassed the Muslim world, and the usually hostile relationship between religion and science. A Muslim researcher would logically consult the Qur'an in the AI/HI field to further explore the transcendental nature of human intelligence; thinking and human intelligence; and human intelligence and the act of creating.

Religious and secular doctrines agree that only humans can be held responsible for their acts, and HI gives humanity both responsibility and free will to act. The Qur'anic stand is a close ally of modern scientists and scholars who do not believe AI can be raised to a level equal or superior to that of HI. While the Qur'anic perspective can help us, the empirico-positive approach is not useful due to its refusal to recognize the transcendental nature of intelligence.

Chapter Seven

Confronting Bias in Third World Culture

Ferial J. Ghazoul

Bias against the Third World in intellectual spheres and methodologies is common knowledge. Literature on the other hand can offer resistance to such biases and prejudices, and function as a precursor for theoretical pronouncements addressing and combating such a destructive phenomenon. Literature depends on stylistic techniques and artistic strategies not based on technological superiority of one over the other but on equal access to the verbal and conceptual. On the

contrary, the oppressed and marginal seem more creative and productive on the artistic level than the oppressor and the powerful.

Creative resistance to ingrained bias takes different forms. This chapter deals with three writers from the African continent: Nigerian Chinua Achebe, author of *Things Fall Apart*; Sudanese Tayeb Salih, author of *Season of Migration to the North*; and Moroccan Tahar Ben Jelloun, author of “I Am an Arab, I Am Suspect.”

Achebe’s book is the story of a proud man from the Third World: the unfolding of the tragedy of protagonist Okonkwo from the Obi ethnic group, who commits suicide before the onslaught of the conquering colonizer and imposition of foreign values. The novel is convincing because it does not pit the African hero against the European villain in a good versus evil drama. Instead, it analyzes the conquest process step by step in a time when the continuity of old values was impossible. Achebe uses strategies and techniques to deploy creative resistance to imperial culture.

Achebe contrasts African and European ideologies and exposes and liberates both. He presents two religions as two manifestations of practically the same essence despite differences in dogmas. This comparative approach prevents us from classifying religion by hierarchy, or from denying some belief systems the attribute of religion. The author’s techniques lure the foreign reader and lead him or her later to question his or her cultural presumptions. Resistance to cultural bias is distilled in Achebe’s work through his deployment of metaphoric language to reveal prejudice.

Salih’s novel *Season of Migration to the North* exudes opposition to colonialism and neo-colonialism. The novel resists northern prejudices and misrepresentation of the African through caricature and literary countering, which reinterprets the drama. Salih wrote his novel in Arabic to counter the Shakespearean tragedy of Othello, the Moor of Venice. The tragedy of Othello was the first dramatic work to be translated and performed on stage in the Arab world. Salih wanted to oppose and correct Shakespeare’s image of the African in Europe by deconstructing Othello’s image in the Arab and Islamic worlds.

Salih said that Othello’s rage could be understood if one saw that he never accepted the Venetians, nor they him. It is “a nationalistic rage, a clash of cultures.” The Sudanese protagonist, a student who travels

to England to study, expresses his vision of the Western rape of his world and its bias. Salih uses a complex strategy to deconstruct the ready-made image of Africa, using hyperbole and satire. He presents Mustafa Sa'eed as a false hero, as the product of a cultural union between oppressor and oppressed, between authority and dependency. The result is a hybrid belonging neither to his homeland nor to the foreign land and culture.

Ben Jelloun's moving story "I Am an Arab, I Am Suspect" uses structural irony in which the reader knows more than the protagonist. Narrative structure contrasts the simplicity of the subaltern with the meanness of society and the deviation of the world. The Arab is guilty until he proves his innocence in a Western world that is prejudiced against him and treats him as a suspect at all times. He is surprised for being perceived as a fundamentalist, indicating to the reader how the evaluation of the Other does not necessarily spring from the behavior of the Other, but from preconceived accusations and ready-made condemnations. The innocent worker asks why he is always suspect, and the reader is moved to disapprove the present set-up with all its prejudices. Ben Jelloun does not conclude or sermonize, but juxtaposes two faces of treatment, leaving judgment to the reader while basing his narrative on the technique of dramatic irony.

Thus we see how African writers have contributed to resisting bias by denouncing it and by formulating it fictionally and creating identifiable strategies of resistance. These techniques include comparing what is viewed as different, reinterpreting a master narrative, and defamiliarizing the familiar and projecting it. The result is a negation of a vertical hierarchy and a displacement of the center of the dominant discourse. In this way, the creative writer presents a comprehensive view of biases while deconstructing the basis for prejudice.

Chapter Eight

Beyond Methodology: Forms of Bias in Western Literary Criticism

Saad Abdulrahman Al-Bazî'i

Methods of literary criticism in the West are biased in favor of the cultural context that engendered them. If the non-Western critic, such

as one whose culture is Arabo-Islamic, applies any of these methods to the literature from his/her own culture, he/she is faced with two choices: to apply such methods as they are, involuntarily adopting the implications and ideologies that formed them, causing misunderstanding of the literary material; or to radically change a method where the resultant applied method departs dramatically from the original one. To claim that methodology can be stripped of its context with little or no change is made groundless by a historical analysis of the cultural and philosophical background of such a methodology.

The question of Western bias should be reconsidered and its justifications checked, rather than treated simplistically. Some critics and scholars do not believe some methods are biased and instead believe they are neutral tools. Contemporary Arab critics have used the structuralist method as a neutral critical tool, believing its effectiveness in enhancing Arab scholarship, overcoming barriers in cultural contexts, reviving national heritage, and keeping pace with progress. This familiar viewpoint in the history of Arabic thought and literary criticism has almost as strong historical and ideological roots as the contrary viewpoint. And its tendency to embrace universality connotes evolution according to cultural standards of the West.

There remains the problem of distortion in literary works and the cultural structure as a whole. A reading of the methodology reveals the bias of cultural specificity in its origin prior to its actual manifestations. However, assuming the bias of method does not always mean that methods as a whole are irrelevant. It does not preclude the possibility of mutual benefit or common characteristics. Bias of method means the high degree of homogeneity in a culture and the difficulty of using the same elements in another culture for the same purpose or significance. The Western critical output discussed here is not concerned with Arabo-Islamic elements interwoven into its culture. Numerous Western thinkers have expressed a desire to overcome Western self-enclosure.

Philosopher Ibn Sina (Avicenna) presented the problem of methodology within the realm of logic, stating that the science of logic follows a comprehensive philosophical outlook. The difference in this outlook hinges on the difference in methodological or logical bases and often refers to the Aristotelian (Greek) philosophy. If philosophy changes, there should be concomitant changes in the methodological bases of inquiry and epistemological deduction on which such philosophy is based. Philosopher Ibn Rushd was a proponent of Greek thought in

Islamic civilization, but his assessment of the limited applicability of Aristotelian poetics strongly indicates general sensitivity to the potential bias engendered by cultural difference.

Other conservatives among ancient Muslim intellectuals resisted the call for a cultural open-door policy. According to American philosopher John Dewey, logic is naturally biased in favor of a certain philosophical principle. To say that methodology has to be dissociated from its epistemological objective is to call for a separation between form and content. Similarly, the presence of common human objectives does not preclude the diversity of means leading to such goals. According to Northrup Frye, the harmony between methods and objectives of criticism could only be achieved if critical principles and hypotheses were to issue from the art dealt with in criticism, for literary works represent an organic unity based on common symbols, traditions, or models. Frye's methodology differs from other formalist tendencies in that it attempts to be comprehensive by studying types as symbolic or typological connections among literary works.

Modern Western culture tends toward secularity but that does not mean the disappearance of religion from Western thought or culture. In the mid-18th century, the Enlightenment, which generally opposed religious orthodoxy, caused a religious critical movement to emerge and defend religion through a new interpretation of the Bible that emphasized its literary and mythological nature as Oriental poetry. Such developments paralleled the rise of Romanticism and helped crystallize the new sacred/secular criticism combination, which equated the religious text in Western literary criticism to human, worldly texts. Frye highlights the mythological nature of the Bible yet holds to a metaphysical concept of the archetype. Doubletalk is one of the very significant dilemmas of a culture embracing the secular yet unable to break away from its religious and metaphysical roots, despite efforts over the centuries to overcome the metaphysical in works by Nietzsche, Freud, and Heidegger.

Overall, Western critical methods enjoy a considerable degree of universality. Yet there will always remain another considerable degree in them that is culture-specific and cannot be transferred. Due to this latter quality, people not sharing the Western cultural context should thoroughly revise such methods before using them.

Chapter Nine

Theories and Principles of Design in the Architecture of Islamic Societies: A Ceremonial Approach to Community Building

Abdelhalim I. Abdelhalim

The values of excellence and beauty are needed to overcome the underdevelopment, alienation, and apathy now prevalent in most communities in the Islamic and developing world. The underdevelopment lies in the separation of the means of production, especially within the built environment, from what is germane to their cultures. Despite this separation, there are still cultural mechanisms that can link the construction of buildings to the culture of the community. These include people's creative energy and community resources and skills. In many communities today, however, building operations are under control of formal institutions such as law and management. A class of events in which the process of the community can be regenerated includes the definition of boundaries, the establishment of centers, and connecting building to the community. If the community's regenerative process is channeled into these building operations, then the building's construction can contribute to the vitality of the people and to the creative development of their community.

There is a connection between the building process and the life of the community. Building, in theory and practice, has thus far viewed these instances of regeneration as, at best, ancillary to the rational process of building. The majority of the world's population lives in communities in which custom and tradition are the only available means of organizing them. Any development must rely on local abilities and resources. The building ceremony, regardless of the community or culture, is the mechanism that links building with the community. Building has always been intimately connected to the people and their creative instincts that have produced buildings and artifacts. This basic regenerative process embodies the rituals and ceremonies of many societies and the vital process that guides growth and forms individual identity, despite the argument of some that today building should be separate from ceremony in the name of economic necessity and efficiency. At most an appropriate integration between culture and production must remain on the symbolic level.

The integration of culture and production is both essential and possible. Building can combine economic growth with creativity and add to the accumulation of capital and knowledge. An important project built in the heart of a community can restore its creative capacity, especially when using local craftsmen and building materials best suited to the local environment. It helps to combine the skills of the stoneworker and his knowledge of geometry with the technician's ability to work from written instructions and drawings, the combination of which leads to innovation.

Chapter Ten

Reflections on Technology and Development: A Cultural Perspective

Hamed Ibrahim El-Mously

The problem of bias lies at the heart of our cultural and scientific interests. Many terms related to modernization, development, and technology are still commonly used, equally by Western and Muslim governments and world institutions. Such terms cannot be used in different political and cultural contexts without a change in their meanings. Attempts at development that are based on Western concepts have failed in Arab and Muslim countries, as well as Third World countries. Insistence on using these terms indicates a desire to replace religion and cause Muslims to believe in modernization and Western technology. Muslims have been subjected to Western winds of change to varying degrees in the course of their cultural, scientific, and professional formation. Muslims have to change themselves first before they can change the world around them. They have to re-examine all the axioms, criteria, and values that have governed their cultural, scientific, and practical activities and that have been subjected to Western cultural bias.

The issue of bias is closely linked to the urgent issue of cultural independence. As time passes, Muslims become increasingly subservient to the West and face more restrictive terms and conditions in their independent cultural enterprise. It is difficult for an individual or group to be totally detached from its original cultural pattern and to adopt a foreign one. The process of cultural shift requires the constant operation of a large number of foreign cultural elements for prolonged

periods. With cultural invasion, a dominant culture attempts to subordinate another culture and deprive it of its independence. The process destroys integration and creates gaps in the structure of the conquered culture, eliminating vital creative potential and increasing subordination to the dominant culture.

To prevent misunderstanding, the use of the terms “technique” and “technology” regarding what is exported or transferred to a society should differ: technique links to the activity of production, while technology occurs in the mind and in the physical reality at a higher level than production. Just as some projects are delivered to us ready-made, some concepts are passed on to us in the same way, packaged for political and social use. “Technology transfer” assumes a one-way transfer between two parties, and assumes that technology is an “object” that can be transferred from one social-cultural context to another, which is untrue. Many experiments confirm that technology is non-transferable. It is possible to transfer elements of technological ability only at the stages of acquisition and operation. Unless great effort is exerted by the Arabo-Islamic world to build its own technological abilities, it will never be possible for it to reach the stages of adaptation and innovation, which are decisive for technological independence.

The dominant attitude in Third World countries is to formulate and implement development plans based on the transfer of techniques from the industrial Western societies or Japan, which can create social and cultural effects and a “nihilistic” attitude that expects to meet Western social goals via imitation of industrial organization. This dilemma could assume a more positive orientation if we ask: How can we assimilate technology as a potential and a feature of our cultural structure? The adoption of the Western development model in Arab/Muslim society created unbalanced exchange relations that turned its members into consumers of Western goods, techniques, and services.

Change did not occur through people’s self-development, awareness, and participation. One of the main functions of cultures is to produce and reproduce values. The Western model deprives cultures of this function, which leads to loss of cultural distinction. Modernization consists of self-realization that causes cultural and social changes necessary to fulfill scientific and technological imperatives. The Arab/Muslim world needs a cultural revolution in education, where current methods cause alienation. In Arab/Muslim culture, the dream

of achieving paradise on earth and material welfare has never been genuine, since the culture does not place humankind at the center of the universe nor view worldly life as separate from eternal life.

Chapter Eleven

Philosophical Beliefs Underlying the Formulation of Physical Laws

Mahjoob Taha

The popular view of physics regards its laws and theories as a unique product on which no two persons could differ. This outlook rests on the premise that all scientific disputes may be settled in the lab, and that the scientific experiment is the final arbitrator. However, this applies only to natural science, and observations are just a starting point. Human theorization is essential and represents the true spirit of scientific work. Science emerges when the human mind comprehends facts and views them from every angle. Empirical methods have evolved over centuries, and progressed not only due to technological breakthroughs but also to the theorization and methods of scientific thought. This progress allowed us to establish a methodology leading to the formulation of general laws from experimental observations. There appear to be three different levels of abstraction: the conservation law level, deduced directly from observation and measurement; the general law level, a postulate that guarantees the validity of the known conservation laws; and the comprehensive theory level, which gives a unified mathematical formula for the fundamental interaction being studied. Human thought is a major factor in the generalization of experimental facts.

Natural sciences are based on a fundamental assumption that we live in a rational universe where natural events are causally connected. Causal correlation remains an essential ingredient of the scientific method but modifications in the postulate of determinism were tailored to agree with the results of experimentation. The view of the natural world entails the adoption of a philosophical standpoint, although defending such a standpoint by completely persuasive logic is impossible. Sometimes a scientific theory is rejected on philosophical grounds despite its accordance with experimental results. At a level of fundamental interactions, scientific research has always been associated with

philosophical premises that do not emanate from experiment. This association is important because it gives an intellectual and cultural dimension to research in the natural sciences. It could possibly contribute to the domain of technological applications and to the realm of human thought. The formulation of many basic scientific laws tends to sweeping generalizations, suggesting that certain philosophical standpoints result from empirical science. Such cases overstep the limits of experimentation and observation.

A researcher who believes in an All-Wise Creator also believes that human beings' free will is a reality and that determinism stops at a certain degree of complexity. The faith-based position rejects the notion of accident as incompatible with the laws of God. The notion of accident reflects humankind's blindness to the causes and reasons beyond the phenomena in question. A believer-researcher can explain the disparity between collective and individual behavior, while others would reject this line of thought, believing in the uniqueness of human mentality and the superiority of human reason to all else in the universe. Every effort exerted in the natural sciences is a human pursuit that reflects ideological, intellectual, and philosophical positions. This should be borne in mind when reading scientific writings.

The Editor

ABDELWAHAB M. ELMESSIRI (1938–2008) was professor Emeritus of English literature and critical theory at Ain Shams University, Cairo, and a foremost intellectual and activist. A prolific writer he published many articles and authored sixty books on various subjects including Zionism, modernism, postmodernism, secularism, and materialist philosophy, etc. His perhaps most famous work has also been called the most important Arabic encyclopedia in the twentieth century: *The Encyclopedia of Jews, Judaism and Zionism* (8 volumes).

IIIT Books-In-Brief Series is a valuable collection of the Institute's key publications written in condensed form to give readers a core understanding of the main contents of the original.

The Western cultural paradigm, dominating academia, is one of the most widespread and accepted forms of **Bias** in existence today. Its influence is felt intensely across the Muslim world and its weight bears down on all forms of study. Precluding reference to the Divine, is it rational for Muslim researchers and scholars to adapt to its demands and for Muslim societies to "reform" to meet that paradigm's standards?

Elmessiri was against philosophical positivism as a way to obtain knowledge seeing it as part of an imperialist epistemology in which the Renaissance has primarily meant the importation of Western thought and theories and the adoption of a foreign paradigm focused on utilitarian materialism which attempts to impose itself upon Muslim thought and society. In his opinion this cannot serve as a model for development.

The collection of writings making up this anthology explore and critique just this, a near total adoption by Muslim scholars of both paradigms, terminologies and research models alien to the socio-economic-religious realities of the Muslim world and the consequences of submitting to this framework as the only rational way of obtaining knowledge and understanding the human condition.

