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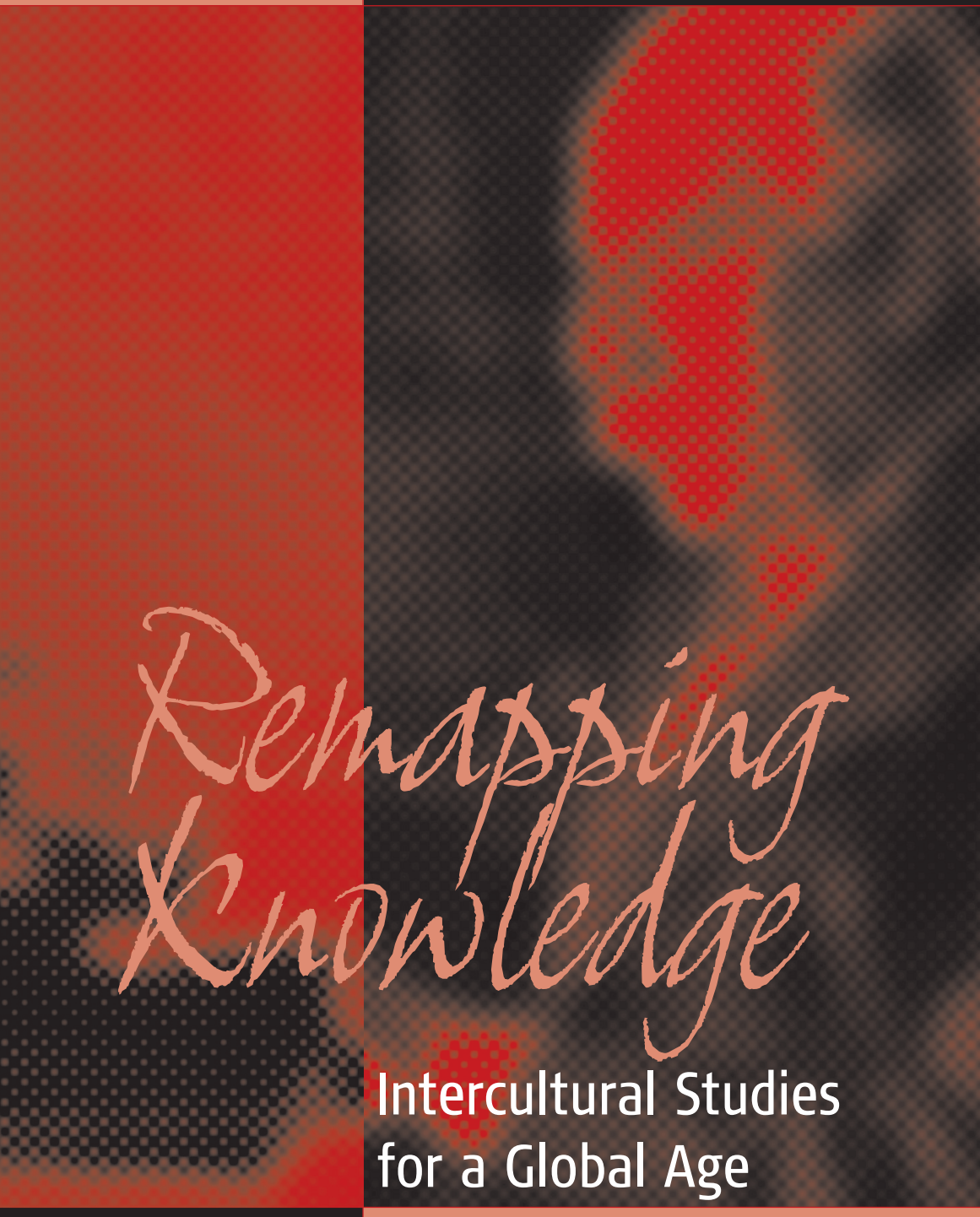

Remapping Knowledge

Intercultural Studies for a Global Age

Mihai I. Spariosu

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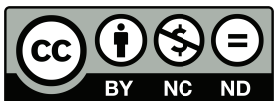

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For Diana, Ana Maria, and Miguel Antonio,
with all my love

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Preface

This book can best be read in conjunction with its companion volume, *Global Intelligence and Human Development* (2004). In both volumes I attempt to elaborate the basic principles of an ecology of global learning, oriented toward global intelligence and harmonious human development. In both studies, I reflect on the phenomenon of globalization primarily in its intercultural, rather than in its financial or political, aspects, and seek to turn away not only from the Western-style, utilitarian mentality, but also from the modernist ideology of progress, understood as unlimited growth. Unlike neoliberal ideologues and their antiglobalist opponents, therefore, I do not see globalization as a golden opportunity for the financially wealthy to become even wealthier. Rather, I see it as a renewed opportunity for humanity to embark on a global, paradigmatic shift from a mentality of power and so-called "struggle for life" toward a mentality of peace and mutually beneficial, intercultural cooperation. But, in order to bring about this paradigmatic shift, we need to create alternative theoretical concepts and cultural blueprints, oriented toward global intelligence, and then work collectively toward their worldwide implementation.

We can begin by developing alternative concepts to analyze and evaluate the phenomenon of globalization itself. To this purpose, my two studies explore key concepts such as global intelligence, sustainable human development, globality, globalism, locality, localism, and the local-global. Thus, I define *global intelligence* as the ability to understand, respond to, and work toward what will benefit all human beings and will support and enrich all life on this planet. Global intelligence is based on the collective awareness of the interdependence of all localities within a global frame of reference and the enhanced individual responsibilities that result from this interdependence. As no national or supranational authority can predefine or predetermine it, global intelligence involves long-term, collective learning processes and can emerge only from continuing intercultural research, dialogue, and cooperation.

The phrase "what will benefit all human beings" in the preceding paragraph, however, should not be understood in the utilitarian, restricted sense that implies the excessive, materialistic and consumerist mentality currently

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spreading to many parts of the globe. Nor should "human development" be understood primarily in terms of neoliberal, economic development, as is all too often the case in public discourse today. In the long run, such utilitarian and reductive modes of thought and behavior, based on the primacy of material self-interest, will hardly benefit humankind, let alone other forms of life on earth. On the contrary, it will impede, if not completely arrest further human development and will severely impoverish the rich diversity of the biosphere. From the standpoint of global intelligence, therefore, "benefit" implies the harmonious, sustainable development of both the material and the spiritual aspects of humanity. These aspects should, moreover, be regarded not as independent entities, but as complementary sides of human nature, engaged in a relationship of mutual causality.

In turn, I define globality as an infinitely layered network of variously interconnected and interactive actual and possible (or imagined) worlds or localities. At a basic human level, globality involves an aspiration toward (self-) transcendence that expresses itself as ceaseless world making and self-fashioning. Globalism, on the other hand, can be regarded as the proper or improper expression of the aspiration toward globality. There are many kinds of globalisms, some proper, some improper, some Western, some not. Most of the improper types of globalism that have so far manifested themselves in human history belong to various mentalities of power that aspire, and compete among themselves, to hold sway over the entire planet. I have called such improper types "globalitarianism," to stress their close affinity with the totalitarian political tendencies that were particularly visible in the past century, but that continue to manifest themselves today. Yet, twenty-first century attempts at globalitarianism do not involve solely repressive political regimes or right wing and left wing dictatorships, but also, most alarmingly, the Western democracies. For instance, they include the current economic, political, and military efforts on the part of some Western governments to impose Western-style, neoliberal forms of democracy on the rest of the world.

Localism, in turn, is a mirror image of globalism and can often take improper forms such as ultranationalism, ethnic and religious intolerance, racism, and so forth. Recent examples of improper localism are not limited to the intolerant, closed-minded attitudes of some monocultural or totalitarian nation-states. They also include the paranoid, ultranationalist, and racist attitudes that certain Western governments have displayed toward immigrants from Islamic and other so-called Third World countries, as well as toward their own dissenting citizenry, in the wake of September 11 and other terrorist attacks against Western (utilitarian) global interests. By contrast, locality is the specific ecocultural space in which individual and collective human activities, contacts, and interactions take place. Locality, just like globality, involves multilayered human perspectives and experiences, ranging from those of the tiniest community to those of planet Earth, or multiplanetary systems.

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On the basis of the preceding distinctions, moreover, I propose the term "local-global" as an appropriate way of describing not only any theory and practice of globalization, but also any future human community. A local-global theory is a globally oriented local theory. In turn, a local-global community is a globally oriented local community or ecocultural environment. Communities around the world do not engage in interaction with a universal or global community—although they may often imagine such communities—but with other local communities. Some communities may happen, at a particular historical juncture, to become globally dominant or visible as far as their ideas and ways of life are concerned. This fact does not, however, oblige other communities automatically to accept their ideas, values, beliefs, and modes of behavior as if they were embodiments of the Global or the Universal itself. On the contrary, these communities will often perceive such ideas and ways of life as improper forms of globalism (e.g., imperialism), particularly if they are forced upon them. By contrast, a globally oriented local community is constantly aware of its links and interdependence with other, close or distant, communities and is open to free and mutually enriching interaction with all of these communities. In other words, a globally oriented local community is aware that symbiotic intercultural cooperation may be the shortest path to global intelligence.

Finally, both studies assume that an emergent ethics of global intelligence can best be grounded in a mentality of peace, defined not in opposition to war, but as an alternative mode of being, thinking, and acting in the world. This mentality, which I have elsewhere defined as "irenic" (Spariosu 1997), has its own body of values and beliefs, emerging through intercultural research, dialogue, and cooperation, and generates its own reference frames, organized on principles other than power. It is such an irenic mentality that can best nurture further human (self-) development and that should inform not only the ethical stance, but also all other aspects of the concept and practice of global intelligence.

Whereas the first book focuses mostly on the social and the life sciences, the present one concentrates mostly on the humanities and on information and communication technology (ICT). Furthermore, while the first book deals mostly with the broader, theoretical issues involved in human development, the present volume concentrates largely on institutional and practical issues, including some of the concrete ways in which we can remap our current fields of knowledge and institutions of advanced learning and research, reorienting them toward global intelligence. Specifically, I focus on the ways in which we can remap and reorganize a transdisciplinary field of intercultural studies that would hopefully transcend the current ideological and political impasse of cultural studies, especially as practiced in the West, while preserving and reorienting some of its valuable insights. Such a reconstructed, transdisciplinary and crosscultural, field would constitute an important vehicle for creating local-global learning environments that will nurture further human development.

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The humanities, side by side and in close cooperation with the other contemporary sciences, could also have a crucial role in both remapping intercultural knowledge and creating local-global learning environments, oriented toward global intelligence. But in order to assume this role, they need, no less than all of the other sciences, to undergo extensive reforms, based on a thorough reexamination of their current principles and practices. Therefore, in the first chapter of the present book, "Intercultural Studies: A Local-Global Approach," I begin this reexamination process by staging an extensive dialogue between two Western-style, academic disciplines: contemporary "experimentalist" ethnography, which turns to literary studies in order to reform itself, and contemporary literary theory, which turns to anthropology to do likewise. The main purpose of this dialogical exercise is to further illustrate and develop the guiding principles of intercultural studies and practices that I began exploring in *Global Intelligence and Human Development*. They include intercultural and global (self-) awareness or attentiveness (instead of cultural critique); intercultural responsive understanding, communication, and cooperation; intercultural resonance (rather than mimesis); intercultural comparative analysis, with nonreductive juxtapositions or engagements of various cultural horizons; mutually enriching, dialogical modes of intercultural translation and interpretation; and nonviolent intercultural contact and learning experiences at the liminal intersections of various cultures.

Based on the foregoing principles, I then suggest a number of concrete research programs in intercultural studies that should initiate a much needed, comprehensive study of and dialogue among world communities and cultures, not only from local, national, or regional perspectives, but also from a global one. So, far from being limited to one or two cultures, or to one or two fields of knowledge, these types of programs would involve a sustained, collective, and cooperative effort on the part of learners, educators, scholars, researchers, and other practitioners from academic and nonacademic fields throughout the world. They would also require creative organizational and institutional forms that are better suited than our current ones for operating within a global reference frame.

Chapter 2, "The Role of the Humanities in a Global Age," outlines the research programs and methodologies of a proposed School of Intercultural Theory and Practice. The School would continue the work, and learn from the experiences, of an earlier International School of Theory in the Humanities that a number of colleagues and I founded and operated until recently. I then propose and consider in some detail two concrete, intercultural research projects. The first one concerns the history of the literary canon, as well as that of other disciplinary canons, in various world cultures. The second one proposes an extensive reexamination of the history of world literature and of other fields of knowledge in terms of works that stage complex intercultural issues that remain equally relevant today, in both a local and a global reference frame. In

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this particular instance, I consider an early view of globalization in English Renaissance drama, specifically, in Christopher Marlowe's *Tamburlaine the Great*, comparing it with the postmodernist and postmarxist notions of globalization, present, e.g., in Michael Hardt and Antonio Negri's influential book on *Empire* (2000).

The two research projects can be seen as having their origin in Western literary studies, but they could best be developed within a crossdisciplinary and crosscultural framework that includes a number of other human sciences, such as anthropology, art history, education, intellectual history, history and philosophy of science, history of religion, cultural studies, legal studies, music, philosophy, political science, sociology, women's studies, and so forth. While I attempt to show concretely how future intercultural projects in human sciences can productively be carried out across a wide range of traditional disciplines, I also attempt to reassure my colleagues in literary studies who feel that their field has lost all relevance to the contemporary world. My response to them is that few fields of knowledge could play a more important part than the humanities in creating new ways of thinking and acting within a global reference frame. But, we must reinvent ourselves in order to serve the human needs of intercultural communication and understanding, peaceful coexistence, and respect for the diversity of life on our planet.

In a world of increasing complexity and interdependency, there is an urgent need to interpret, understand, and communicate intercultural information properly, as well as to translate, mediate, and negotiate among the mindsets that generate it. So there is an ever-increasing demand not only for interlinguistic, but also for intercultural translation and interpretation. Cultural and linguistic commonalities and differences play an important, perhaps even a determining role, in many human transactions, including trade; diplomacy; political, economic, and environmental disputes; sports competitions; tourism; personal and social relations; and so forth. The humanities are best positioned to study, comprehend, and convey such commonalities and differences, as well as to mediate between them, in a responsible manner. The key words here are interpretation and communication. There is an urgent need to continue our research on the nature and modalities of human communication in its culture-specific contexts, as well as within a global reference frame.

First of all, however, it behooves literary and other humanistic studies to continue moving away from the notion of "discipline" itself and to prepare the way for transdisciplinary mindsets and practices in all fields of knowledge. In future global and crosscultural interchanges, traditional cognitive fields and boundaries will increasingly be challenged and reconfigured. We literary people should help this process along by contributing to the development of specific blueprints for future remappings of knowledge, which might well need to display the kind of ontological flexibility and epistemological inventiveness that have always been the mark of literary discourse. For that purpose, we need

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to give up our own territorial ways of thinking and doing things and to begin looking on literature not as a traditional canon of literary texts, but as a form of liminal activity that generates new cognitive associations and interactions.

Chapter 3, "Information and Communication Technology for Human Development: An Intercultural Perspective," explores the validity of the claim that the contemporary, Western-style technosciences, also known under the collective name of *information and communication technology* (ICT), have brought about a revolution in human history, inaugurating the so-called Information Age, which has in turn engendered a new global paradigm, called the "information" or "knowledge" society. I suggest that this claim might sound convincing only to those analysts and practitioners who assume that technology is the determining factor in the development of a certain society, driving its economy and, through the latter, all other social and cultural arrangements. But one needs to test this assumption against the broader, cultural historical background of current ICT, closely examining the intercultural and socioeconomic consequences of its introduction worldwide. Such an examination will reveal that, far from moving toward a genuinely new global paradigm, we are simply extending the currently dominant one.

When speaking of "information-" or "knowledge-" based economies and, by extension, societies, neoliberal and other analysts implicitly refer only to a Western-style system of commercial values and practices and, within that system, only to a small, if currently privileged, fraction of it: the subsystem of utilitarian values. Far from being a universal instrument of knowledge, the current ICT is merely an expression of this economic subsystem that wishes to impose itself not only on Western culture as a whole, but on all other cultures as well. Although shifts in modes of production/distribution and supporting technologies can certainly make a substantial difference in people's daily, *material* existence, they do not amount to global paradigmatic shifts. Such shifts come from human mentality, involving radical changes in modes of thinking, behavior, and interaction.

It is highly unlikely, therefore, that our current information and communication technologies, given their predominantly utilitarian orientation, will revolutionize our mentality any more than their earlier counterparts such as the radio, telegraph, telephone, and television did. Speaking of a "knowledge" society, moreover, obscures rather than clarifies the most important issues that humanity is confronted with and should be working on in the foreseeable future. Far from assisting us in resolving these urgent issues, the concept of a "knowledge" society appears, within a global reference frame, as smug, (self-) deceptive, and overreaching. Thus, within this global frame, instead of a "knowledge" society one would be much more advised to speak of "learning" or "intensive learning" societies.

In turn, I emphasize the necessity of creating different forms of ICT that would support worldwide learning and research projects, oriented toward global intelligence. I then highlight the important role that the humanities can

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play in assessing and in helping develop such ICT forms. Specifically, I discuss two broad areas in which the humanities and the arts could prove particularly helpful: a) initiating extensive historical-theoretical reflection, as well as sustained intercultural and crossdisciplinary dialogue on past, present, and future ICT within local-global reference frames; and b) participating in the creation and development of new Internet projects and software concepts, based on, and further amplifying, emerging intercultural knowledge/wisdom. I give a number of examples in each area, including an analysis of Gunther Grass's recent novel, *Crabwalk* (2002), which utilizes the concept of the Internet both to create new narrative techniques and to reflect on the current cultural and ethical consequences of its worldwide use.

I also provide an analysis of Quantum Relations (QR), an innovative concept of data processing, based on relativity and quantum theory in physics, as well as on the ontoepistemological assumptions of general systems theory and Whitehead's philosophy of process. In contrast to most reductionist scientific theories, QR implicitly acknowledges diversity and alterity as the very conditions of existence. It can take into account and process widely different cognitive perspectives, including linguistic, philosophical, cultural, sexual, and other observer-dependent variables.

Like other contemporary strands of systems theory, QR acknowledges that hierarchies as modes of organization are best understood not as centers of "command and control," but as reference frames or levels of complexity embedded or nestled within each other and engaged in constant communication and mutual interaction. QR could thus support and enhance a cooperative, symbiotic view of our universe, in which all living and nonliving components of the global system and subsystems depend on each other for their well-being and sustainable development. In the Appendix, I have also included a hitherto unpublished, "Brief Overview" of Quantum Relations, kindly provided by Hardy F. Schloer, the founder of the theory, and his close collaborator, Philip Gagner. This overview offers a firsthand, general account of the theory, complementing my own analysis of it.

Chapter 4, "The Intercultural Studies Academic Program: A Pilot Project in Global Learning and Leadership," continues the proactive stance of the present book and proposes an experimental academic program, designed to educate local-global elites in the spirit of global intelligence. This is a three-year program, leading to a combined BA and MA degree in Intercultural Studies, and is based on the concept of intercultural studies that I develop in previous chapters and in *Global Intelligence and Human Development*. Indeed, it is the preparatory, undergraduate version of the doctoral program in Intercultural Knowledge Management that I outline in the latter book. Both programs take into consideration the current disciplinary and administrative constraints in our universities. Consequently, they could be implemented relatively easily even under the present state of world education.

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A main objective of the Intercultural Studies Program (ISP) is to cultivate in its participants a sense of mission and commitment to local-global human values and ideals, as well as willingness and ability to translate them into practice throughout the world. ISP students develop superior intercultural linguistic and communication abilities, as well as increased intellectual mobility and flexibility, which allows them to feel at home in, and move freely across, several cultures, thereby gaining a genuine global, crosscultural perspective. The transdisciplinary and intercultural nature of the ISP research projects and academic curricula require that students move between institutions in several regions of the world, as well as across departmental divides at any single institution. A global perspective will give them the intercultural responsive understanding needed to bring together specialists or experts from various fields and from several cultures in order to design and execute transdisciplinary and intercultural projects that none of these experts would know how to implement on their own.

ISP is designed to create group solidarity among a culturally diverse body of students, teaching them how to cooperate in and effectively interact with shifting cultural and linguistic environments. It will also integrate academic and experiential knowledge. From the first year of their studies, students begin to acquire and combine theoretical and practical knowledge in order to address real-time, local, and global issues. They organize their curricula and research programs around the concrete problems they are asked to solve. They form crossdisciplinary and intercultural teams to work on viable solutions to specific, real-world problems, rather than through the codified practice of a particular academic discipline or culture.

ISP students, moreover, build capacity to identify and address potential socioeconomic and other types of problems before they develop into crises that threaten the peaceful development of world communities or diminish the diversity of world resources. They will also be called upon to design workable, realistic blueprints for the sociocultural and human development of their countries or regions, based on the best traditions of wisdom available in their cultures, as well as in those of others, and on the most cherished aspirations and ideals of their people.

Thus, the most important objective of ISP is to cultivate in its graduates a propensity toward global intelligence, or toward intercultural responsive understanding and action, in addition to global competence and expertise. This is what will distinguish ISP from many academic programs with an international and intercultural focus, such as can be found at some of the top international schools in various parts of the world. For the most part, the main objective of such international programs is to develop global competence and expertise that their students will, in turn, place in the service of individual private or public organizations, irrespective of the mission and goals of these organizations. These are important skills, and to date there is a grievous shortage of global

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experts in North America and many other parts of the world. But, for a genuine local-global practitioner, these skills cannot be separated from the goals and ethics of global intelligence, from which they derive their true meaning.

By way of conclusion, I would like again to emphasize that, despite differences in focus and disciplinary subject matter, the present book and the earlier one on *Global Intelligence and Human Development* complement each other and can best be read as a hypertext. They attempt to bring together, under the banner of intercultural studies, a wide variety of fields, cutting across many scientific and humanistic disciplines. Specifically, they create extensive links between global studies, environmental studies, ICT studies, the humanities, and global education, even though at present such domains of knowledge are treated as if they were largely independent of each other. Global studies, for instance, are considered as mostly the domain of the social sciences, such as international relations, sociology, political science, and political economy. In turn, environmental studies and ICT studies are regarded as mostly the domain of the physical and life sciences, whereas global education is mostly confined to the academic discipline of "higher education," even as this discipline is increasingly "encroached upon" by a number of nonacademic, national and international, governmental and nongovernmental organizations, concerned with developing new ways of learning and research in the context of globalization. On the other hand, the humanities, and literary studies in particular, are increasingly perceived as only marginally relevant to all of these other fields and to global issues in general.

My position in both books is that all of these areas of knowledge, as well as many others, should become part of the same transdisciplinary network, within a global reference frame. Yet, all too often, academic and nonacademic researchers and practitioners in these areas are unaware of the issues that concern their colleagues, or of the fact that many of them share the same concerns, especially at the theoretical and ethical levels. Consequently, they seldom talk to each other, let alone cooperate, across disciplinary and cognitive boundaries. My two companion volumes attempt, at least in part, to compensate for this regrettable lack. Above all, they stress the necessity of remapping our fields of knowledge and learning institutions so that they can communicate freely and interact symbiotically. One should remember at all times that, from a global perspective, there is ultimately only one kind of science, which is human science. It comprises any number of interdependent branches of learning and knowledge production, including the physical sciences, the social sciences, the humanities, and the performing arts, which can contribute equally to human (self-) development. Therefore, all branches of learning need to work together to generate new forms of integrated knowledge, oriented toward global intelligence.

I would also like to note that both books mark a departure in my way of thinking about scholarly research and educational institutions. In earlier

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works, I have attempted to convey my life philosophy and ethical beliefs mostly indirectly, through a detached, scholarly medium. In the past few years, I have found myself moving more and more toward a proactive stance in academia and scholarship, reflecting on and even seeking to contribute to alternative forms of institution building. I have come to believe that this stance—which I do not regard as political, but as broadly civic and ecological—is necessary, because too many of my colleagues in North American academia and elsewhere seem to have adopted either a purely negative or a fatalistic position toward the global changes that are dawning upon us. They appear to think that these changes are somehow coming from outside our local communities and have little to do with our deep beliefs and personal choices. Therefore, all we can do is either to react to them critically, if ineffectively, or to submit to them in a fatalistic, if not a cynical or opportunistic, fashion.

Nor do I agree, as I have made it clear, with those neoliberal and other analysts who see the current changes as being driven by our economies and/or technologies that subsequently become our fate. On the contrary, I believe that changes in our economies and technologies are driven by our increasing awareness of, and curiosity about, our almost unlimited potential as human beings and our desire to figure out how we can best evaluate and fulfill this potential. In this regard, it is up to us continually to transform our economies and technologies to suit our life projects, instead of fetishizing them and then surrendering our freedom to them, as we all too often tend to do, especially in academia.

The newly (re) discovered, nonlinear world conditions inherent in the current globalizing trends are both encouraging and terrifying. They are encouraging, because they reveal each individual human being to be an active participant in the continuously emerging local-global realities. They should thus alleviate the feeling of helplessness and "powerlessness" that many of us experience in the face of the complexities of the contemporary world. But, they are also terrifying, because our responsibilities as human beings have increased and continue to increase at an exponential rate. It is for this very reason that cooperative and dialogical, rather than agonistic models of human relations and interactions have now become imperative. It has also become imperative that all of us academics get involved at the level of our local communities and do not abdicate our responsibilities as intellectuals and educators in the face of the occasionally overwhelming onslaught of utilitarian and reductionist attitudes and practices that prevail both inside and outside our current learning establishments.

Finally, I would like to express my gratitude to many of my friends, colleagues, and students who have contributed directly or indirectly to this book. I would especially like to thank those who have shared the successes and failures of my institution-building efforts in various parts of the world. I am particularly grateful to Sorin Antohi, Nabil Ayad, Ronald Bogue, Fernando Cabo

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Four "brainstorming" sessions on global learning that I organized and led or co-led, two in the United States (Atlanta, Georgia and Concord, Massachusetts) and two in the south of France, have also substantially contributed to clarifying my ideas about the principles and objectives of global intelligence. In addition to some of the aforementioned colleagues and friends who have participated in all or several of these sessions, I am grateful to several other participants for their valuable contributions, including concrete suggestions for course and research topics for the intercultural studies program. Some of these topics I have modified and have incorporated in my ISP proposal in Chapter 4. I would especially like to thank Sorin Antohi, Paul Bové, Mikhail Epstein, J. Hillis Miller, Wolfgang Iser, Ronald A.T. Judy, Geoffrey Kittay, Julio Ortega, Brian Rosborough, Meera Viswanathan, and Lindsay Waters, who participated in the Concord meeting; and Sorin Antohi, Lilian Barros, Philippe Coulomb, Meinolf Dierkes, Zehra and Ahmet Evin, Riel Miller, Jacques de Pablo Lacoste, Hardy Schloer, Peter Stockinger, Inez Schreiden, and Zhang Xinhua, who participated in the Avignon meetings.

Last, but certainly not least, I would like to thank my wife Diana Santiago and my children Ana Maria and Michael Anthony, to whom I have dedicated this book, as well as its companion volume, in deep gratitude for their unflinching support and unconditional love.

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Chapter 1

Intercultural Studies
A Local-Global Approach

One would think that cultural studies would be a natural place to look for guidance in creating new educational principles and strategies for human development in this century. Its basic premises and methodologies ought to be compatible with an emergent ethics of global intelligence and its desiderata of crossdisciplinary and crosscultural responsive understanding, dialogue, and cooperation, as conditions of generating new local and global knowledge. Unfortunately, the field of cultural studies, as developed and practiced especially in North American academia and then exported to other academic environments in various countries from around the world, is as much at an impasse as other academic disciplines.

Since its inception in the 1970s, cultural studies has largely operated on the basis of an ideological and political alliance among such academic schools as Marxism, poststructuralism, feminism, and postcolonial studies. Its methodology has largely been a "hermeneutics of suspicion," based on social critical discourse, which originated with Marx and Nietzsche, in the nineteenth century, and was most notably continued, in the twentieth century, by the Frankfurt school of social critical thought, Freudian and other schools of psychoanalysis, and French and Anglo-American poststructuralism. Initially, the field of cultural studies fulfilled a useful role in examining certain asymmetric mechanisms of socioeconomic, cultural, and sexual power inside and outside Western "developed" societies. Yet, it had no solutions to offer beyond the traditional Marxist notions of class struggle, to which it added the notions of gender and race conflict.

The latest academic avatars of cultural studies often lack the cosmopolitan sophistication of their predecessors, in part because they have mostly limited their object of study, and social critique, to global or local popular culture as a manifestation of "late," consumerist capitalism. Furthermore, since the collapse of their political alliance during the last decade of the twentieth cen-

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tury, they have again relapsed into splinter groups and factions that are vying for academic authority and such administrative and financial advantages as may come with it. They have built their own academic disciplines, departments, and interdisciplinary programs and have joined the academic bureaucratic establishment, often with a vengeance. They have contributed to the contentious, legalistic atmosphere of North American academia, swept by successive waves of political correctness that are, to some degree, reminiscent of the cultural policies of East European communist regimes in the 1950s, or the Soviet "proletcultism" of the 1930s. Therefore the field of cultural studies, at least as it is largely practiced today in the West and its former colonies, is hardly in a position to offer any viable solutions for advancing global intelligence. On the contrary, it tends to inhibit such advancement, with its perennial oppositional discourses that are continuously co-opted by the very forces it allegedly struggles against.

Literary studies, one of the major fields that, together with cultural anthropology (particularly ethnography), philosophy, history, film studies, social studies, and women's studies, has mostly participated in the interdisciplinary programs of cultural studies, does not seem to fare much better. The common wisdom in North American academia has it that, despite their desperate interdisciplinary efforts, literature and literary studies are dying, if not already dead. This terminal state of crisis is brought about, it is often argued, by the onset of the new information and communication technologies or the Digital Age, which will eventually replace the printed page with the electronic screen. The very term "literature" (coming from the Latin word *littera,* "letter") seems to suggest that this Western form of discourse, dependent as it is on print technology, is fast becoming obsolete in a culture in which writing is largely replaced by word processing and digital imaging.[1]

A related problem that has come back to haunt North American literary studies is precisely their turn toward interdisciplinarity and cultural studies. Specifically, they have adopted the utilitarian and quantitative methodologies of the social sciences to such an extent that they are now in danger of losing their identity as an independent field of research. Consequently, literary studies have come to be perceived, especially by cost-and-benefit minded college administrators, as nothing more than an insignificant, and often politically troublesome, appendix to the social sciences. It is small wonder, then, that those who have built their careers, if not staked their entire intellectual and emotional lives, on literature and literary studies, should feel acute anxiety. This anxiety might variously translate into demoralization, cynicism, switch of career tracks or, at the other end of the psychological spectrum, self-defensive or aggressive apologies for the literary profession. Indeed, according to the compensatory mechanism of emotional polarizations, there are even those who claim that literature is all there is, from the hard sciences to virtual reality, to human history, to the Text of the World.

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Yet, it would surely be too soon to give up on literary studies (or on cultural studies, for that matter). The "death of literature," or its emotional counter slogan, "everything is literature," belongs to the same crisis-oriented vocabulary as the "death of God," "death of the author," and "death of the subject." All of them are part of the inflated rhetoric of modernity, with its acute consciousness of "all-devouring Time" and its frenzied drive for ever new sensations, whether physical or conceptual. Their rhetorical force has, however, greatly diminished with ad nauseam repetition. Literature is alive and well and living in a globalized world, like the rest of us. On the other hand, if the "death of literature" signifies no more than the death of literature and language departments as they are organized and function in today's disciplinary university, then one should cheer this process along, rather than mourn it. It is high time for academic reform in the field of literary studies as well, which does not mean that this field will die, but that it will renew itself and become again relevant to today's world.

In fact, literary studies are in an excellent position to contribute substantially to what appears to be a worldwide shift of knowledge paradigms, rather than to fight a losing, rearguard, academic action or be swallowed up by the social sciences. Even though some forms of literary studies might be more fashionable than others in the present intellectual climate, and even though literary studies, no less than cultural studies, continue to be plagued by ideological and political factionalism especially in the United States, the artistic tools and rhetorical strategies of literature in general are, or could be, among the most productive in the reconfiguration of knowledge and the creation of new cognitive paradigms that are the mark of our global age. It is this message that one may find not only in the Euro-American field of literary theory, e.g., in the recent work of Wolfgang Iser, Edward Said, Wlad Godzich, Paul Bové, James Hans, Arnold Krupat, Virgil Nemoianu, Gabriele Schwab, Kurt Spellmeyer, Frederick Turner, and the present author, but also in other human sciences, e.g. in the work of "metahistorians" such as Hayden White; sociologists such as Erving Goffman, Richard Brown, and Mike Featherstone; or ethnographers and anthropologists such as Victor Turner, James Clifford, Stephen A. Tyler, Paul Rabinow, George Marcus, and Michael Fischer, among others.

In this chapter, I shall focus on the productive feedback loops that have, for more than two decades, been circulating between ethnography as the vanguard of a postcolonial, revisionist, cultural anthropology and a literary theory that, while not ignoring the important lessons of deconstruction, attempts to move beyond some of its nihilistic implications. Starting from such feedback loops, I shall stage a crossdisciplinary comparison and dialogue that should help us develop the theoretical and methodological principles and practice of a reconstructed field of *intercultural studies.* This field would go beyond the current ideological and political impasse of cultural studies, while preserving and reorienting some of its valuable insights. It would situate itself in the van-

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guard of a much needed, comprehensive study of and dialogue among world cultures, not only from a local, national, or regional perspective, but also from a global one.

1. The Aesthetic Turn in Experimentalist Ethnography and the Anthropological Turn in Literary Studies: A Transdisciplinary Perspective

The "experimentalist" ethnography is the locus where much of the crossdisciplinary interface between anthropological and literary studies took place during the last quarter of the twentieth century. Many of the theoretical assumptions that ground the new ethnography can be found in an early collective volume, edited by James Clifford and George E. Marcus and entitled, *Writing Culture: The Poetics and Politics of Ethnography* (1986). In the Introduction to this volume, significantly entitled "Partial Truths," James Clifford lists some of these assumptions. According to him, the scholars whose essays are gathered in the volume see culture "as composed of seriously contested codes and representations; they assume that the poetic and the political are inseparable, that science is in, not above, historical and linguistic processes." They also assume that "the writing of cultural descriptions is properly experimental and ethical," while their emphasis on text creation and rhetoric highlights "the constructed, artificial nature of cultural accounts." (Clifford and Marcus 1986: 2) For Clifford, the written, literary component of ethnographic accounts is what gives them their peculiar, amphibolous character of partial truths and partial fictions.

In order to prevent "empiricist heckles" over the notion that ethnographies are mere fictions or literature, rather than objective, scientific accounts, Clifford attempts to redefine the term "fiction" (and, as we shall see later on, the term "literature" as well). For him, fiction, as commonly employed in contemporary textual theory, no longer means falsehood, or the mere opposite of truth. Rather, it "suggests the partiality of cultural and historical truths, the ways they are systematic and exclusive." (6) In this sense, "even the best ethnographic texts—serious true fictions—are systems or economies of truth. Power and history work through them, in ways their authors cannot fully control." (7)

Clifford borrows such theoretical concepts as "dialogism," "polyphony," and "otherness" from Mikhail Bakhtin (who initially develops them in his literary analyses of Dostoevsky's novels) in order to reform the monological narrative techniques of traditional ethnography. According to Clifford, this ethnography gave the voice of the ethnographer a "pervasive authorial function" and to others—usually members of the alien culture to be studied—the role of sources or "informants" to be cited, paraphrased, and interpreted. As a result, "polyvocality was restrained and orchestrated." (15) By contrast, the

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new ethnography recognizes "dialogism and polyphony" as modes of textual production. It questions the "monophonic authority" of traditional ethnography, which has always claimed to represent other cultures, at the same time that it has, presumably, hindered them from presenting themselves. Traditional ethnography, as the handmaiden of anthropology, "looked out at clearly defined others, defined as primitive, or tribal, or non-Western, or pre-literate, or nonhistorical." By contrast, new ethnography "encounters others in relation to itself, while seeing itself as other." (23)

In turn, Talal Asad, in his essay on "The Concept of Cultural Translation in British Social Anthropology" included in the same volume, critically examines the notion of "the translation of cultures" that social anthropology seems to have regarded as one of its main projects since the 1950s. This notion, also borrowed from literary and linguistic studies, presupposes that cultures, much like foreign languages, need to undergo a process of translation in order to be properly understood outside their own, "natural" habitat. Most importantly, Asad implicitly questions the process of understanding itself and the ways in which Western scientific communities, including anthropologists, acquire and classify knowledge. These ways largely involve the projection or imposition of Western cultural constructs upon remote and mostly nonwestern cultures. Thus, anthropological processes of understanding and/or acquiring knowledge, including cultural translation, are "inevitably enmeshed in conditions of power—professional, national, international." (Clifford and Marcus 1986: 163)

According to Asad, languages themselves are not "equal," because there are "asymmetrical tendencies and pressures in the languages of dominated and dominant societies." (164) The anthropologist needs therefore to consider the possibility that cultural translation might be "vitiated" by such tendencies and pressures. Asad offers the example of Arabic, which undergoes forcible transformations under the influence of English, signaling "inequalities in the power (i.e., in the *capacities*) of the respective languages in relation to the *dominant* forms of discourse that have been and are still being translated." (158, italics in the original)

Asad also questions the authority of ethnographers to read the "implicit" in foreign cultures. The ethnographic method of "decoding the other" is akin to the psychoanalyst's work and, as such, is a "form of theological exercise." (161). According to the psychoanalytic approach, social anthropologists are trained to decode implicit meanings. These meanings are not the ones that the native speaker actually acknowledges in his speech, or accepts from outside his culture, but those he is presumably capable of "sharing with scientific authority in 'some ideal situation.'" (162) Consequently, social anthropologists are not trained to introduce or enlarge cultural capacities learned from other cultures into their own, but rather "to translate other cultural languages as texts." (160)

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One should, again, note that such textual interpretive methods were borrowed, via psychoanalysis, from literary studies, specifically from hermeneutics. As is well known, Freud himself developed psychoanalysis as a form of hermeneutics applied to the human psyche that he in turn conceived as an implicit, multilayered text to be decoded and explicated. In Freud's work, moreover, there is no positivistic or disciplinary split between science and literature, both appearing as complementary forms of knowledge.

As we can see from the preceding citations, Asad does not explicitly formulate the principles of a new kind of cultural translation that should guide the social anthropologist's work, although these principles are easily deductible from his text. Cultural translation ought to enhance the translator's cultural capacities, his ability to transform his own culture by learning from others. Indeed, to put it in an aphoristic manner, translation is exploring and learning, like an infant, new ways of life. The idea of cultural translation remains very important in current anthropological and literary studies and deserves further elaboration. I shall return to it, later on in this chapter, when I shall propose the concept of *intercultural translation*, based on Asad's critique of traditional anthropological notions of cultural translation and Wolfgang Iser's concept of hermeneutics as translation acts.

Paul Rabinow, in his essay on "Representations are Social Facts: Modernity and Post-Modernity in Anthropology," takes up some of the same critical issues, but also offers a program of action, or an ethical code for the new anthropology. According to Rabinow, this anthropology does not need a theory of indigenous epistemologies or "a new epistemology of the other." Instead, it should *anthropologize* the West. For example, it should show how "exotic" the Western constitution of reality is. To this purpose, it should focus on those branches that are most taken for granted as universal, such as epistemology and economics, and making them appear "as historically peculiar as possible." (241) Anthropology should also pluralize and diversify its approaches. In Rabinow's view, one way of going against economic or philosophic "hegemony" is to "diversify centers of resistance." One should also avoid the error of "reverse essentializing," because, after all, "Occidentalism is not a remedy for Orientalism." (241)

Rabinow also reflects critically on the work of the experimentalist ethnographers or "metaethnographers," as he calls them, such as Clifford. According to him, they "ignore the relations of representational forms and social practice" when they claim that ethnography is a form of literature, or metafiction, or metatruth. Instead, they should, like Pierre Bourdieu, be mindful of the "strategies of cultural power that advance through denying their attachment to immediate political ends and thereby accumulate both symbolic capital and 'high' structural position." (252) Rabinow equally questions the claim of the metaethnographers that their kind of writing emerged because of decolonization. He suggests the possibility that academic politics

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might have had something to do with it, instead. Although asking if "longer, dispersive, multi-authored texts would yield tenure might seem petty," it is nevertheless important to determine the "situatedness of the anthropologist within academia." (253)

Finally, Rabinow surveys the various theoretical positions in cultural anthropology, including ethnography. He distinguishes four different theoretical approaches: interpretative, critical, political, and critical-cosmopolitan. These approaches, all of a hermeneutical nature, form an "interpretive federation," to which Rabinow claims he equally belongs. His obvious sympathies lie with critical cosmopolitanism, however, in which "the ethical is the guiding value." (258) He describes this approach as an "oppositional position, one suspicious of sovereign powers, universal truths, overly relativized preciousness, local authenticity, moralisms, high and low. Understanding is its second value, but an understanding suspicious of its own imperial tendencies. It attempts to be highly attentive to (and respectful of) difference, but it is also wary of the tendency to essentialize difference." (258) Critical cosmopolitanism is an "ethos of macro-interdependencies, with an acute consciousness (often forced upon people) of the inescapabilities and particularities of places, characters, historical trajectories and fates." (258)

The program envisaged by Rabinow is partly carried out by George E. Marcus and Michael J. Fischer in their influential book on *Anthropology as Cultural Critique: An Experimental Moment in the Human Sciences*. First published, just like *Writing Culture*, in 1986, but re-edited with a new introduction in 1999, this book is a comprehensive account of the significant transformations that ethnography has spearheaded in the field of anthropology, as well as of the ways in which anthropology as an academic discipline, or cluster of disciplines, can reposition itself within a global reference frame. It is particularly useful, because it places the recent developments in ethnography in both a cultural-historical perspective and an interdisciplinary one. Although one may not necessarily agree with Marcus and Fischer's particular cultural-historical narratives, one can nevertheless appreciate their narrative strategy that allows them to view their field from both the inside and the outside. The authors thus succeed in gaining the historical and emotional distance needed for any cultural critical project that also wishes, as theirs does, to propose a concrete program of disciplinary reforms.

In their brief history of anthropology as an academic discipline, Marcus and Fischer focus mostly on its British, French, and North American versions. They appear to divide this history into three main phases: the generalist, the positivist, and the self-reflexive or critical phase. The generalist phase coincided with the birth of anthropology as an academic field, in the second half of the nineteenth century, under the sign of the grand theories of scientific progress, based on the belief in the possibility of a universal, rational Science of Man. According to Marcus and Fischer, what have now become

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the specialized subfields or disciplines of archeology, ethnology, biological anthropology, and sociocultural anthropology were at that time "integrated in the competencies of individual anthropologists, who sought generalizations about humankind from the comparison of data on the range of past and present human diversity." (17) Anthropologists such as James Frazer and Edward Tylor in England, Emile Durkheim in France, and Lewis Henry Morgan in the United States pursued "ambitious intellectual projects that sought the origins of modern institutions, rituals, customs, and habit of thought through the contrasts of evolutionary stages in the development of human society." (17) They rarely traveled or did fieldwork, however, being mostly "armchair" anthropologists.

The second stage of British and American academic anthropology came during the first three decades of the twentieth century and can best be understood "in the broader context of the professionalization of the social sciences and the humanities into specialized disciplines of the university, especially in the United States." (17) Positivistic notions of science resulted in divisions of academic labor, disciplinary specialization, analytic languages and standards, and distinctive methodologies. Under these conditions, the "generalist fields of the nineteenth century—those well established, like history, and the upstarts, like anthropology—were now mere disciplines among a multitude of others; their grand projects became the specialties of bureaucratized academia." (17-18)

According to Marcus and Fischer, anthropology did not feel at ease in this new disciplinary environment. While attempting to find its place as one of the social sciences, it remained somewhat of a maverick among these sciences, precisely because of its generalist origins and practices. One should add that, in the late twentieth century, when "interdisciplinarity" and "unity of knowledge" became the order of the day in North American universities, especially under pressure from upper administrators who found the disciplinary institutional paradigm to be too rigid to accommodate the explosion of knowledge led by the physical and life sciences, anthropology easily rediscovered its "interdisciplinary" vocation, just as philosophy, history, and literature did. This is not to say that any of these fields has yet recovered from the onslaught of logical and scientific positivism and academic bureaucratization, or that any of them has become genuinely crossdisciplinary.[2]

Be it as it may, it was during the second phase of its development, the authors claim, that anthropology came into its own as an academic discipline. This was largely due to ethnography whose innovation was to bring together "into an integrated professional practice the previously separate processes of collecting data among non-Western peoples, done primarily by amateur scholars or others on the scene, and the armchair theorizing and analysis, done by the academic anthropologists." (18) Ethnography has also spearheaded the third phase of self-reflexive and critical anthropology, which began and flourished during the last three decades of the twentieth century and continues to

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the present day. Marcus and Fischer connect this phase with the broader context of what they see as the crisis of representation in the human sciences.

The authors take the French sense of "human sciences" (*les sciences humaines*) to include not only the conventional social sciences, but also law, art, architecture, philosophy, psychology, literature, and even the theoretical natural sciences. By "crisis of representation" they mean not only questioning the validity of all of our theoretical and methodological assumptions about social reality, but also a historical paradigm that tends to recur throughout Western intellectual history. This paradigm is broadly characterized by the suspension of grand social theories and systems of thought in favor of "rich experimentation and conceptual risk-taking."(10) The older, dominant theoretical frameworks are not denied, but are used in new, eclectic ways. According to Marcus and Fischer, our intellectual history can thus be seen as an "alternate swing of the pendulum between periods in which paradigms, or totalizing theories, are relatively secure, and periods in which paradigms lose their legitimacy and authority—when theoretical concerns shift to problems of the interpretation of the details of a reality that eludes the ability of dominant paradigms to describe it, let alone explain it." (12) Our contemporary age (in the past three decades) has experienced just this kind of swing from a period of grand theories to eclectic experimentation and exploration of new ways of describing "at the microscopic level the process of change itself." (15)

For Marcus and Fischer, the absence of paradigmatic authority in their discipline reveals itself in the fact that at present there are many anthropologies, such as ethnosemantics, British functionalism, French structuralism, cultural ecology, psychological anthropology, etc. These subdisciplines, moreover, use a variety of eclectic approaches. For example, some of them synthesize Marxist theory with structuralism, semiotics, and other forms of symbolic analysis; some merge language studies with social theory; and some employ scientific frameworks such as sociobiology with a view to attaining a fully "scientific" anthropology. Nevertheless, all of them take the practice of ethnography as their "common denominator in a very fragmented period." (16) In turn, ethnography gives rise to "interpretive anthropology," that is, the "explicit discourse that reflects on the doing and writing of ethnography itself." (16) Here, then, we have Rabinow's "interpretive federation," led not by critical cosmopolitanism, but by ethnography as cultural critique, or interpretive anthropology.

The question for Marcus and Fischer is how to give renewed relevance to the field(s) of anthropology in the present climate of theoretical skepticism. In other words, how can anthropology best represent itself in a period of representational crisis? They argue that during such periods, "a jeweler's-eye view of the world is needed, and this is precisely where the strength and attractiveness of cultural anthropology reside at the moment". (15) Ethnography again comes in handy, because it has long been dealing with "problems of the recording, interpretation and description of closely observed social and cultural processes". (15)

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According to Marcus and Fischer, it is also during periods of crises, when paradigmatic authority is absent, that one should expect a diffusion of ideas across disciplinary boundaries. They contend that anthropology should take advantage of this fact and seize the opportunity of regaining and putting to use its generalist vocation (now called "interdisciplinarity"). From a theoretical standpoint, anthropology "has always been creatively parasitic, testing out (often ethnocentric) generalities about man on the basis of specific other culture cases, investigated firsthand by the ethnographic method." (19) Because its concerns cross the traditional divide between the social sciences and the humanities, anthropology can in fact serve "as a conduit for the diffusion of ideas and methods from one to the other." (16)

Marcus and Fischer's historical account of paradigmatic shifts, both inside and outside their field, can be modified, expanded, and refined. For example, the historical pendulum that they see as alternating between two models of knowledge, one that involves authoritative totalizing theories and one that involves absence of paradigmatic authority, is a "partial truth," only partially plausible. Western intellectual history, or any other history, appears much messier and cannot easily fit into any such binary, linear cognitive models. For example, what Marcus and Fischer call a period of fragmentation may also be attributed to the positivistic turn and excessive specialization in academic research, rather than to a crisis of representation. This kind of positivist, disciplinary approach does favor "jeweler's-eye" analyses and distrusts grand theories, because it perceives them as largely "untestable" through experimental scientific methods. But this hardly means that it has at any time lost faith in such scientific methods or, indeed, in the grand rationalist project of the Science of Man.

On the other hand, even if we decide to work with Marcus and Fischer's binary models of knowledge, we need to make them more dynamic and interactive. One may, for instance, postulate that the two models, instead of following a pendulum-like movement, overlap in all historical periods and often engage in causally reciprocal, feedback loops. Grand theories continuously emerge and disappear in various fields at various times in different parts of the world. Conversely, the process of questioning the possibility of knowledge (any kind of knowledge) parallels the process of questioning any kind of authority, whether intellectual or not, and is continuously present during different historical periods, in different Western societies.

Some paradigmatic shifts may, furthermore, become visible only in retrospect and are asynchronous in relation to different fields of knowledge and disciplines. In another context (Spariosu 1989) I have argued, for instance, that the Romantic period in literature and the arts, which flourished in various European countries between the end of the eighteenth century and the mid-nineteenth century, reached its full impact in science only at the beginning of the twentieth century. They then became an authoritative paradigm only in the

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1950s, with the acceptance of the principles of relativity and quantum mechanics in physics. (These were worked out precisely during the 1920s and 1930s, when Marcus and Fischer place their swing of the pendulum away from grand-style theories.) Periods of intellectual skepticism can coincide and coexist with periods of great faith in the Science of Man, as seems to have been the case during most of the eighteenth and the nineteenth centuries.

In order to add depth and credibility to their historical account of the birth and development of their field, Marcus and Fischer could have mentioned other Western anthropological traditions that were at least as important as the British and the French, and certainly more important than the North American one, in shaping anthropology into a modern academic discipline. Four major European traditions in ethnography immediately come to mind: the Portuguese, Peninsular-Hispanic, Italian, and German ones, with such illustrious predecessors as Marco Polo, Columbus, Hernán Cortés, Amerigo Vespucci, Vasco da Gama, Fray Bartolomé de las Casas, Bernal Díaz del Castillo, Garcilaso de la Vega, and other voyagers and ethnographers who led or accompanied European expeditions to the so-called New World; Giambattista Vico, as well as Kant, Herder, Wilhelm and Alexander von Humboldt, the Grimm brothers, and other Romantic thinkers who contributed to the creation of a national spirit (and, ultimately, of the nation-state), based on their ethnographic studies. The list may also include the Russian, Dutch, and Scandinavian explorers, as well as those of Central and Eastern Europe who in the nineteenth century were subjects of the Austro-Hungarian, Ottoman, and Russian empires. One should also include the important Hellenistic, Arabic, African, Chinese, Indian, Japanese, and Mayan contributions to ethnography during different periods in the history of humankind.

What is of interest in Marcus and Fischer's narrative constructions, however, is not so much their historical validity, which may variously be contested or subscribed to, but their performative quality, i.e., their ability to become authoritative paradigms (although we need to examine and redefine what we mean by "authoritative" as well), resulting in new research programs and, generally, in the transformation of anthropology and other disciplines within human studies. These studies should now be considered not only within their local, European and North American, reference frames, but also within a global one. Marcus and Fischer start this process in their Introduction to the second edition of *Anthropology as Cultural Critique*. Later on in the present chapter I shall return to this second Introduction in order to discuss the role of interpretive anthropology within a global framework. I shall also review, at that time, the research programs proposed by Marcus and Fischer for their discipline, which could play an important part in the reconstruction of the field of intercultural studies as well. For now, I would like to turn to the literary side of the interdisciplinary dialogue that I have been staging here, in order to take into consideration other theoretical building blocks that could equally contribute to this task.

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Not unlike his colleagues in anthropology, Wolfgang Iser, one of the foremost literary theorists of our time, is concerned with the question of the contemporary relevance of his discipline in a period of cognitive paradigmatic shifts. He addresses this question in his latest books: *Prospecting: From Reader Response to Literary Anthropology* (1989), *The Fictive and the Imaginary* (1992), and *The Range of Interpretation* (2000). In the first two of these books, Iser develops what he calls a "literary anthropology." Thereby, he implicitly acknowledges the cultural anthropological turn in contemporary literary studies, which meets halfway ethnography's turn toward literature.

According to Iser, literary anthropology has arisen as a historical necessity in our age, because literature has again reached a turning point (as it did with the invention of printing a few centuries ago), evidenced by the numerous pronouncements about its imminent demise under the pressure of the contemporary mass media. But what is fading away is less the literary phenomenon itself than its traditional functions as perceived by the various poetics and aesthetic theories of the past. Hence, for Iser literary anthropology has a triple objective (which parallels to some extent the methodological objectives of Marcus and Fischer's interpretive anthropology): to map out the changing functions of literature over time, to determine what its new functions might be in a postmodern age, and to understand its enduring place in the human overall scheme of things. Inevitably, the second and third objectives will to some extent overlap according to the "temporizing of essence" effect, described by Kenneth Burke (and implicitly referred to by Iser), through which any poetics or aesthetics tends to equate the function(s) of literature with its nature.

Iser begins his literary anthropological project by sketching a broad historical outline of the traditional functions of literature in the West. The classical and neoclassical notions of literature as mimesis, which assigned the literary work the task of making nature accessible to human beings, or even perfecting it, were replaced by the Romantic notions of literature as the creation of a genius, that is, as a realm of freedom opposed to the realm of nature, even as it imitates natural process. Thus, in the nineteenth century, the old relationship of complementarity between art and nature gradually turned into one of opposition, with literature being seen as either absolutely independent from or even more real than reality. These views led to the interrelated notions of art as a religious surrogate and as an ennobling instrument of humanistic culture, which in turn led, ironically, to the bourgeois utilitarian notion of art as a means of gaining social status. According to Iser, it is largely against these bourgeois notions of high culture that Dada, Surrealism, and the 1968 French student movement rebelled, but in doing so, they created their own notions of literature as practical (revolutionary) agent.

During the second half of the twentieth century, the concept of literature as reaction to and interpretation of reality—a concept to which Iser equally subscribes—has moved to the forefront of literary theory and criticism. This

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development in literary studies is part of the earlier realization, variously articulated by Nietzsche, Vaihinger, Husserl, Heidegger, and Wittgenstein, and also taken up, as we have seen, by some experimental ethnographists, that our acts of cognition are acts of interpretation and that, in turn, our acts of interpretation are acts of world-making or ontological acts. Interpretation is a way of selecting, combining, and ordering, but also omitting, ignoring, or even suppressing, bits of reality in order to create a coherent whole, structure, or system. Iser points out that, once the hermeneutic complex of structure, function, and communication comes to the center stage of Western thought, it unfolds with a certain historical inevitability.

What underlies the hermeneutic complex is its search for meaning, or its semantic orientation: The concept of structure "describes the production of meaning," the concept of function "gives concrete definition to the meaning," while the concept of communication "elucidates the experience of meaning." (Iser 1989: 231) In other words, the work of art is always reduced to its semantic dimension. Yet, Iser contends that the semantic dimension is not the ultimate dimension of the literary text, but of literary theory, "whose discourse is aimed at making the text translatable into terms of understanding." (232)

By contrast, for Iser the ultimate dimension of the literary text is "the imaginary." Whereas meaning tends toward precision, the imaginary is diffuse by its very nature. Its diffusiveness eludes semantic determination, allowing it to be transformed into "many gestalts." (232) In turn, within the literary text, the imaginary is continuously shaped by the fictive. Consequently, in his next book, *The Fictive and the Imaginary*, Iser proposes a triadic model of interplay between the imaginary, the fictive, and the real as the conceptual basis for his literary anthropology.

Iser defines both the imaginary and the fictive in functional terms, tracing the history of their uses. He points out that imagination has variously been considered as a human faculty (by the Romantics and S.T. Coleridge in particular), as a creative act (by Jean-Paul Sartre), and as Ur-fantasy or radical imaginary (by Cornelius Castoriadis). All of these conceptualizations show that the imaginary is a featureless and inactive potential that lacks its own intentionality. An outside agent must, therefore, activate it, such as the subject (in Coleridge), or consciousness (in Sartre), or the psyche and the sociohistorical (in Castoriadis). Within the literary work, it is the fictive that becomes this activating agent.

In turn, the fictive is a functional category no less slippery than the imaginary, having a long history in terms of its literary, philosophical, and scientific uses. Iser traces the history of its philosophical uses from Francis Bacon to Nelson Goodman (Iser 1992: 87-170)—of course, one could easily have traced this history all the way back to the Sophists, Socrates, Plato, and Aristotle. One could now also add the new ethnographers' use of it, for example in Clifford's concept of "partial truth" in relation to ethnographic discourse. According to Iser, the most important feature of the fictive is its double meaning, or its abil-

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ity to cross boundaries through its "fictionalizing acts." On the one hand, a fictionalizing act makes inroads into the real, dissolving its rigid boundaries by selecting, recombining, and bracketing some of its constitutive elements. On the other hand, it crosses into the boundless world of the imaginary and gives it a certain direction or structure.

For Iser, then, literature, no less than art in general, is a privileged locus of interaction between the fictive, the real, and the imaginary. In the literary work, the fictive gains an added functional feature that distinguishes it from its uses in philosophy and science, namely, self-disclosure. Through self-disclosure or the act of pointing to itself as fiction, the fictive can best carry out its role as mediator between the real and the imaginary. It transgresses the limits of "what it organizes (external reality) and what it converts into gestalt (the diffusiveness of the imaginary)." Thereby, it leads "the real to the imaginary and the imaginary to the real." (Iser 1992: 4) For Iser, then, the fictive in literature is a "halfway house" or a borderline phenomenon, always oscillating between the real and the imaginary.

Finally, Iser turns his attention to such anthropological categories as play, mimesis, performance, representation, and staging, which introduce the philosophical premise of his literary anthropology: the extraordinary plasticity of human beings that has its sources in our perpetual attempt—and perpetual failure—to become present to ourselves. Because humans seem to possess an indeterminate nature, they "can expand into an almost unlimited range of culture-bound patternings. The impossibility of being present to ourselves becomes our possibility to play ourselves out to a fullness that knows no bounds, because no matter how vast the range, none of the possibilities will 'make us tick.'" (Iser 1992: 297) In turn, literature, through mimesis and staging as forms of play, becomes a vast panorama of human possibilities, "because it is not hedged in either by the limitations or by the considerations that determine the institutionalized organizations within which human life otherwise takes its course." (297)

Because literature constantly monitors the ever-changing manifestations of human self-fashioning without ever completely coinciding with any of them, it "makes the interminable staging of ourselves appear as the postponement of the end." (Iser 1992: 302) Literature thus addresses the "cardinal points of existence," that is, birth and death. In Iser's view, birth and death have always been "sources of disquiet" for human consciousness, because they are "ungraspable certainties," defying cognition. (302) So humans attempt to make them as tangible as possible through literary staging or simulacrum. Literature "allows us—at least in our fantasy—to lead an ecstatic life by stepping out of what we are caught up in, in order to open up for ourselves what we are otherwise barred from." (303)

One of Iser's important insights, which he shares with the deconstructionists and the poststructuralists in general, is that any theoretical or critical per-

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spective, no matter how comprehensive, inclusive, or pluralistic it aspires to be, will inevitably reduce the literary work to a semantic level. This also holds true for those new ethnographers, such as Clifford and Tyler, who use literature for anthropological ends, as we shall see immediately below. One may, however, add that even those theoretical approaches that are based on the deconstruction of meaning are forms of semantic reduction of the literary text, because deconstruction is a logical operation, depending on the communicative structure and/or function that it dismantles. In other words, deconstruction, no less than other semantic approaches, discounts the imaginary aspect of the literary text even as it reduces it to this aspect.

As Iser points out, the imaginary by itself always appears as indeterminate. For this reason, it essentially defies any meaning at the same time that it conditions all meaning. So, one could argue, deconstruction as an anti-semantic logical operation (un) covers the imaginary, but in the negative or destructive fashion that arrests the creation of further meaning. Therefore, it paradoxically denies further access to the imaginary as well. It is in this sense that deconstruction (especially as practiced in American academia in the wake of Paul de Man) can be seen as a nihilistic intellectual endeavor, in which the search for meaning enters a perpetual crisis or state of dissatisfaction.

For his part, Iser, once he has uncovered the imaginary as productive indeterminacy (or what certain Eastern schools of thought would call productive nothingness or emptiness), prefers a Nietzschean form of joyful forgetfulness. He relaunches the search for meaning by incorporating the imaginary itself into the equation and exploring the ways in which it contributes to the creation of meaning in the literary text. Thereby, however, he does not fall back into the old trap of semantic reduction: he defines literary reception not as a primarily semantic operation, but, rather, as "a process of experiencing the imaginary gestalt brought forth by the text." (Iser 1989: 210) In this regard, Iser respects the alterity of the literary text as a perpetually new unfolding of the imaginary.

Although Iser attempts to turn away from the nihilistic tendencies of our contemporary culture—which often experiences the "emptiness" of the imaginary in a negative if not a tragic manner—and to open up the possibility of new ludic spaces for the human imagination, some of the implicit philosophical assumptions that underlie his literary anthropology still show certain nihilistic residues.[3] If one were to express the hermeneutical double nature of Iser's literary anthropology in philosophical terms, one might say that there is a certain *décalage* between his constructivist epistemology and his residually neo-Kantian ontology. So the next step of literary anthropology might be to explore the concept of the real in the same thoroughgoing philosophical, historical, and anthropological fashion that it has explored the concepts of the fictive and the imaginary.

Without going into the long and complex history of the Western concepts of reality, here I would only like to note that these concepts seem nowadays to

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have become so diffuse that they needlessly problematize the issues involved in Iser's literary anthropology. Incidentally, they also problematize the issues related to Marcus and Fischer's notion of paradigmatic shifts as pendulum swings between skeptical and confident modes of perceiving social reality. The two anthropologists do not theorize the notion of reality any more than Iser does, leaving the impression that there is a monolithic social reality out there, which can then be described more or less adequately either by grand theoretical systems or by the jeweler's-eye view of the ethnographer. Thus, they largely leave unexamined the reality-making capacities of any theory—grand or small—including their own ethnographic speculations. On the other hand, Rabinow, through his notion of "representations as social facts," narrows down the role of these theories to helping create specific social realities. He thereby denies their relative independence in relation to a specific social reality, i.e., their imaginary aspect.

One can, for example, see the literary text, indeed the imaginary itself, as another form of reality, if by "reality" one understands, in neo-Kantian fashion, not only a (visible or invisible, accessible or inaccessible, knowable or unknowable, orderly or chaotic) succession of physical, psychological, and historical phenomena, objects, and events, but also human artifacts, including language, which are always a paradoxical mixture of ideal and material elements.[4] It is clear, moreover, that by "the real" Iser does not mean the opposite of the fictive, or even that of the imaginary, since he argues that these binary oppositions have lost their theoretical cogency. He is also well aware of the fact that the opposition between literature or "fiction" and reality gives rise to a familiar regressive, mirrorlike, effect that is often dramatized and played upon by literature itself.

In order to avoid such aporetic effects, one can replace the terms "reality" and "the real" with "the actual." Iser's literary anthropological triad would then become the interplay of the imaginary, the fictive, and the actual. The latter term would neatly correspond to Iser's phenomenological notion of the literary work as a series of concretizations that arise in the interaction of this work with a recipient or a community of interpreters. The "actual" would thus underscore the decisive role human communities have in establishing or changing a specific—and specifiable—state of affairs. In this sense, a literary work does not react to or interpret either the real or Reality as such (the Kantian and neo-Kantian *Ding an sich*), but can play an active role in redefining or modifying a past or current state of affairs, or even in generating an entirely new one.

Ontologically, one could go even farther and joyfully affirm the unity between reality and the imaginary (instead of regarding it negatively as an aporia), positing it as a continuous unfolding of an infinitely diverse plurality of fictive, actual, and liminal worlds.[5] This would certainly not mean confusing "literature" with "reality" or, properly speaking, the literary with the actual

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(and Iser seems to me justified in stressing once again the adverse ontological consequences of such Romantic confusions). On the contrary, it would further clarify the specific, *liminal* function of literature in ceaselessly reshaping the actual world through an interplay of the fictive and the imaginary. In fact, one of Iser's most important insights is this liminal function of literature. Although he will use this term, borrowed from anthropology, only in his next book on the range of interpretation, it would be methodologically advantageous to adopt it in this earlier context as well.

The concept of liminality would specifically describe the literary phenomenon, with its ceaseless crossing of boundaries between the fictive, the actual, and the imaginary. It would also properly distinguish between literature and fiction, or between literary-liminal and fictive worlds. As Iser points out, the fictive worlds of philosophy and science (including ethnography) are pragmatically oriented, that is, oriented toward the actual. Consequently, they are largely underplaying the liminal potential of the fictive. By contrast, literary worlds release precisely this liminal potential, by directing the fictive not only toward the actual but also toward the imaginary.

In his most recent book, *The Range of Interpretation*, Iser does introduce the term "liminality" in connection with his theory of interpretation or hermeneutics, which becomes another facet of his literary anthropology. He elaborates on the thesis, episodically present in Gadamer's *Truth and Method* (1960) as well, that any act of interpretation is in fact an act of translation, specifically, the translation of a particular subject matter into a different register. Furthermore, each act of interpretation opens up a gap between the subject matter and the register into which it is translated. Following Arnold Van Gennep (1960), Victor Turner (1982), and other anthropologists and literary theorists, Iser calls this gap a liminal space.

As each act of interpretation generates a liminal space, its intent will realize itself in the way in which it can negotiate this space. According to Iser, such a negotiation is indispensable as the liminal space is bound to contain a resistance to translation—a resistance, however, that energizes the drive to overcome it. Interpretation may thus be conceived as a paradoxical effort to cope with the liminal space it itself generates by narrowing it down as much as possible. Finally, if interpretation is a form of translatability, then it will always depend on what it attempts to translate, rather than on some infallible concept of truth or reality.

Starting from the idea of interpretation as a form of (cultural) translatability, Iser sketches four main types or models of interpretation according to the subject matter that is to be translated into a different register and the different ways in which each type negotiates the liminal space that it opens up. He also deploys these four main types historically, tracing their gradual emergence and fading as the necessary result of paradigmatic shifts in the value systems and beliefs operating in a certain community or culture within the Judeo-Christian world.

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According to Iser, the first interpretive type is the exegetic model of the Torah in the Judaic tradition, where the texts to be interpreted form a sealed, or open, sacred canon, based on divine authority. This model is also borrowed by literary criticism in the Neoclassical Age, resulting in the creation of a literary canon. In this interpretive mode or genre, undisputed authority is of paramount concern when sacred texts need to be translated into the life of the community or when canonized authors become guidelines for both the production and reception of literature. (Iser 2000: 13-28) In turn, when the canonic authority becomes eroded and subject to critical disputes, the interpretive community finds ways of coping with this loss through new strategies of interpretation, e.g., the hermeneutical circle, with such variables of it as Schleiermacher's "self-reflective circularity," Droysen's "nesting of circles," and Ricoeur's "transactional loops." (41-69)

These variables of the hermeneutical circle remain operative as long as the interpretive community still believes in some kind of center that holds reality together. Once this center loses its hold and becomes replaced by a void, or vortex, or entropy, a different mode of interpretation comes into being: the "recursive loop." Iser analyzes various types of recursive loop, ranging from the interpretive strategies of cybernetics, in the work of Norbert Wiener (1948) as an attempt to control entropy and reconstitute the center; to those of "ethnographic recursion," in the work of Clifford Geertz (1973) and André Leroi-Gourhan (1993), as an attempt to negotiate between the familiar and the alien in the encounters between cultures or levels of culture; to those of "systemic recursion," in the work of the Santiago School of systems theory (Maturana and Varela 1980), as an attempt to deal with a reality conceived as open-endedness in terms of autonomous systems, or composite systems, emerging out of a structural coupling of systems. (Iser 2000: 83-112)

The last type of interpretation Iser describes is the "travelling differential," a term he borrows from Franz Rosenzweig's book *The Star of Redemption* (1921). This interpretive type attempts to deal with a situation where holistic conceptualizations of the divine or the transcendental as advanced by philosophy and theology have lost their ability to translate incommensurabilities into cognition. (113-44) Iser sums up his argument by showing how the last three types of interpretation that he has described are interconnected and how "the hermeneutic circle, the recursive loop, and the travelling differential actually shade into each other whenever interpretation occurs." (Iser 2000: 141) Thus, the difference between various interpretations is mostly one of emphasis, with one of the interpretive modes being "dominant" and the others "subservient" to it.

Iser also raises the question of the nature of the liminal space created by any interpretation, which according to him is that which "marks off the subject matter from the register and therefore does not belong to either." (142) This liminal space is "basically empty, yet something seems to arise out of it," due

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to the interplay of the circle, loop, and differential that lends it structure. Iser further describes the liminal space as a "vortex" in which these three operational modes "struggle with each other." (143) The liminal space, while not autopoietic by nature, can nevertheless assume this quality "by drawing its virulence from what is inserted into it from outside itself." (144) In the final analysis, Iser concludes, the very uncontrollability of the liminal system allows it to become a nonlinear "self-organizing system" or a "source of emergent phenomena." (145)

Most of Iser's recent work, no less than that of the new ethnographers, reveals that not only literary studies, but also Western practices of interpretation in general, including those implicitly or explicitly employed by the social, physical and life sciences, might fruitfully be viewed in cultural anthropological terms, that is, not as universal givens, but as culture-specific, historical phenomena. Furthermore, Iser considers these questions from the standpoint of recent developments in the theoretical sciences, such as chaos, complexity, and emergence theory, based on earlier insights of general systems theory, thus demonstrating their wide applicability not only to natural but also to cultural phenomena.[6] Iser's theory of reading and communication could also be productively employed in the context of contemporary cultural studies, of which ethnography, as we have seen, is an integral part. But Iser elects not to pursue this option, limiting himself to what one might call a "philosophical anthropology in a pragmatic sense"—Kant's term and title of one of his early and, in my view, most seminal works.

Perhaps one of the reasons why Iser does not directly engage cultural studies in his work is precisely because this field, as currently constituted in Western academia, all too often enlists literature in the service of some specific ideological or political agenda. Experimentalist ethnography itself is a good example of this opportunistic use of literature. As we can see in several essays included in *Writing Culture*, ethnography co-opts literature in order to reinvent and legitimate its own disciplinary and rhetorical strategies. There would be nothing prejudicial in this use of literature, if some ethnographers did not, at the same time and in the same movement, abuse it.

For instance, Clifford, in his introduction to *Writing Culture*, remarks after he makes his case for the semiliterary nature of ethnography: "As will soon become apparent, the range of issues raised is not literary in any traditional sense. Most of the essays, while focusing on textual practices, reach beyond texts to contexts of power, resistance, institutional constraint, and innovation." (Clifford and Marcus 1986: 2) Literary texts can obviously point to these contexts as well. Here Clifford adopts a charge, often leveled at postmodernist literature (but not at all literature) by certain traditional literary critics, that it is too self-reflexive and self-referential, and therefore self-indulgent. (Ironically, we recall that Rabinow, in his own contribution to *Writing Culture*, levels the very same charge at the new ethnographic writing, includ-

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ing that of Clifford.) But, then, later on in the same introduction, Clifford, as if to discount his first statement, reduces literature, just like Rabinow, to ideological discourse and, as such, to a "transient" category: "The ideological formations of art and culture have no essential or eternal status. They are changing and contestable." (6) Again, Clifford borrows this judgment from a certain sociological, perhaps Marxist, type of critical discourse on literature, which says less about literature itself than about its interpretive community, as Iser also points out in a different context.

In turn, Stephen A. Tyler, in his essay on "Post-Modern Ethnography: From Document of the Occult to Occult Document," goes to great lengths in describing the new ethnography as a form of archaic poetry—an idea he borrows from Werner Jaeger's *Paideia* (1945), which he appropriately cites in his text. At the end of his argument, however, undoubtedly mindful of "empiricist heckles" from his more conventional colleagues that also seemed to worry Clifford, Tyler falls back on the same argument of self-indulgence and self-reference as a distinguishing criterion between his experimentalist ethnographic discourse and the literary one: "No origin outside the text—just literature then, or an odd kind of lit. crit.? Yes, literature, but not in the sense of total self-reflexivity, of literature about itself and nothing else." Unlike literature, ethnography is not self-referential, but evokes what "can never be put into a text by any writer," namely the commonsense understanding of the reader. In this regard, the incompleteness of the ethnographic text "implicates the work of the reader." In turn, the reader's work "derives as much, if not more, from the oral world of everyday expression and commonsense understanding as it does from the world of the text." (Clifford and Marcus 1986: 138)

Literary critics such as Iser, who have developed sophisticated reader-response theories in dealing with literary texts, would obviously argue that engaging the reader in a thoughtful dialogue about intra- and extra-textual worlds is precisely what most literature does. That experimentalist ethnography uses literary and aesthetic strategies in order to gain disciplinary authority is not objectionable per se. After all, Marcus and Fischer acknowledge the theoretically opportunistic nature of ethnography that is "creatively parasitic" on ideas borrowed from other fields, which it puts to the test of ethnological practice. Their observation applies equally well to literature, which in turn uses a wide range of nonliterary discourses in its imaginary constructions. This kind of borrowing back and forth is part of the healthy circulation of ideas that fertilizes and enriches the intellectual climate of any transdisciplinary effort.

Problems arise, however, when the new ethnographers attempt to distinguish their ethnographies from literature by reenacting the old scapegoat ritual that Socrates performed on poetry, for example, in Plato's *Republic*, where he attempted to substitute poetry for philosophy as the authoritative discourse in the polis. This scapegoat ritual has been enacted, again and again, at the scene of the birth of many a new discipline or the rejuvenation of an old one. And,

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incidentally, the sacrificial victim of such rituals has not always been poetry or literature alone. Cultural anthropology itself should, therefore, study this widely practiced sacrificial ritual as an integral element of the disciplinary scientific mentality or culture. In turn, a reconstructed field of transdisciplinary and intercultural studies, oriented toward global intelligence, will hopefully avoid such power moves, deeply engrained in our cultural histories.

Indeed, what is at stake in any disciplinary enterprise is power as a founding principle of all that is, including representation. In this sense, Marcus and Fischer's "crisis of representation" is in fact a crisis of old power systems of authority, which are at first challenged and undermined, but eventually manage to be reborn and to reconstitute themselves on different epistemological grounds. These crises can simply be seen as strategies of reconfiguring power structures so that they can regain their authority in the communities that have temporarily lost faith in them. Modernity itself thrives on all kinds of crises as power-enhancing strategies, as we can discern, for example, in the insatiable modern appetite for natural and manmade disasters that the New Media feed on and feed back to their public.

If literature can be reduced to its semantic or representational level, then it loses its imaginary or liminal features. Thereby, it loses its capacity for pointing to values outside its immediate cultural context, such as "unrepresentable," cultural otherness and alternative worlds. These are not representable precisely because their grounding principles are incommensurable with those of power. In this manner, literature can be contained and controlled within power-staged representations.

Rabinow, for example, implies the ubiquity and inevitability of power in all representation, when he declares in a typical postmodernist, Foucaultian fashion: "Thought is nothing more and nothing less than a historically locatable set of practices." (Clifford and Marcus 1986: 239) In turn, we recall Clifford's assumption that "the poetic and the political are inseparable." (2) Through these statements, both Clifford and Rabinow effectively deny, in the wake of Foucault, that thought can have an imaginary history, or histories, locatable outside actual public and social practices. And most such public and social practices known to humankind have been based on power relations and representations. So this is a way for such poststructuralist writers as Foucault, Rabinow, and Clifford to equate thought with power. For them, thought cannot exist in a "vacuum," that is, in a liminal space and cannot function outside a concrete set of social relations and practices. (We might recall, in this context, Aristotle's famous aphorism that "power abhors vacuum.")

But how does a particular set of social practices and relations change? Must it always be power that drives such change? Whereas the poststructuralist answer would be a definite "yes," human thought could imagine, and has imagined, other possible answers. Like many other poststructuralists, Foucault, Rabinow, and Clifford discount the creative role of the human imagina-

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tion—an important component of thought that is not always and inevitably based on a binary opposition of truth versus falsehood, or an either/or logic, or some other such mechanism of power. Although thought, individual and collective, may be "local" in terms of the range of choices open to specific members of a human community or culture at a given time and place, it can also conceive of social choices and structures outside those currently available, and is thus capable of producing new social "facts." Therefore, Iser seems to shy away from the current versions of North American and other cultural studies also because most of them discount the imaginary or liminal aspects of literature and thought in general.

And yet, by not considering literature in a wider intercultural context, Iser's literary anthropology misses the opportunity to confront its own partial blindness to cultural alterity, in the restricted sense that it occasionally presents its assumptions (just as Kant presented his) not as specifically Western, but as universally human. It also misses the opportunity to confront contemporary cultural studies itself, including experimentalist ethnography, with its blindness to literature as a liminal phenomenon and to the possibilities of world making outside the realm of power politics. It is perhaps for these reasons that Gabriele Schwab, Iser's former student at the University of Konstanz and current colleague at UC Irvine, takes the next logical step from literary anthropology to an "imaginary ethnography," which she situates squarely in the field of cultural studies. A brief consideration of her recent work might be useful in understanding how literary anthropology can be creatively employed in this field.

In *The Mirror and the Killer-Queen: Otherness in Literary Language* (1996), Schwab develops a theory of literature as cultural contact. By "cultural contact," following Gregory Bateson, she means both the interactions between culturally different communities and those within a single community, such as the "processes whereby a child is molded and trained to fit the culture into which he was born." (Schwab 1996: 9) She contends that literary texts establish a "highly specialized" form of cultural contact with their readers. This cultural contact involves both the imaginary worlds these texts propose and the reading practices into which readers of literature are socialized, including traditional and experimental literary techniques. Ultimately, literary texts confront their readers with an experience of otherness, whether this otherness is internal (psychological, sexual, social, and cultural) or external (intercultural).

Schwab notes that there are two major forms of alterity that earlier theories of reading, including those of the Konstanz School to which Iser equally belongs, have not dealt with: sexual otherness and intercultural otherness. Moreover, these types of alterity have always engendered forms of cultural and intercultural contact based on asymmetrical relations of power. Schwab supports the feminist thesis that although anyone may in principle occupy the

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position of the Other, the symbolic order of language, based as it is on binary oppositions, represents "Woman as the primary Other—which, in turn 'feminizes' all other agencies or orders that occupy the position of otherness, be it the racial other, the child, the primitive, the insane, the irrational, the poetic, the unconscious, or simply chaos." (37) One might disagree with Schwab's essentialist privileging of "Woman as the primary Other," which can be regarded as part of the compensatory mechanism inherent in the reversal of any asymmetrical binary opposition—in this case that of male versus female. But one can hardly deny that women, together with the so-called "sexual deviants," have often occupied the position of the Other in Western cultural polarities based on gender.

In turn, Schwab notes that contemporary cultural studies foreground intercultural otherness largely in the form of extensive critiques of Western capitalism, colonialism, and imperialism with their largely "ethnocentric," destructive forms of cultural contact. According to her, cultural criticism has also attempted to develop an "ethic of otherness" based on decolonization, whether the "decolonization of other cultures, ethnic minorities, women, or the unconscious." (37) The assumption of this criticism is that colonialism has marked intercultural contact to such a degree that its dynamic also applies to attitudes toward cultural otherness as a whole. One might, again, disagree with Schwab's and other postcolonial critics' privileging of the colonial Other, for the same reasons that one might disagree with the privileging of the sexual Other. Yet, one can hardly deny that colonialism has produced a severe trauma in the collective psyches of both the colonizers and the colonized, which will take a long time and a great amount of intercultural reconciliation to heal.

For Schwab, cultural criticism is a "border operation," as evidenced, for example, in Mary Louise Pratt's concept of "criticism in the contact zone." Pratt defines "contact zones" as "social spaces where disparate cultures meet, clash, and grapple with each other, often in highly asymmetrical relations of domination and subordination." (Pratt 1992: 4) But, temperamentally, Schwab seems to feel closer to Arnold Krupat's notion of ethnocriticism, developed mostly in his book, *Ethnocriticsim* (1992), which attempts, at least in principle, to avoid a violent concept of cultural difference, while acknowledging the difficulty of such a project. For Krupat, as for Schwab, literary texts display qualities of betweenness, being on the frontiers of fields such as history, ethnography, philosophy, and social science, and often crossing these frontiers with impunity. In turn, ethnocriticism partakes of this "frontier condition of liminality or betweenness." (Krupat 1992: 27) It seeks to position itself "somewhere between objectivism and relativism" (27) and to employ a Bakhtinian, dialogical approach to otherness. We recall that dialogism and polyphony are among the most important methodologies of the new ethnography as well, and should be a grounding principle for any intercultural studies project, oriented toward global intelligence.

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But Schwab, unlike her colleagues in ethnography and as if in answer to Iser's apparent reservations toward what he seems to perceive as the ideological biases of cultural studies, does attempt to define the specificity of literary texts in relation to that of other cultural texts, without scapegoating any of them. In this sense, she brings an important contribution to literary anthropology. She argues that the cultural function of literature is largely to shape "literary figurations of otherness—be it an internal otherness or that of other cultures—and thereby determining its mediation to readers. Because they work at a subliminal level, style, formal structures, and literary moods may, in fact, shape experiences of otherness even more deeply than the historical or cultural remoteness of texts." (Schwab 1996: 43)

Working especially with experimental literary texts such as *Alice in Wonderland*, *Finnegans Wake*, *As I Lay Dying*, *Nightwood*, etc., Schwab argues that these texts bear in a fundamental way on the cultural relevance of literature. Unlike philosophical and other systematic forms of discourse, experimental literature at its best provides "a heteronomous experience that achieves a movement to the other that never returns to the same." (45) Experimental literature also stimulates a way of thinking characteristic of open, rather than closed, systems and thus "tends to increase sensitivity and tolerance for otherness and to decrease cultural paranoia." (44)

Here, again, Schwab opportunely invokes Gregory Bateson to the effect that "systems of thought or forms of cultural contact that rigidify boundaries in order to maintain internal coherence lead to an increase of outside pressure or, in relation to other cultures, external conflict and hostility, which is ultimately destructive for all agents involved." (45) By contrast, experimental literary texts point toward "a dynamic, nondestructive or balancing relationship between cultures in contact" that requires a "permanent renegotiation of their mutual boundaries." (45) This process results in a different form of inner coherence based not on domination, but on flexibility and openness to change.

Schwab further argues that literary forms of language as modes of cultural contact generate an aesthetic experience that "may well form a countersocialization—as long as literature retains its subversive potential." (46) In turn, a theory of reading such as hers should enhance the resistance to destructive forms of cultural contact and increase the capacity for nondestructive ones. According to her, as well as to many other contemporary cultural theorists, today's radical question is survival, "not only in the ecology of the earth but also in the ecology of encounters with other cultures, the ecology of mind, speech, and voice, or the increasingly marginalized space of reading." (46)[7]

Through her theory of reading as cultural contact Schwab goes a long way toward restoring the rightful place of literary studies among contemporary cultural studies, without disregarding its specific cultural role. One of her important contributions is to introduce the questions of sexual and cultural otherness in traditional Western hermeneutics, thereby revising and expanding

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it, instead of rejecting it out of hand as "paternalist" and "sexist." Yet, her cultural-ethnographic approach to literature could have benefited from Iser's literary anthropology even more than it has so far. Schwab does not explore the notion of liminality, at least not in this particular study, nor does she explicitly use Iser's theses on the fictive and the imaginary, although they might have enriched her "imaginary ethnographies."

For example, Schwab could have shown that not only literary texts, but also ethnographic studies in general may be called "imaginary" or "constructed" as some ethnographers themselves, e.g., James Clifford, point out. She could have further noted that the chief difference between the two types of discourse resides in the fact that the fictive worlds of philosophy and science, including anthropology and ethnography, are primarily oriented toward the actual, and as such they are necessarily underplaying the liminal potential of the fictive. By contrast, literary worlds release precisely this liminal potential, by directing the fictive not only toward the actual but also toward the imaginary.

In her theory of literature as cultural contact, Schwab focuses mainly on the notion of otherness, often equating cultural contact with the experience of alterity and thus unwittingly adopting an ethnographic bias: cultural otherness has been at the center of Western ethnographic studies from their very inception, in Herodotus, Plutarch, and others. But the experimentalist ethnographers themselves, for instance Paul Rabinow, George Marcus, and Michael Fischer, point out that otherness as a traditional disciplinary staple of ethnography should equally be submitted to a careful cultural critique, so as to avoid the pitfalls of its all-too-frequent theologization (Edward Said's term).

2. Globalization, the Concept of Culture, and Intercultural Studies

My discussion so far has revealed that crossfertilization between ethnography and literary anthropology is only in its initial phases and that further comparative analysis must be carried out for both fields to gain full insight into each other's potentiality as partners in a reconstructed field of intercultural studies, within a global reference frame. To this purpose, we can now return to Fischer and Marcus's second Introduction, significantly entitled "The Project of Anthropology as Cultural Critique: Past and Future," which will further help us sketch the guiding principles of intercultural studies, oriented toward global intelligence. In this second Introduction, Fischer and Marcus set out to attain two objectives: On the one hand, they propose to revisit and reevaluate some of the issues that concerned ethnography in the 1980s, but remain relevant today. On the other hand, they put forth new research topics to be developed in the field of anthropology in the context of the global changes that have intervened since the publication of their book.

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According to Fischer and Marcus, today's ethnography must change its strategies in the face of new global challenges, such as the ongoing reconfigurations of the culturally homogeneous nation-states under the pressure of great demographic shifts; the rise of the technosciences and transnational finance, communication, and media; and the emergence of new metaphors for our lifestyles or ways of being and acting in the world. Notably, collective research and collaborative, interdisciplinary projects should replace the practice of ethnography as a cluster of individual projects carried out by a single researcher—the conventional model of ethnographer or anthropologist as hero, popularized, one might add, by such Hollywood films as the "Indiana Jones" cycle. One should also take into consideration that, in a globalized environment, the relationship between ethnographer and his informants in the field has changed profoundly. The fields themselves have now become entirely unfamiliar to informants, experts, ethnographers, and cultural translators alike.

Therefore, the authors contend, the objective of anthropology is no longer to discover new worlds—"new" to its own culture, that is—translating the exotic into the familiar, or defamiliarizing the exotic. Rather, it is "increasingly the discovery of worlds that are familiar [to] or fully understood by no one, and that all are in search of puzzling out." (Fischer and Marcus 1999: xvii) Anthropologists should furthermore give up the assumption that the local effects of globalization are the same in all places. Instead, they should assume that "powerful alternative modernities" have been emerging in various parts of the world. Such alternative modernities will require "the sort of exploration that little-known 'peoples' once were subject to in anthropology." (xviii)

The call to "repatriation" that the authors advocated in the 1980s, according to which ethnographers should return from exotic overseas locations and do fieldwork in their own communities, has proven "a bit too simple and binary" under the impact of globalization. In the new global circumstance, "many of the most interesting processes of social and cultural formations are translocal, operating across any distinct local boundaries." (xviii) This also makes it more difficult for ethnographers to take sides or to "extricate moral action from negative results, as in one's relation (no matter where one is located in the system) to ecological issues where it is impossible for one to avoid contributing to the problem unless one could improbably sever all ties with the monetary economy." (xviii)

As to the research programs that anthropologists should develop in the new global circumstance, Fischer and Marcus distinguish three areas, rich in objects and subjects for anthropological fieldwork: (1) the New Media with their fast developing computer-mediated communication and visual technologies that have already given them global ubiquity; (2) social reorganization after collective trauma, such as that inflicted by communism, colonialism, civil war, and so forth; and (3) the continuing transformation of modernity by science and technology. These new subjects and objects of anthropological

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research will require new methodologies capable of dealing adequately with the issues that now shape discourses about society in a global context, such as cultural hybridization and multiple identities, flexible and shifting social and economic integration, as well as "new forms of stratification, inequalities, and power relationships." (xxvi)

In addition to the methods of interpretive anthropology already mentioned, such as collaborative and interdisciplinary endeavors, the "jeweler's-eye gaze," and cultural critique with its changed moral stances, the authors discuss comparative analysis that needs, in turn, to be much refined and attuned to a global reference frame. One must develop "new practices of comparative analysis not among self-contained cultures but across hybrids, borders, diasporas, and incommensurable sites spanning institutions, domiciles, towns, cities, and now even cyberspace," including "techniques of dynamic, nonreductive juxtapositions" or "orchestrated engagements of [cultural] 'horizons.'" (xxix) One should further develop forms of experimentation, not only experimental ethnographic writing, but also scientific and anthropological experimentation as a "mode of intervening in the world, and changing it." (xxxii)

Finally, the authors come back, appropriately, to the issue of ethics that should inform cultural critique in a reformed ethnography and, for that matter, in all other fields. They emphasize again that the nineteenth-century schematic formulations to which the new and old ethnographies have resorted, such as "the much overused and overly abstract Hegelian politics of recognition and its descendants in contemporary political philosophy" (xxxii), have largely lost their relevance in today's global environment. Fischer and Marcus conclude by observing that the accounts they gave "of the ethical milieu of projects of cultural critique in the 1980s is largely consistent with the narratives derived from the nineteenth- and early twentieth-century scripts critical of recent forms of domination." (xxxiii) With a changed global circumstance, however, cultural critique faces and should address new challenges of ethical formulation, such as "complicities of [ethical and political] positioning in environmental dilemmas with the accompanying medical, legal, economic, political, and psychological implications and concomitants." (xxxiii)

Perhaps we are finally in a position, with the help of the scholars whom I have engaged in dialogue so far, to outline some of the principles, methods, and research programs that would lead to a reconstructed field of intercultural studies, oriented toward global intelligence. We have already identified several important issues that should be taken into consideration when developing this intercultural project in a global environment. Such issues include: (1) a need for new or revised principles and objectives for learning and research within a global reference frame; (2) a need to develop corresponding institutional frameworks; (3) a need to reform the notions of cultural and disciplinary authority; (4) a revised role for cultural critique; (5) new or revised sites, topics, and methods of research; (6) new ethical standards of evaluation in an

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intercultural environment. In the next subsection, I shall briefly reexamine these questions from a local-global perspective, that is, from the perspective of a globally oriented Western scholar and practitioner, and shall suggest some of the ways in which they might best be approached within a reconstructed field of intercultural studies. First, however, it might be useful briefly to explore the current meanings and uses of the term "culture" and then define my own use of it. Indeed, the nature, objectives, and methodology of cultural and intercultural studies may vary widely according to the different meanings ascribed to this term.

One may roughly discern two main concepts of culture in contemporary anthropology and Western-style social science in general: The first one is an essentialist and substantialist view, tied, no less than the notion of globalism and localism, to a dialectic of the universal and the particular. In this view, culture is a durable, substantial and, ultimately, universal entity that determines the identity, coherence, and solidarity of a larger or a smaller social group. In turn, cultural identity creates cultural differences, which are, as a rule, contingent, insubstantial, and nonessential and can eventually be resolved or reconciled in a universal culture.

The second view of culture is the symmetrical opposite of the first one. It raises cultural difference to an essential status and sees cultural identity as a fluid, unstable, and insubstantial state in the ceaseless play of cultural differences. Above all, it invariably regards this play of differences as a conflictive or agonistic one. Postmodernist schools generally prefer the second view, whereas modernist and other traditional cultural approaches, such as Marxism, prefer the first one. More often than not, the two concepts of culture engage, in turn, in a contest for cultural authority and thus generate amplifying feedback loops, according to the principle of mutual causality. Of course, one can also find Western theorists who attempt to mediate between the two positions, or subject them to a Hegelian sublation (*Aufhebung*). This third approach has so far met with little success, however, being usually relegated to the first, universalist position. A good example of an essentialist, but flexible and conciliatory, postmarxist view is that of Terry Eagleton (2000). Arjun Appadurai (1996), on the other hand, represents an intransigent, postmodernist version of the second view.

Eagleton, in an essay on "Culture Wars," included in *The Idea of Culture* (2000), rightly deplores the clash between what he calls "Culture" and "culture," which is no longer merely a "battle of definitions," but has turned into "a global conflict." (Eagleton 2000: 51) Eagleton's two terms are the equivalent of the traditional and the postmodernist concepts of culture I have just mentioned (although, unlike me, he calls only commercial culture "postmodern" and considers it apart from the other two categories). He shows not only how each of these terms functions separately, but also how the polarity itself frames and controls the entire discourse of Western-style cultural and global studies.

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In my terminology (borrowed from general systems theory), he analyzes in detail the destructive and constructive feedback loops that "Culture" and "culture" generate in their contest for global authority. He stages the dialectical play of these polarities, with all of their paradoxical effects and contradictions.

According to Eagleton, the paradoxical point about Culture is that it is "cultureless," because its values do not belong to any particular form of life, but "simply to human life as such." (Eagleton 2000: 53) Yet, according to the dialectic of the universal and the particular, the "values of Culture are universal, but not *abstract*" so that they can thrive only within "some kind of local habitation." (53, emphasis in the text) Therefore, Culture is the product of both a particular civilization and of universal spirit, functioning as a link between this civilization and "universal humanity." (54) By contrast, cultures are "blatantly particular, resonant of nothing but themselves, and without these differences they would disappear." (Eagleton 2000: 54)

But Eagleton equally notes that the distinction between universal Culture and particular cultures is "ultimately deceptive, since pure difference would be indistinguishable from pure identity." (Eagleton 2000: 54) It is for this reason that my own description of the two concepts of culture has emphasized the purely functional, rather than essential difference between them: "Culture" subsumes difference to identity, whereas "culture" does just the opposite. Eagleton implicitly acknowledges the functionality of this distinction when he points out that the two polarities are interchangeable, leading to paradoxical effects in terms of local cultural politics: "What may seem the last word in epistemological radicalism in Paris can end up justifying autocracy elsewhere. In a curious reversal, cultural relativism can come to ratify the most virulent forms of cultural absolutism. In its charitable view that all cultural worlds are as good as each other, it provides a rationale by which any one of them may be absolutized." (76-77)

By what Eagleton calls a "curious dialectic," fundamentalism and anti-fundamentalism are far from being the polar opposites that they claim to be: one may unwittingly end up in the service of the other. In this respect, the "final triumph of capitalism—to see its own culture penetrate to the most conspicuous corners of the globe—may also prove exceptionally dangerous for it." (82) One can, however, point out that, despite what Eagleton might think, such reversals are not at all "curious." On the contrary, they are quite common in societies organized around the power principle, where essentialist concepts are often loosened from their firm ontological moorings and impressed to do battle for opposing social or cultural forces.

Eagleton usefully notes that whereas culture functions in terms of a dialectics of the universal and the particular, Culture functions in terms of a dialectics of the universal and the individual. From the standpoint of Culture, culture "perversely seizes upon the accidental particulars of existence—gender, ethnicity, nationality, social origin, sexual tendency and the like—and converts

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them into bearers of necessity." (55) By contrast, Culture favors not the particular, but the individual, because individuality "is the medium of the universal, while particulars are purely random." (55) Consequently, Culture regards itself as "the spirit of humanity individuating itself in specific works; and its discourse links the individual and the universal, the quick of the self and the truth of humanity, without the mediation of the historically particular." (55)

Eagleton's distinction between Culture as the expression of the individual and culture as the expression of the particular clarifies the Romantic relationship between the nation and the state, which in the modern period has become the hyphenated concept of nation-state. Whereas nationalism involves an organic relationship between individuals and their nation, the state simply appeals to this organic relationship in order to give it a political structure. In turn, contemporary identity politics should be distinguished from nationalism, because it refers to the particular, rather than to the individual, and therefore does not operate on an organismic, but a mimetic principle. According to this principle, group cohesion is formed around conflictive difference ("us against them"), rather than around an identity of cultural affinities. Hence identity politics is inimical to the nation-state and, paradoxically, but not unpredictably, prefers postmodern forms of "cosmopolitanism" to nationalism.

Although Eagleton's general rhetorical strategy is to speak from the interior of each perspective, constantly switching sides, he does eventually settle in favor of a reformed concept of Culture. He also draws a distinction between a "postmodern" or commercial culture and a culture of identity/ difference. In my view, however, commercial or "popular" culture is not a separate phenomenon, but an opportunistic use of both Culture and culture for material profit (which is certainly not a "bourgeois," nor even an exclusively Western invention). Nor is commercial culture an exclusively postmodern phenomenon, as Eagleton implies, even though its current explosive expansion might be without precedent: the Western distinction between high culture and low or popular culture goes at least as far back as the fifth and the fourth centuries BC, as we can glean from Plato's and Aristotle's complaints about the dramatic poets who "pander" to the Athenian rabble for material profit.

In marked contrast to Eagleton's complex and reflexive analyses that deftly move in and out of the various cultural positions he brings under consideration, Appadurai deliberately remains within cultural particularism and rejects the universalist presuppositions of Culture out of hand. For instance, he objects to the substantialist and essentialist ways in which the term "culture" has been employed in various disciplines such as anthropology, sociology, history, and philosophy. To him, "culture" as a noun predictably implies some kind of physical or metaphysical object or substance. As a metaphysical substance, the noun culture "seems to privilege the sort of sharing, agreeing, and bounding that fly in the face of the facts of unequal knowledge and the differential prestige of lifestyles, and to discourage attention to the worldviews and

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agencies of those who are marginalized and dominated." (Appadurai 1996: 12) As a physical substance, on the other hand, culture smacks of "any variety of biologisms, including race, which we have certainly outgrown as scientific theories." (12)

Appadurai further contends that whereas the noun "culture" invokes some type of essentialism, the adjective "cultural" is purely relational. Substantive ideas of culture encourage us to think of actual social groups as cultures, while the relational character of "cultural" as an adjective "stresses its contextual, heuristic and comparative dimensions and orients us to the idea of culture as difference, especially difference in the realm of group identity." (Appadurai 1996: 13) Culture therefore is "a pervasive dimension of human discourse that exploits difference to generate diverse conceptions of group identity." (13) For Appadurai, moreover, culture is not only group identity based on difference, but also "the process of naturalizing a subset of differences that have been mobilized to articulate group identity."(15) In his view, the term can best be applied to the nation-state, which has used it as an effective instrument of rallying the ethnic majority of a country or a region around it, in order to create a national identity.

Appadurai also introduces the term "culturalism" to mean the "conscious mobilization of cultural differences in the service of a larger national or transnational politics." (Appadurai 1996: 15) Culturalist movements are self-conscious about identity, culture, and heritage, which they use as instruments in their struggle with nation-states and other culturalist groups. In the age of globalization, under conditions of mass mediation and massive migration, these culturalist movements, such as those of African-Americans in the United States, Algerians in France, Pakistanis in Great Britain, or French speakers in Canada tend to be "counternational and metacultural" (16); in other words, according to Appadurai, they tend to contribute to the dissolution of the nation-state and a reconfiguration of cultural identities.

Even from this brief account, it is obvious that Appadurai, unlike Eagleton and in typical postmodernist fashion, reduces culture to an agonistic play of differences that creates various identities associated with specific social groups. Despite his disclaimers, he seems in effect to reduce culture to a function of identity politics based on class, gender, race, ethnicity, etc. To employ his own terminology, Appadurai's approach to culture seems "culturalist" rather than cultural. Putting it crudely, it would seem that for him a Croat is a Croat because he is not a Serb, and vice versa. Furthermore, a Croat can prove his identity only by fighting a Serb, and the other way around. Here, we have a mimetic approach to world cultures, in which one culture defines itself not as what it is, but as what it is not, namely, against other cultures. This approach is precisely what Eagleton refers to as a form of "barbarism," although this term also needs to undergo thorough critical and historical reflection. Binary oppositions such as Civilization and Barbarism are emotionally charged terms,

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with a long and troubled world history, and will only further fuel the current global "culture wars."

One should hope, to the credit and benefit of humankind, that there is more to culture than agonistic identity and difference, whether social or individual. Of course, identity politics may play an important role in cultures based primarily on a mentality of power, and in that limited context Appadurai's definitions are certainly valuable. But, if we reduce all culture(s) to culturalism, i.e., to an agonistic play of identity and difference, as many postmodern theorists in the field of cultural studies tend to do (including Foucault, Rabinow, and Clifford), we exclude the possibility of cultures in which identity politics may hardly play a role. In other words, we exclude the possibility of cultures in which the Will to Power does not determine everything else. This reduction would be an impoverishment of the collective imagination that Appadurai refers to elsewhere in his book and that Rabinow and Clifford largely ignore when considering thought as a pragmatic function of (power) politics. In fact, Appadurai's collective imagination is of the mimetic type, in René Girard's sense (Girard 1977; 1986; 1987), restricted as it is to the media-stimulated, mass-culture imaginary, circumscribed by consumption and a double-binding desire for social mobility and group identity.

In defining culture, in order to negotiate the pitfalls of both essentialism and culturalism, we can again turn to the notion of globality as an infinitely diverse expression of the global aspiration, which I mention in the Introduction and develop at some length in *Global Intelligence and Human Development*. In this light, various cultures can be seen as primary modes in which the human desire for world making and self-fashioning, i.e., the creative imagination, manifests itself. Specific mentalities or modes of thought and behavior generate, at the same time that they (according to the principle of causal reciprocity) are being generated by, specific ways of life, language, sound and image patterns, knowledge, art, architecture, institutions, and interactions with other human beings and with the physical environment—a complex and fluid web of interdependence that can be called culture. Indeed, keeping in mind Appadurai's essentialist caveat, it would be more appropriate to speak of "cultures," rather than Culture (pace Eagleton).

Every culture has the inner potential to renew or transform itself primarily through the imagination and its creative forms, including myths, narratives, folklore, artistic productions, ritual, etc. In this respect, it is counterproductive, if not misleading, to draw a distinction, as Appadurai does, between traditional and modern imagination as one doing less social work and being less collective or less emancipatory than the other. (Appadurai 1996: 5) There are many local collective imaginations that devise ever-fresh ways of doing social work, based on the traditional and nontraditional creative resources of a specific culture, which moreover may fruitfully interact with similar resources from other, nearby or remote cultures. And there are many human factors other than power

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that motivate the various collective imaginations, such as playfulness, curiosity, generosity, love and care for others, aspiration toward personal development, spiritual transcendence and self-transformation, to mention only a few.

Such factors, however, have little or no place in Appadurai's and other postmodernists' mass-cultural or civilizational models, involved as they are with the Will to Power and its hegemonic obsessions.[8] Even an enlightened postmarxist like Eagleton seems unable to imagine a culture or Culture that is not based on power. For him, culture, at least in the modern state, "is more the product of politics than politics is the dutiful handmaiden of culture." (Eagleton 2000: 60) He does seem, as is his wont, to reverse this judgment later on, by counterarguing that "culture is in some sense more primordial than politics," albeit less "pliable." (61) Yet, the fact remains that for Eagleton "there is more to the world than culture" (107), namely "nature," interpreted as play of physical forces. For example, he writes that the "wager of Marx, Nietzsche, and Freud is that at the root of meaning lies a certain force." Presumably, for these thinkers "all the most significant events move at the uneasy conjuncture of meaning and power, of the semiotic and (in the broadest sense) economic." (107)

Here, Eagleton is still operating with an essentialist and substantialist distinction between nature and culture, which conceives of their interaction in linear causal terms, rather than in terms of mutual causality. Like Appadurai, Eagleton posits force as the "first cause" of both nature and culture. He then assumes that force splits itself into two realms: a physical and a symbolic one. In the physical realm, or nature, force remains ineffable, as force, whereas in the symbolic realm, or culture, it becomes representable, as power. This assumption is a dualistic philosophical belief, typical of the Will to Power in its modern guise, which continues to be shared, without exception, by postmodernists and postmarxists alike.

Once we realize that the two antagonistic concepts of culture are direct expressions of a mentality of power, we can also begin to see that they are Janus-like faces of two other pet concepts of this mentality: discipline or "order" and anarchy or "disorder." What Eagleton describes as Culture is in fact disciplinary culture, in all the senses of that term, including the rigid ordering and compartmentalization of knowledge. In turn, Appadurai's culturalism is "anarchical" culture, where the hierarchical, disciplinary principle is replaced by a ceaseless contest of social forces.[9]

Intercultural studies, therefore, should move away from all of these antagonistic concepts that prevail in current Western cultural studies. Instead, they should adopt an irenic view of cultures as interdependent, self-organizing social systems that form an integral part of the symbiotic web of life. (Capra 1997) Because various cultures engage in mutually causal interactions or amplifying positive and negative feedback loops within a global reference frame, the field of intercultural studies would be well advised, in order to play

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a constructive role in the world arena, to adopt the emergent ethics of global intelligence, grounded in a mentality of peace.

3. Toward a Transdisciplinary Field of Intercultural Studies

Transdisciplinarity would therefore mean, in the first place, moving away from both disciplinary and anarchic models of culture. Disciplinary principles and practices are counterproductive for intercultural studies, because they will simply continue amplifying intercultural miscommunication, distrust, and violent conflict prevalent in today's global arena. Neither will interdisciplinary principles be more effective, as the case of cultural studies in the United States shows, because these principles are entirely codependent with disciplinary ones. As a field of study and practice, therefore, intercultural studies would be crosscultural and transdisciplinary and will employ a local-global approach to knowledge. Its goal will be to remap traditional knowledge, as it is acquired and transmitted by various branches of learning, be they scientific or humanistic, as well as to generate new kinds of knowledge within an intercultural and global reference frame.

A transdisciplinary approach to knowledge requires philosophical and scientific presuppositions and practices that are entirely different from their disciplinary counterparts. It does not presuppose that knowledge is power, but only that power produces certain forms of knowledge that may become irrelevant or transfigured in other reference frames. It also presupposes a mutually enriching interplay of what various cultures perceive as global or universal and what they perceive as local. This interplay finds its academic equivalent in the interplay of transdisciplinary or holistic knowledge and specialized knowledge. It presupposes an integrative mode of thinking and practice that looks beyond constituted academic fields and their fragmentation of knowledge, although it does not deny their usefulness.

Yet, a global mode of thinking and acting takes into consideration the fact that knowledge is local not only in terms of field boundaries or confines, but also in terms of its historicity. As both Iser and the experimentalist ethnographers point out, knowledge is always bound to a specific time and place, to a specific culture or system of values and beliefs or, indeed, to a specific lifestyle. It is for this reason that I suggested, in the Introduction, that theories of globality cannot properly be regarded as global, but only as local-global. In turn, a local-global approach, while it may have its own notion of globality, attempts to identify the cultural specificities, or the locality, of knowledge, and to explore commonalities and differences among such localities and among various local viewpoints.

A local-global approach presupposes that in the process of exploration of cultural commonalities and differences in the way in which we acquire, trans-

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mit, and utilize knowledge, new kinds of crosscultural knowledge emerge through intercultural dialogue and cooperation, and new kinds of integrative cognitive processes become possible. It finally presupposes that even these kinds of crosscultural knowledge will be valid only within their new reference frames, and may be restructured within larger frames, in other words, that even "global" knowledge is local in relation to such frames. At its broadest theoretical level, intercultural studies will concern itself with and explore such questions as: What are the conditions of the possibility of the emergence of crosscultural and/or transdisciplinary knowledge? How does such knowledge differ from, but also involve, cultural or disciplinary knowledge? How can it be communicated or taught? What uses can this kind of knowledge be put to and whom does it serve? What organizational and institutional forms might it take?

The principal objective of intercultural studies will be to seek and practice global intelligence. I have already defined global intelligence as the ability to understand, respond to and work toward what is in the best interest of and will benefit all humankind and all other life on the planet. This kind of global, responsive understanding and action can only emerge from continuing intercultural research, dialogue, and cooperation, and no single national or supranational instance or authority can predetermine its outcome. So, global intelligence is an emergent phenomenon and involves a lifelong learning process.

Orientation toward global intelligence or intercultural responsive understanding and action is what will distinguish the intercultural studies project from many international and interdisciplinary programs, including cultural studies, at some of the top universities in the United States and other parts of the world. For the most part, the main objective of such interdisciplinary, international programs is to develop global competence and expertise, which their students will, in turn, place in the service of individual private or public organizations, irrespective of the mission and goals of these organizations. Global competence and expertise are what Fischer and Marcus implicitly see as the objectives of their new discipline of ethnography/anthropology as well. These are very important and useful skills, but, for a genuine global practitioner, they cannot be separated from the mission, goals, and methods of an emergent ethics of global intelligence, from which they derive their true meaning.

A) Institutional Framework(s) for Intercultural Studies

A field of theory and practice such as intercultural studies, oriented toward global intelligence, will need alternative institutional frameworks. Consequently, this field cannot be founded on the presupposition that a cluster of disciplines organized as academic departments will band together to create another administrative unit, called a Center or Institute for Intercultural Studies, at this or that progressive university. It would need much more dynamic and flexible institutional frameworks in order to be able to attain its research

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and learning objectives. It will take sustained effort and a good deal of community involvement to reform our universities in that direction. Meanwhile, a good first step in at least getting this reform process underway would be to propose and implement crosscultural and crossdisciplinary pilot programs that involve the cooperation of several academic and nonacademic learning and research institutions from various parts of the world. These pilot programs would respond to Fischer and Marcus's call for genuine experimentation both in a scientific and in a practical sense, as a "mode of intervening in the world, and changing it," but they would obviously not limit themselves to the (disciplinary) field of ethnography.

In the present context, I can only specify the basic organizational principles of a globally oriented field of intercultural studies within which pilot programs might be launched. In the last chapter of this study, however, I shall actually describe one of these pilot programs in some detail. The transdisciplinary field of intercultural studies would be created with the assistance of international academic consortia, but would be given enough autonomy to develop its own institutional frameworks and operate on its own. The advantage of such an experiment is that while it will not restructure the current academic organizational paradigm, it will allow reform-minded faculty members and university administrators to see what might or might not work, should a similar model be introduced into an academic disciplinary environment, with the long-term objective of replacing such an environment altogether.

One institutional arrangement under which a globally oriented field of intercultural studies could prosper would consist of loose "federations" (Rabinow's term) or networks of crossdisciplinary and intercultural research teams, whose members would be selected from participating academic and nonacademic research institutions, located in various parts of the world. These teams would continuously change their disciplinary composition and research focus and would constitute themselves not according to academic fields of study, but according to concrete, complex problems of a social, political, cultural, economic, medical, environmental, legal, military, or other nature that need to be solved at the local-global level in various parts of the world. Their overall mission would be to study, produce, and apply local-global knowledge in a globally intelligent way. They would require worldwide, crossdisciplinary and crosscultural, cooperation among scholars, researchers, and practitioners in any field of human endeavor.

These intercultural research teams would obviously not involve entire academic disciplines and would not depend administratively and financially on any specific department or any specific university or research institute. They would recruit only a few volunteers from such departments and institutes, who would go on temporary "research leave" for the duration of their projects. At first, these volunteers might well turn out to be those disciplinary "odd ducks" who do not seem to fit anywhere and are poor "academic citizens," at least by

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the standards of bureaucratic academia. At the same time, however, such "odd ducks" are, more often than not, reflection-prone or theoretically minded. They are generally dissatisfied with the state of knowledge and its modes of production in their own fields and think the grass is greener on the other side or, shall we say, in-between. By joining an intercultural research team they might find out that there is nothing wrong with them, but that they may have been in the wrong research environment all along.

The research teams should also include nonacademic global practitioners, because many of these practitioners are trying to puzzle out the same problems, and their practical experience will be an important resource in finding the appropriate solutions. As Fischer and Marcus note, "software and hardware developers, users and clients, patent and copyright lawyers, financiers are among those who regularly say that the concepts by which they traditionally operated [and which, one may add, they undoubtedly learned in school] have been overtaken by the world in which they now operate, that new concepts and methods need to be formulated. Such people talking about their own worlds of expertise might be thought of as 'organic intellectuals' who together with anthropologists [and, one should add, researchers from all other disciplines] are exploring the emergent new worlds about which they share a mutual curiosity." (Marcus and Fischer 1999: xxv)

One should nevertheless keep in mind that, despite the mutual curiosity as well as adventurous spirit that academic researchers and "real-world" practitioners may have in common, they may also have widely different professional goals and life objectives, depending on their various fields of activity, cultural backgrounds, life experiences, and ethical motivations. On the other hand, there is no good reason why this human diversity should create anxiety, mistrust, and conflict among the members of the intercultural research teams. On the contrary, it should create rich and fertile working environments, conducive to extensive intercultural dialogue and negotiations, during which the team members will learn how to work with each other and out of which a new kind of crosscultural and crossdisciplinary consensus or cooperative spirit should emerge. What will finally matter in choosing the right members for a research team in intercultural studies is not whether an individual researcher is a specialist or a generalist, an academic or a nonacademic, but whether she is open to ways of knowing and doing things beyond those she has been trained in and accustomed to.

B) Disciplinary and Cultural Authority in Intercultural Studies

I should like to emphasize, again, that the field of intercultural studies should turn away from both disciplinarity and interdisciplinarity. It should by no means avoid studying questions of power and exploring creative, nonconfrontational ways of approaching these questions. Yet, it should distance itself not only from violence, symbolical or otherwise, but also from power as a fun-

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damental principle of organizing human relations and institutions, including academic disciplines. A good preliminary step toward this intellectual and emotional detachment might be to engage in an extensive cultural anthropological (self-) study of disciplinary authority and power relations within academia itself, with concrete and practical suggestions of how one might organize research and learning processes on different principles. One may also study the relationship between what Foucault calls disciplinary structures of power, which he situates in the past centuries, and controlling structures, which are more sophisticated and manipulative and which he associates with contemporary times. But even a cursory look at Western cultural history will show that both power structures have recurred in various historical periods and have never ceased to coexist, engaging in complex feedback loops inside and outside contemporary academic and research cultures.[10]

Of course, many academic studies, including those of Foucault, are concerned with power and its discursive strategies. Unfortunately, however, none of them has been oriented toward global intelligence. Nor has any of them come up with viable local and global solutions. As a rule, such studies point out the asymmetrical power relations among various academic fields and disciplines and within the academic tenure and bureaucratic systems, or, more generally, the inextricable link between knowledge and power. But their authors content themselves either with "exposing" and "opposing" these dominant power structures (see, e.g., the essays by Asad, Clifford, and Rabinow in *Writing Culture*) or with getting a "share of the pie." Most often they do both. They have never seriously raised the possibility of turning away from power itself as an organizing principle of human affairs. The majority of our academics regard power as both fate and ultimate goal. Of course, this is no less true of most of the nonacademic inhabitants of the so-called real world—"real" because, if you know how to play the game to your advantage, you can get a much bigger slice of the power pie than in academia.

The "postmodern" university has not abandoned the traditional academic disciplinary paradigm in any way. Disciplinary authority remains one of the ultimate academic goals of both administrators and regular faculty members, being tied up, as it is, for instance, in the United States, with tenured academic positions, "competitive" salaries and research grants, expert consultant's fees, as well as symbolic rewards, such as professional honors and prizes. In their second Introduction, Fischer and Marcus mention several times the fact that anthropologists are worried, no less than their academic colleagues in other fields, that their (disciplinary) authority as experts might be dwindling, because of their shifting role in a global environment. Whereas in the past anthropologists were largely the sole experts or custodians of "cultural difference," now their authority is being threatened by a plethora of diffuse sources of information on this topic, "purveyed through television and popular media." (Marcus and Fischer 1999: xx)

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Instead of hailing this development as a good opportunity to question the nature of disciplinary authority itself and to call for different ways of organizing academic and other forms of knowledge production, Fischer and Marcus repeatedly attempt to reassure their colleagues by suggesting new ways in which ethnography may regain some of its lost disciplinary authority. For example, they write: "So the fact that ongoing ethnographic research has lost a traditional, prominent function—if not a monopoly—within the official knowledge domain of the West of discovering and speaking authoritatively for cultural difference among the world's peoples is not as alarming or as devastating an event for anthropology as long predicted or feared." (xxii)

In turn, they note that new opportunities present themselves in a global environment, and whether they will be explored or not will depend on "the courage, ingenuity and openness of anthropologists in establishing fresh forms of authority for themselves that certainly seem to be in line with the way other related disciplines and fields of knowledge are being reconfigured." (xxii) For the authors, however, these new forms will depend, ironically, on "the articulation of new norms and regulative ideas of ethnographic practice, in which collaboration and dialogue are no longer just theories and sentiments of ethnographic writing nor the revealed essence of what anthropologists have been doing all along, but become the starting points for novel research landscapes, agendas, and relationships stimulated by the equally new objects of study that anthropologists pose for themselves and for the general public." (xxii)

The preceding citations should make it obvious that Fischer and Marcus have some difficulty in leaving behind the assumptions of disciplinary thinking and practice. Although they make a most eloquent case for collaboration and dialogue as the starting points for novel research agendas and human relationships, they do not seem ready to discard disciplinary concepts and frameworks, such as the model of knowledge as expertise, which in turn grounds the knower's authority in his or her scholarly community and community at large. Despite their best intentions, they exhibit automatic disciplinary behavior, for example, when they attempt to distinguish their *Anthropology as Cultural Critique* from its companion volume, *Writing Culture*, in terms of their different objectives. Notably, they state that in their first book, "there was a clear linkage between textual critiques of ethnographies and the implications of these for changes in research strategies, programs, and persona in anthropology that was lacking or unmarked in *Writing Culture.*" (Fischer and Marcus 1999: xxviii) For them, the authors add, "the decline of a certain construction of ethnographic authority never augured the end of anthropology, but rather the opportunity to reorient its core practices and rethink its regulative ideals, which indeed is what has happened over the past decade and is still occurring." (xxviii)

One may concede that the authors' attempt, in the first part of the preceding citation, to delimit the scope and objectives of the two projects is method-

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ologically sound and useful, in line with their idea of comparative analysis. The second part of the citation, however, reveals the scapegoating mechanism that I have already pointed out in relation to establishing disciplinary authority vis-à-vis other fields, or other trends within one's own. It is highly unlikely that the seasoned anthropologists who contributed to the volume—ironically, George Marcus co-edited that volume as well—really had the implicit or explicit objective of auguring "the end of anthropology" through their contributions, as the authors of the second Introduction imply.

The irony deepens if we notice that it is Fischer who has mostly written this second Introduction and who appears listed first as its author. Thus, the scapegoating mechanism seems to be directed against the third member of this authorial triumvirate, that is, James Clifford, the other coeditor of *Writing Culture*. This point may certainly seem trivial, if not petty, but it illustrates Rabinow's contention that anthropology, as well as any other disciplinary enterprise, is often also carried out in the coulisses of academia and that concrete human and institutional relations cannot be ignored when examining the development of a certain discipline. More importantly, it shows that all of us, disciplinary academics, need to reflect on and perhaps even abandon our scholarly strategies of power, including the hermeneutics of suspicion that I have deliberately employed in this paragraph, if only for "didactic" purposes. These strategies have turned into automatic habit even with those of us who attempt to find new, cooperative ways of doing scholarship in a transdisciplinary and intercultural, global reference frame.

On the other hand, the "scapegoated" Clifford himself exhibits the same kind of automatic disciplinary habits when he attempts, in his introduction to *Writing Culture*, to establish the disciplinary authority of the new ethnography—thus, ironically, preempting any accusations of sabotage against his discipline. He does this not only by scapegoating literature in his turn, but also by establishing the ancient credentials of ethnography as a science of sciences that is now steadily moving to the center of all fields of knowledge, presumably replacing philosophy's queenly status.

As we recall, Clifford begins by arguing that the new ethnography is a liminal field that is "actively situated *between* powerful systems of meaning. It poses its questions at the boundaries of civilizations, cultures, classes, races, and genders." (Clifford and Marcus 1986: 2; italics in the text) But, in the next few sentences, he unexpectedly moves his new ethnography from this liminal, nonauthoritative position on the margins of discourse, or between powerful systems of meaning, right into the center of such systems. He now argues that ethnography's "authority and rhetoric have spread to many fields where 'culture' is a newly problematic object of description and critique." (2) Experimentalist ethnography is steadily "moving into areas long occupied by sociology, the novel, or avantgarde cultural critique, rediscovering otherness and difference within the cultures of the West." (23)

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Furthermore, according to Clifford, ethnography's "traditional vocation of cultural criticism," as exemplified in Montaigne's "On Cannibals" or in Montesquieu's *Persian Letters*, has now reemerged, e.g., in the Chicago School of urban sociology (through the work of Lloyd Warner, William F. Whyte, and Robert Park); in historical ethnography (in the work of Emmanuel Le Roy Ladurie, Natalie Davis, and Carlo Ginzbur); in ethnomethodology (through the work of Harold Garfinkel, Harvey Sacks, and Aaron Cicourel); in cultural studies (through the work of Edward Said and others); in cultural history (through the work of Hayden White and others); in Marxist cultural theory (in the work of Raymond Williams, Stuart Hall, Paul Willis, and Fredric Jameson); and in sociology (especially in Pierre Bourdieu's and Michel de Certeau's analyses of implicit knowledge and everyday practices).

While at it, Clifford could also have added to his list of ethnographic trophies, say, Richard Brown's "poetics of sociology," Thomas Kuhn's work in the history and philosophy of science, and Stephen Greenblatt's cultural poetics. His arguments display three of the most common strategies of disciplinary and nondisciplinary power: 1) scapegoating; 2) moving from the margin to the center; and 3) establishing ascendancy based on primogeniture. Any of the disciplines just mentioned could undoubtedly make the same imperial claims that Clifford makes for ethnography, and some have not hesitated to do so, for example, much of contemporary literary theory. One can thus see that interdisciplinarity itself, as Clifford and other academics understand and practice it, is nothing more than a special form of disciplinary macrototalitarianism. But hegemonic claims, including academic macrototalitarianism, are part of the "old" disciplinary mentality. As such it undermines and invalidates Clifford's crossdisciplinary project that requires cooperation among all fields of knowledge without attempting to establish hierarchies among them.

A more reasonable, although still (inter) disciplinary position is that of Fischer and Marcus who, in their retrospective look on the ethnography of the 1980s, note that this was "a period of florescence for sophisticated interpretive methods as well as inquiries into the nature of interpretation itself across a variety of mutually informing currents ranging from feminism to postcolonial studies, media studies, cultural studies, and science studies. Anthropology's position among these has been as a partner, borrower and teacher." (Fischer and Marcus 1999: xxi)

But, we should perhaps regard some of the current globalizing trends on our planet as a great opportunity to abandon our old authoritative, disciplinary practices altogether and to transform entirely the way in which we acquire, transmit, and use knowledge in general. Certainly, cooperation and dialogue may profitably be used in both disciplinary and interdisciplinary frameworks. But, in those instances they will remain mere strategies of (re) gaining disciplinary authority, as we could see from the interdisciplinary program of experimentalist ethnography. Within the framework of this program, interdisciplinary alliances

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may be formed and broken according to the specific disciplinary interests of ethnography, which in effect treats cooperation and dialogue not as fundamental principles and values, but only as means of attaining its disciplinary goals.

Yet, crossdisciplinary and intercultural dialogue and cooperation can also be used to change the disciplinary frameworks themselves. To the latter purpose, we would need to turn them into fundamental guiding principles for all scholarly efforts (both within and outside a specific field of knowledge or a specific culture), as well as for all human relationships and institutional arrangements on our planet. In turn, authority itself should be based on those principles, rather than on expertise in any field of knowledge or in any social or cultural domain. Rabinow is illuminating on this point, when he refers, in *Writing Culture*, to the changing role of philosophy in the contemporary age: "As with Wittgenstein, Heidegger, and, in a different way, Dewey, Rorty is faced with the fact, troubling or amusing, that once the historical or logical deconstruction of Western philosophy has been accomplished, there is really nothing special left for philosophers to do. Once it is seen that philosophy does not found or legitimate the claims to knowledge of other disciplines, its task becomes one of commenting on their works and engaging them in conversation." (Clifford and Marcus 1986: 236)

Rabinow's observation, however, should apply not only to philosophy, but also to anthropology, history, literary studies, sociology, political science, economics, biology, physics, and any other academic field of knowledge that may wish to participate in the worldwide, transdisciplinary project of intercultural studies. Troubling and unamusing as it might be for philosophy, who at one time was the undisputed queen of all sciences, to be unseated from her lofty throne, no science, including ethnography, should attempt to usurp her place. Instead, all sciences, old and young, hard and soft, human and physical, should joyfully enter Rabinow's reconstructed federation of equal partners, commenting graciously on each other's works and engaging in delightful and productive conversation. In turn, this conversation should result in collective, worldwide action inspired by global intelligence.

C) Cultural Critique and Intercultural Learning and Research Environments

"Cultural critique" is one of the most cherished notions of modern Western thought and a methodological cornerstone of cultural studies. Therefore, it should be submitted, within the Western scholarly community, to both an extensive cultural anthropological study and a thorough self-analysis from a local-global perspective. Other kindred notions such as ethnocriticism, critical cosmopolitanism, critical thinking and all the other "critic-isms" and "critique-isms" should also be reevaluated from the same local-global viewpoint. We particularly need to explore the ways in which the idea of criticism has, throughout its history, contributed to a perpetuation of various disciplinary mentalities not only in the Western world, but in other worlds as well. In this

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sense, even notions of cultural resistance, opposition, subversion, and survival are part of the arsenal of power that perpetuates politics as usual, be it in a "colonized" or "decolonized," local or global reference frame.[11]

Viewed from a global perspective, it would be wise to refrain from practicing cultural critique or critical thinking (a pet learning objective for any "progressive," Western-style academic curriculum), or ethnocriticism, within an intercultural framework. At the same time, one should propose these critical methodologies as topics for an extensive intercultural dialogue and comparative analysis, rather than simply using them automatically, as if they were obviously shared, universal values. It might be of interest to note that, in their second Introduction, Fischer and Marcus are not quite sure where to go with their notion of cultural critique, although they try to make the best of it, not least because it was featured in the title of their book's first edition. There they used the term unreflectively, but now they feel the need to explain it and call for a revision of its meanings and purposes in a globalized environment. In this environment, they argue, new forms of cultural critique "must emerge in the spaces of negotiation among increasing numbers of detailed spheres of expertise and interests." (Fischer and Marcus 1999: xvii) They never spell out, however, what these new forms of critique might be or look like.

Yet, "cultural critique" does come with a heavy ideological and political baggage, as Fischer and Marcus themselves indicate when identifying their theoretical predecessors: the Frankfurt School, French "surrealist" anthropology, and the American "documentary realists" of the Great Depression. These schools are of either Marxist or Nietzschean descent, so that the resulting form of cultural critique, no matter how refined and revisionist it might be, will necessarily have mixed critical standards and objectives, deriving from two conflicting ideologies of power. In Nietzsche's case, the ideology is that of the "master," in which the will to power is harnessed to the benefit of "superior," predatory individuals. In Marx's case, the ideology is that of the "victim," in which the will to power is harnessed to the benefit of a victimized, but in the end historically privileged, social class, namely the proletariat. Another problem is that cultural critiques have proliferated to such an extent in contemporary Western academia that they have become ritualistic, if not empty gestures (we have seen that Fischer and Marcus make a similar point about the Hegelian dialectic of recognition and other, overused, Western theoretical abstractions).

We should finally recall, as Fischer and Marcus are equally aware, that cultural critique and critical thinking are Western notions that might do well in certain Western intellectual circles, but not so well in other local circles. In these latter circles, they are often perceived as needlessly and counterproductively confrontational and aggressive, if not as "soft power" instruments of furthering Western imperialist designs on other cultures.[12] Although the notion of critique is probably too deeply ingrained in our current mentality to be easily

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abandoned, we should at the very least become aware of and use it only in its proper "local," Western intellectual and cultural reference frames.

We should also consider other candidates to replace criticism or critique as a conceptual tool in a global learning environment. Such candidates in English might be *global awareness* and *self-awareness*, *global attentiveness*, or possibly even *global consciousness*, although the term "consciousness" has also accumulated a rather heavy philosophical and ideological baggage in Western intellectual history. All of these terms, however, should preserve the connotations of reflection and self-reflection that are necessary for any creative thinking and action that seek human (self-) development. On the other hand, they should be free of the oppositional or agonistic connotations of "critique," as well as of its etymological link to "crisis," another pet concept of Western modernity. They would thus become less easily co-opted as instruments of power by warring Western or other ideological factions in an intercultural environment.

D) Sites, Topics, and Methodologies of Intercultural Studies

The sites of intercultural studies are those pointed out by Clifford, Fischer, Marcus, and Schwab. One should, again, emphasize that what is different about these sites is not their physical-geographical or virtual position (e.g., cyberspace or imaginary landscapes), but their interdependencies. In principle, intercultural studies could be carried out in any location, from cosmopolitan global cities to remote mountain villages to cyberspace, precisely because the local and the global are in a relationship of reciprocal causality. This means that any individual or collective action at the local level may eventually have worldwide resonance, just as any global-scale action might eventually affect all localities. A program of intercultural studies oriented toward global intelligence will focus on researching these emergent phenomena of reciprocal causality and will suggest ways in which one could engage in positive action to achieve mutually enriching human relations and world conditions.

In turn, the topics of research for intercultural studies can also include those listed by Fischer and Marcus in their second Introduction and by Schwab in her book. More comprehensively, they can be organized and conducted within six large areas that are and will remain crucial for intercultural research and knowledge production in the foreseeable future:

- Globalization and Local Strategies for Human Development
- Food, Nutrition and Healthcare in a Global Environment
- Energy World Watch for Sustainable Development
- World Population Movement and Growth
- New Media, Information Technology, and Intercultural Communication
- World Traditions of Wisdom and their Contemporary Relevance

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This list makes it clear that intercultural studies would not be based solely on anthropological or literary theoretical assumptions and methodologies, but also on a wide variety of other principles and practices, oriented toward global intelligence. Cultural anthropology/ ethnography, literary studies, and many other fields of knowledge would be called upon to participate in developing concrete transdisciplinary and crosscultural projects in these six general areas.

Each project would require different intercultural research teams and would select, on an ongoing basis, researchers and practitioners from those fields that would be of most assistance in attaining its particular research objectives. In this regard, one should again stress that one should hardly have only generalists involved in intercultural studies, even though they might well turn out to be those who are most willing and able to lead various research groups. On the contrary, specialists (but not "experts") are equally important in this kind of intercultural research. What is central to the present project, then, is that specialists and generalists will work together in a crosscultural and crossdisciplinary environment to resolve concrete human problems. Again, the relationship between specialized and general fields of knowledge ought to be the same as that between locality and globality, that is, one of reciprocal causality. Consequently, the principles of intercultural and crossdisciplinary dialogue and cooperation to the benefit of the entire planet will necessarily be the ground rules for all research projects in intercultural studies.

Although there are many other intercultural topics worth pursuing—and some of them I have already discussed in *Global Intelligence and Human Development* or shall list in Chapter 4 of the present book—here I would like to focus on three important issues that may also constitute an object of intercultural research and dialogue: 1) cultural contact and liminality; 2) cultural and intercultural translation/ interpretation; and 3) intercultural and transdisciplinary comparative analysis. All of these issues are mentioned in the work of the ethnographers and literary theorists whom I have engaged in conversation and should be considered as basic methodological tools of intercultural studies from a Western, local-global perspective.

Intercultural studies may productively employ the notions of cultural contact and liminality as conceptual tools, but would first need to submit them to the same process of self-scrutiny and intercultural comparative analysis and dialogue that is appropriate for other notions that cultural studies has so far employed largely in (Western) disciplinary and interdisciplinary contexts. For instance, we will need to distance the notion of cultural contact—as Bateson, Schwab, and Krupat begin to do—from the idea of opposition and contest. One of the typical examples of this agonistic, confrontational approach, which has been extensively employed in the North American cultural wars, but also in the "freedom" movements of Latin America, Africa, and other parts of the world, is Pratt's notion of "criticism in the contact zone," also mentioned by Schwab. We recall that Pratt defines contact zones as "social spaces where

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disparate cultures meet, clash, and grapple with each other, often in highly asymmetrical relations of domination and subordination." (Pratt 1992: 4)

Pratt's notion might have been appropriate for past colonial and postcolonial contexts with their disciplinary discourse of struggle, opposition, domination, liberation, emancipation, etc. that in this last century have been repeated ad nauseam throughout the world. These discourses are all part of the arsenal of a power-oriented mentality. They are counterproductive in the present global circumstance, in which antiglobalization movements are proving to be as ineffective, and as co-optable, as their earlier avatars and in which genuine intercultural dialogue and cooperation, oriented toward global intelligence, are slowly emerging as the only viable ways of moving forward (despite the fact that, for the time being, they are seldom utilized outside a power-oriented reference frame).

Whereas intercultural research projects should certainly seek to resolve tensions in the troubled zones of contact, they should also study those intercultural contact zones in which people from various cultures are currently living or used to live side by side, in peace and harmony. These studies, if conducted in a thoroughly transdisciplinary and crosscultural fashion and within their proper historical contexts may help reveal unexpected causes of conflict as well as models of peaceful coexistence that might also be useful in other parts of the world. Indeed, it might well turn out to be the case that the no-man's-land between cultures, the empty spaces between borders, or the amphibolous grey areas in which nothing is quite settled one way or another and in which new patterns can gradually or suddenly emerge may constitute privileged sites for intercultural negotiations and dialogue, rather than privileged sites of conflict, as they have been considered by an interdisciplinary field of cultural studies. In this regard, intercultural studies may also redefine the notion of (inter) cultural contact itself by linking it with the notion of the liminal, understood in its etymological sense of "threshold" between various margins, boundaries, and frontiers. Among the scholars that begin to do so is Arnold Krupat, who situates his "ethnocriticism," as we have seen, at the border between ethnography, history, and literary studies.

If we place liminality as a Western anthropological and literary concept, but also as a site of intercultural negotiation, within a global reference frame, we will also discern the historical and cultural (i.e., "local") boundaries of Iser's literary anthropology. His definition of humans as beings who can infinitely fashion and refashion themselves—and it is by no means clear that such a definition might ultimately prevail, through intercultural dialogue and negotiations, in most cultures—would always exceed any specific psychological or any other kind of explanation that one might provide for the human need for such perpetual self-fashioning. Specific explanations will evidently remain valid within the actual world or reference frame produced through a specific liminal process, but not outside that frame.

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Iser's explanation of literature in terms of the human need to postpone death by interminable self-staging, as well as his description of humans as beings who can never be present to themselves and who must therefore employ fantasy in order to lead an ecstatic life by stepping out of what they are caught up in—is certainly valid within the actual world(s) produced by a Western, modern and postmodern mentality. This mentality, particularly as articulated by philosophers such as Heidegger and his followers, perceives and experiences Being in terms of a perilous game of (self-) revelation and (self-) withdrawal, in which human existence perpetually plays itself out between the "cardinal points" of birth and death. The question arises, however, whether such a concept—and corresponding experience—of Being is the be-all and end-all of human potentialities, or only one onto-epistemological path out of many, leading to a specific type of actual world. Or, to rephrase this question in terms of the present study: is this local (Western) manifestation of the global impulse, whether proper or improper, the only possible kind of such manifestation, or is it just one among many?

The very idea of infinite human self-fashioning through the triadic interplay of the fictive, the actual, and the imaginary within the liminal space of literature requires, as Iser himself is aware, that we allow for other perceptions and even other experiences of Being (or of the global). For example, certain Eastern modes of thought and behavior, which have resulted in various Buddhist practices, are operating with different "cardinal points" for humans and for Being in general. For them—as for certain forms of Western Christianity, as well as for other, non-Western, religions—birth and death are not absolute limits but, rather, liminal experiences through which humans gain access to other actual worlds. In turn, Being and, for that matter, the global is not a hide-and-seek power game either with *Dasein* or with God (and here arguably certain forms of Buddhism part ways with other religions, including Christianity). Rather, it is a groundless ground of infinite generosity that continuously unfolds itself as "suchness" or "thusness."[13] A fruitful intercultural project could then be to study the various ways in which humans have conceived and experienced being in the world and the global, the different epistemological and ontological consequences of these conceptions, and the specific mechanisms through which they have acted upon their global impulses in order to produce actual worlds.

Concomitantly, one could develop an intercultural *peratology* or science of limits, which would explore how a specific human mentality establishes its own psychophysical and sociocultural boundaries (e.g., through a liminal interplay of the fictive, the imaginary, and the actual) that will in turn generate its specific space-time continuum or actual world. Intercultural peratology would also explore the ways in which the liminal process opens up the possibility of accessing or constructing other worlds through redefining and refashioning one's own psychophysical and sociocultural boundaries. Viewed in this

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light, literary anthropology and imaginary ethnography appear as significant steps in developing intercultural studies in the coming decades.

Another major issue that a field of intercultural studies can research extensively is the theory and practice of cultural interpretation/ translation. Iser points out that the concept of liminality can play a substantial role in this context as well. As we recall, he argues that any act of interpretation is in fact an act of translation of a specific subject matter into a different register. As such, it opens up a liminal space between the subject matter and the register into which it is translated. This liminal space is always perceived as a resistance that must be overcome in order for an interpretation or translation to emerge, although it can never be overcome entirely. In this regard, for Iser an act of interpretation/ translation is a powerful, if not violent, act that attempts to fill a liminal void, thus generating meaning literally out of nothingness.

Yet, Iser's notion of the liminal as an empty space or black hole leading to self-organization of meaning is only one possible "use" of liminality and it may point to the limits of the current scientific formulations of chaos, complexity, and emergence theory. Instead, one may wish to develop Iser's promising idea that the liminal draws its qualities "from what is inserted into it from outside itself." So, if humans insert into it "struggle" and "virulence," then that is what they will get out of it as well. One could then point out the intimate, reciprocal relationship, creating amplifying feedback cycles not only among the last three interpretive genres described by Iser, namely the circle, the loop, and the traveling differential, but also between these three and the first interpretive genre, the exegetic or canonical one, which is explicitly authoritarian. This would be relatively easy to do, especially since Rosenzweig's traveling differential is brought to bear precisely on that sacred, canonical tradition of interpretation. Perhaps all of the interpretive strategies Iser describes are mere attempts to create new variables of cultural or other types of authority that a mentality of power can never give up once and for all. By contrast, one can imagine developing entirely nonviolent forms of interpretation, based not on a dynamics of conflict, but on a mentality of peace and cooperation, which would be of great use in approaching other cultures and mindsets within a global reference frame.

Intercultural translation/interpretation should then conceive of liminal space not as a vortex or a black hole that must continually (and hopelessly) be filled—a sort of Sisyphean project, impelled by a Nietzschean amor fati, which is also proposed by Albert Camus. Rather, it should see it as a meeting place of alterities on "neutral ground" as it were, in which mutual exploration and learning can take place and out of which all participants emerge entirely transformed. In this respect, we may profit from Asad's comments on cultural translation. He invokes Rudolf Pannwitz, as cited by Walter Benjamin in his essay on Translation, in order to convey the idea of translation as a coming together and transfiguration of alterities: "Our translations, even the best ones,

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proceed from a wrong premise. They want to turn Hindi, Greek, English into German instead of turning German into Hindi, Greek, English. Our translators have a far greater reverence for the usage of their own language than for the spirit of the foreign works. … The basic error of the translator is that he preserves the state in which his own language happens to be, instead of allowing his language to be powerfully affected by the foreign tongue. Particularly when translating from a language very remote from his own he must go back to the primal elements of language itself and penetrate to the point where work, image, and tone converge. He must expand and deepen his language by means of the foreign language." (Clifford and Marcus 1986: 157)

As both Asad and Schwab point out, intercultural translation should always be a matter of dialogue and mediation through which all participating cultures become affected and transformed. But Asad does not consider the possibility that intercultural translation might also challenge and transform the very "fact" of the "inequality of languages."[14] Deleuze and Guattari's view of what is a "strong" and a "weak" language in their book on Kafka and the concept of a minor literature (Deleuze and Guattari 1984) might be productively employed in this context as well. Whereas Asad sees English as a strong and dominant language, one could in fact see it, in the manner in which Deleuze and Guattari see Kafka's German, as a weak language, precisely because of its plasticity, flexibility, and adaptability that has made it a "prey" for nonnative speakers throughout the world. It is the weak languages, not the strong ones that survive and flourish, albeit in metamorphosed guises. Strong languages are "strong" precisely because of their inflexibility and imperviousness to change, that is, because of their inability to adapt to new global circumstances. Thus, they are much more likely to become endangered or extinct than their weak counterparts.

English as the official language of "Empire" (Hardt and Negri 2000) is in the same position today that Latin was two thousand years ago. Latin is now a dead language that was "cannibalized" and "bastardized" by the various "barbarians" of the Roman Empire. But, during the long hiatus between its decadence and final extinction (in early modernity), it gave birth to a number of major European languages and dialects and it greatly modified English itself, which was also born from the hybridization of two "barbarian" tongues: the Norman (Romance) and the Anglo-Saxon (Germanic). Therefore, one can plausibly argue that Latin continues to "live" today through all of these other tongues. In this respect, it is ironical to see that the Academies of Sciences of various former colonial countries, such as the French Academy, issue "standard language" usage decrees in an attempt to rescue the purity and the integrity of their languages and to protect them from "hybridization" and "bastardization." In fact all they do is fight a rearguard action and, therefore, contribute to the cultural weakening and possible extinction of these languages.

Thus, Asad and other postcolonial scholars may wish to take into consideration the Nietzschean, or indeed any other power dialectics of weak and

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strong, in which the two poles are highly unstable and reversible. They may also wish to consider that interlinguistic and intercultural relationships in general may often turn out to be asymmetrical and asynchronous with respect to their political and economic counterparts. In this respect, a dominant political and economic power might not always be able to impose its language and culture on the dominated one. On the contrary, both cultures may oftentimes emerge entirely transformed from their contact. We are currently experiencing this process in contemporary Europe, where hosts of immigrants from former colonial countries have "invaded" their former metropolis and are literally transforming its physiognomy, in all of its socioeconomic, political, cultural, and even biological aspects. The same process is underfoot in North America, where African, Hispanic, and East Asian populations have increased at a much more rapid rate than their Anglo-Saxon or European counterparts and are beginning to change the face of the continent.

A third theme that would profitably concern the field of intercultural studies is comparative analysis in an intercultural and crossdisciplinary reference frame. As we recall, Fischer and Marcus call for new practices of comparative analysis not only "among self-contained cultures," but also across "hybrids, borders, diasporas, and incommensurable sites spanning institutions, domiciles, towns, cities, and now even cyberspace." (Marcus and Fischer 1999: xxix) Obviously, within the field of intercultural studies such comparative analyses must transcend their disciplinary and interdisciplinary reference frames, so that these frames themselves might in turn become objects of intercultural comparative analysis, dialogue, and mediation.

One may, however, note that, despite such new important sites for comparative analysis as cultural hybrids, borders, liminal spaces, cyberspace, etc., intercultural comparative analysis of "self-contained" cultures will remain crucial. It is not inconceivable that a complex global society based on the principles of global intelligence might eventually emerge, with the help of all local-global cultures and as a result of extensive intercultural dialogue and cooperation among them. Its advent, however, is certainly not around the historical corner, because the principles of global intelligence, let alone genuine intercultural communication, are in their initial, developing stages at best. Thus, one should first focus on the development of these principles in the context of a continuous and genuine intercultural research and dialogue.

One step toward such dialogue would be to engage in extensive comparative research of large and small world cultures or societies. In this sense, any intercultural comparative analysis should start from a secure sense of cultural identity, rather than an insecure one. But, a globally intelligent approach would also require that researchers engaged in an intercultural project, and then gradually other members of the cultures involved in intercultural learning experiments, view their cultural position and identity through the others' perspectives, as well as their own.[15] One might thus begin by thoroughly explor-

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ing, in a dialogical, nonconflictive manner, the actual and imagined differences that may exist among the diverse human languages, cultures, value systems, and beliefs, which in turn determine the ways of thinking, feeling, and acting of various people. It might very well turn out that many of the clichés that various members of one culture circulate, automatically or intentionally, about other cultures and their members are based on incomplete knowledge or received opinion.

In intercultural comparative analysis, one may also employ such dramatic, rhetorical, and anthropological techniques as "dynamic, nonreductive juxtapositions," or "orchestrated engagements" of cultural horizons (Fischer and Marcus 1999) but, again, outside a disciplinary or interdisciplinary context. I hope that the present chapter will also be seen as such an attempt at dynamic, nonreductive juxtaposition, in this particular case, an orchestrated engagement between ethnographic and literary perspectives. But we should also distinguish between reductive approaches in intercultural comparative analysis and their symmetrical opposites, pluralistic or relativistic approaches. Both types can be equally counterproductive in an intercultural environment, the first because it may amplify cultural conflict and violence, the second because it may stall and eventually cause the breakdown of any intercultural dialogue and cooperation.

E) Ethical Standards of Evaluation in Intercultural Studies

Intercultural comparative analysis, with its technique of staging nonreductive juxtapositions and engagements, brings us to a crucial point, that of the diversity of ethical standards and values in a global environment and their likelihood of clashing against each other. This issue is very much on the minds of Fischer and Marcus, who return to it several times in their second Introduction. They argue that globalization makes it more difficult for ethnographers to take a clear ethical position in conducting their fieldwork and in writing up the findings of their research. They invoke ecological issues as a good example of this ethical dilemma in a global environment. They claim that it is impossible for anyone to avoid contributing to the environmental problems that plague our planet, "unless one could improbably sever all ties with the monetary economy." They also claim that "complicities of all sorts are integral to the positioning of any ethnographic project." (Marcus and Fischer 1999: xviii)

As I suggest throughout this book, however, intercultural studies should have an unambiguous ethical position with regard to the human and natural environment, as well as to other issues of global concern, whether they are related or not to the "monetary economy." It should certainly not neglect the fact that new complicities of all sorts are integral to the new global circumstance and should study such complicities in relation to their older counterparts. But the position of the ethnographer, or any other specialist or generalist involved in the field of intercultural studies, should be unambiguously

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grounded in the emergent ethics of global intelligence. Thus, the urgent question is changing not only the underlying, disciplinary assumptions of our scientific enterprises such as anthropology or literary studies, but also the prevailing, utilitarian assumptions of our "monetary economies." Instead of contenting themselves with the role of mere "objective" or "neutral" scientific observers, anthropologists and other scientists should actively contribute to transforming such economies into sustainable human activities, serving the intrinsic interests of all life on Earth, not just those of a privileged, small section of the world communities.

At the same time, I should again emphasize that the notion of global intelligence and its ethics are emergent phenomena and cannot be predefined from any local-global perspective, including my own. On the contrary, they will be the result of extensive intercultural dialogue and negotiation that can be initiated by the members of the intercultural teams themselves and then submitted to general public debate in academic and nonacademic circles from various countries and regions throughout the world. Meanwhile, our comparative analyses and other interpretive acts should be informed by intercultural responsive understanding, which entails an ongoing, peaceful dialogue and cooperation with other human beings.

Responsive understanding, just like dialogism and polyvocality, is a concept that Mikhail Bakhtin originally used in his literary criticism. Obviously, however, it can be profitably employed in a much larger, intercultural context as well. We recall that Bakhtin defines the term "responsive understanding" as an infinitely open conversation with other humans in the presence of the Other. For him, the term also implies watchful listening that carefully and lovingly preserves the integrity of the Other. In turn, Bakhtin conceives this Other as a "super-receiver," or a present yet invisible entity, hovering above all the participants in the dialogue. In many Western and other traditions, the super-receiver has variously been conceived as collective Humanity, the People, History, Absolute Truth, God, the Transcendent, the Universe, and so on. So, not surprisingly, the Other bears the marks of Rosenzweig's traveling differential.

The "super-receiver," however, might not be the happiest choice for initiating an intercultural dialogue among human beings, because most misunderstandings and conflicts in human history have arisen over—and many atrocities have been committed in the name of—this third Other. And yet, given its seemingly overriding importance in all cultures, would not its removal leave us with a void or nothingness that would preclude all dialogue? This would be the case only if nothingness were interpreted as a negative and frightening condition, as any power-oriented mindset does in fact interpret it. As I have noted, though, some of the most significant and productive dialogues among human beings may take place precisely in the interstices between cultures, in the liminal no-man's-land where differences begin to lose their contours and become malleable and negotiable. So the shortest path

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to responsive understanding might be to posit an indefinable locus, such as the luminous void or creative emptiness, as the proper place of human encounters, where one builds alternative human relations by starting literally from nothing (ness).

This kind of counterintuitive, imaginative leap would suffice to carry us over the threshold of local-global, intercultural communities. But, if turning away from traditional super-receivers and thereby leaping into nothingness may seem too frightening or impracticable, then we may at least proceed, in our intercultural encounters, as if *any* human being engaged in peaceful dialogue is a manifestation of such super-receivers or traveling differentials and therefore warrants responsive understanding, that is, watchful listening, as well as loving and careful preservation.

Finally, I should like to emphasize, again, that the principles and methodologies of intercultural studies that I have discussed here belong to a local-global perspective, which is that of a Western scholar who has obviously not renounced cultural critique and is only slowly working his way through the main assumptions and practices of what he perceives to have been his *Lebenswelt*, while groping toward other kinds of worlds and ways of life. Hereby I would like to invite colleagues not only from the Western world but also from other cultural worlds, who may feel, as I do, like "odd ducks" in their own learning environments, to come together in an extensive intercultural dialogue in which this and other programs of intercultural studies may be discussed, refined, modified and, hopefully, implemented.

By way of a very modest beginning for this intercultural dialogue, I would like to bring a voice from another wonderfully rich world culture into the present conversation, which has so far remained largely intracultural. The ancient Taoist texts contain some of the most illuminating comments that I know on the liminal nature of "nothingness," the relationship of reciprocal causality between power, authority, and knowledge, and on the kind of authority to be sought by scholars, as well as by all other intellectual, spiritual, political, and business leaders of our world communities. These texts include the *Tao Te Ching*, attributed to Lao Tzu, a legendary Chinese poet who presumably lived in the sixth century BC and thus was an older contemporary of both Confucius and Socrates; and the *Chuang Tzu*, a collection of sayings attributed to another Taoist sage, Chuang Tzu (365-290 BC), a younger contemporary of Plato. I shall therefore choose two excerpts from this ancient tradition of wisdom and shall allow them to speak for themselves, without scholarly commentary.[16] I shall simply note that, at least to me, these excerpts harmoniously resonate, across the ages and widely different cultures, with the idea and practice of global intelligence, based on a mentality of peace, for which I have been pleading in my work.

The first excerpt concerns the liminal "void" or "emptiness" as a source of all values for the Tao (pathway):

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I do my utmost to attain emptiness;
I hold firmly to stillness.
The myriad creatures all rise together
And I watch their return.
The teeming creatures
All return to their separate roots.
Returning to one's roots is known as stillness.
This is what is meant by returning to one's destiny [or nature].
Returning to one's destiny is known as the constant.
Knowledge of the constant is known as discernment.
Woe to him who willfully innovates
While ignorant of the constant,
But should one act from knowledge of the constant
One's action will lead to impartiality,
Impartiality to kingliness,
Kingliness to heaven,
Heaven to the way [or Tao],
The way to perpetuity,
And to the end of one's days one will meet with no danger. (*Tao Te Ching* I.XVI)

The second excerpt, also attributed to Lao Tzu, but included in the form of an edifying story in the "Inner Chapters" of the *Chung Tzu*, concerns the nature of governance according to the Tao, which can never be described directly, but only through its salutary effects on the social and moral being of the community for whose benefit it is being practiced:

When he governs, the sage emperor
fills all beneath heaven with bounty,
and yet he's nowhere to be found.

He transforms the ten thousand things,
and yet no one thinks to rely on him:

people never even mention his name,
for he lets things find their own joy.

He stands firm in the immeasurable
And wanders free in realms
Where there's nothing at all. (Chuang Tzu, *Inner Chapters* VII.4)

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Notes

1. Of course, the term "literature" has over time been extended to include, on the one hand, oral, "preliterate" productions of traditional cultures and, on the other hand, everything that is printed. We speak, e.g., of "scientific literature." These meanings testify to our literate mentality that is not likely to disappear any time soon and certainly not under the impact of computers, which are its direct offspring. For a useful history of the concept of literature, see Adrian Marino, *The Biography of the "Idea of Literature." From Antiquity to the Baroque* (Albany, NY: SUNY Press, 1996).
2. For a full discussion of the issue of disciplinarity and interdisciplinarity, see below, in this chapter, as well as my *Global Intelligence and Human Development*, especially Part III.
3. For a wide-ranging analysis of the nihilistic tendencies in contemporary Western thought, as well as their deep-seated, cultural historical roots, see Arran Gare, *Nihilism Incorporated: European Civilization and Environmental Destruction* (Bungadore, Australia: Eco-Logical Press, 1993). Gare's postmarxist remedies for these tendencies, such as "creative rationality" and new forms of Gramscian "hegemony," are less interesting from a global standpoint. In my view, they will continue enhancing the present mentality of power that thrives on oppositional, critical discourse, as I have argued throughout the present volume, as well as in *Global Intelligence and Human Development*.
4. Iser seems largely to share this type of Neo-Kantian view, also expressed by some American constructivists such as Nelson Goodman (1978). Of course, over the ages "reality" has also meant the permanent, immovable realm of the ideas, God, spirit and so forth, versus the "unreality" of transitory, perishable matter. This opposition (in Parmenides, Plato, and others) has spawned other binary oppositions, such as essence and appearance, truth and illusion/delusion, and the like. It reappears in Kant as the opposition between the unknowable, transcendent *Ding an sich* and the transcendental world of ideas, concepts, emotions, perceptions, etc. A similar opposition is preserved in semiotic theories of language in which the signifier and the signified (for Saussure), and then the added "metasign" (for Peirce), point to an ideal linguistic reality. This is the famous "linguistic turn" in modern Western thought, in which language is declared to be the only reality, and the world, a Text or a Book. My own view of reality is perhaps more "interactive" than either the neo-Kantian constructivist view or the semiotic one. For me, reality is not divided into subject and object, mind and body, language and world, signified and signifier, conscious and unconscious, knowable and unknowable, inside and outside, order and chaos, and so on; rather, it is an infinite unfolding of constructed and self-generated worlds or ontoepistemological reference frames, which are neither "pregiven," nor part of an absolute totality, but always in process. In this respect, Werner Heisenberg's view that the "universe" (or, indeed, the pluriverse) will respond to us in the way we approach it makes a great deal of sense to me. Transitions between worlds may be effected through liminal interstices where limits and differences can be renegotiated and reset. In turn, language—and the noun should always be used in the plural in order to avoid essentialization—does not "cover" or "represent" reality (in the manner of a map), but is an important way of world-making and communication, although not the only one. For some of the consequences of this position, see my discussion below.
5. For an extensive analysis of this ontoepistemological model, see Mihai I. Spariosu, *The Wreath of Wild Olive: Play, Liminality, and the Study of Literature* (Albany, New York: SUNY Press, 1997), especially pp. 31-72. There I also explore the concept of literature as a ludic-liminal activity, with some references to Iser's work. Those references have constituted the point of departure for the present discussion as well.
6. For a full discussion of these theories, see my *Global Intelligence and Human Development*, particularly Parts I and II.
7. In *Global Intelligence and Human Development*, however, I challenge the almost unanimous belief in environmental studies that today's radical question is that of human survival.

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Rather, the radical question is to change the mentality that makes "survival" an overriding value in human communities and to put this value in its proper place within the reference frame of a mentality of peace. For a full argument, see *Global Intelligence and Human Development*, especially Chapter 5, "Toward an Ecology of Ecology."

8. In this respect, also see my extensive analysis of Samuel Huntington's *Clash of Civilizations* (1996), in *Global Intelligence and Human Development*, Chapter 1, "Globalization and Contemporary Social Science." Huntington's book is almost a parodic elaboration of Appadurai's mimetic approach to culture. A more complex view appears in *Culture Matters: How Values Shape Human Progress* (New York: Basic Books, 2000), which Huntington coedits with Lawrence E. Harrison. The volume is a collection of essays based on an interdisciplinary symposium at Harvard University, in which participants included scholars, journalists, and nonacademic practitioners. They all agree to define culture as the "values, attitudes, beliefs, orientations, and underlying assumptions prevalent among people in a society." They also define human progress as "movement toward economic development and material well-being, social-economic equity, and political democracy." Beyond those definitions, however, the views expressed range from the cultural developmentalist position of Harrison and his research group, according to whom certain cultural values determine economic and social success (measured by Western standards), to the cultural relativist and pluralist position of Richard A. Shweder, according to whom the developmentalist position shows moral arrogance, being just another form of Western (cultural) imperialism, and should be replaced by a two-tiered world system of "global cosmopolitan liberalism" and "local non-liberalism." A cogent, non-Western view is that of Tu Wei-Ming, who speaks of "multiple modernities" and urges scholars from all over the world to embark upon a comparative study of "modernization" from multiple civilizational perspectives.

   The problem with most of the positions articulated in the volume is that they subscribe, in various degrees, to the notion of human "progress," largely conceived as material and economic development. Of course, I have suggested that human development, rather than human progress, is a more appropriate term to use in a local-global framework, implying as it does not only economic or social development, but also moral and spiritual. In this respect, all human societies and/or cultures are currently in a "developing" phase and should work together toward an alternative world system, based on global intelligence and an irenic mentality. For the political implications of the "culture wars" in the United States, see John Fonte, "Why There Is A Culture War: Gramsci and Tocqueville in America," in *Policy Review*, No. 104 (December 2000 and January 2001).

9. In this context, then, the word "anarchy" does not mean absence of power, but only absence of a central ordering principle, or of a so-called "order of rank," which results in the war of all against all. For further elaboration on these power concepts, see my discussion of Marlowe's *Tamburlaine* and Hardt and Negri's *Empire* in Chapter 2 below.

10. For a detailed argument, see *Global Intelligence and Human Development*, especially Chapter 6, "A Paradigmatic History of the University: Past, Present, and Future."

11. Nowadays it is fashionable, in North American and other cultural studies, to assert the primacy of the political over all other human activities. To me this simply means that the power principle has always been most visible (if not necessarily most effective) in its political manifestations. One often hears, largely in ideological circles, that a most effective political move is to deny or to ignore the existence of the political. We have seen that Pierre Bourdieu and, in his wake, Rabinow make a similar argument regarding politically aloof academia or culture in general. This argument reminds me somewhat of my native Romania's erstwhile communist party, which never allowed for the possibility of genuine political neutrality and which always acted on the principle that "you are either with us, or against us," typical of the either/or logic of any disciplinary mentality. The same totalitarian spirit of partisanship, which obviously leaves little room for liminal perspectives, is often evinced by political parties in the "pluralistic" Western democracies as well. Matthew Arnold, among many others, had already pointed out this phenomenon in Victorian Eng-

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land, notably in his *Culture and Anarchy*. In any case, the question is not to deny the existence of the political, but to put it in its proper reference frame, as one among many other human activities. Finally, one needs to explore the nature of politics itself, which in the Western tradition (but in other traditions as well) has often been identified with ways of wielding power, rather than with ways of organizing communal life. A power-oriented mentality will create a power-oriented politics, but one should also be able to envisage politics that are not primarily guided by power, regardless of how "utopian" or "naive" this might appear (to a disciplinary mentality, that is).

12. This term belongs to Joseph Nye (2002), who makes a distinction between "soft power," involving cultural authority, and "hard power," involving political, economic, and military force. For a detailed discussion of these concepts, see *Global Intelligence and Human Development*, especially Part I. There I also examine the related issues of cultural imitation and cultural resonance and suggest that "resonance," not "imitation," would be a better term to describe mutual interactions and relations among various world communities, within a global reference frame.
13. For further discussion of these issues in relation to early Buddhism and later, Zen Buddhism, see *The Wreath of Wild Olive*, Chapter 3 and, most recently, *Global Intelligence and Human Development*, Chapter 4, "Buddhist, Taoist, and Sufi Views of the Web of Life."
14. Asad's view of translation as an act of power has become quite common in postcolonial studies and in the contemporary theory of translation in general. See among others, Tejaswini Niranjana, *Sitting Translation. History, Post-Structuralism and the Colonial Context* (1992); Roman Alvarez and Carmen M. Vidal, *Translation, Power and Subversion* (1996); and the essays collected and edited by Maria Tymoczko and Edwin Gentzler in *Translation and Power* (2001).
15. Since we already have many Western readings of other cultures, it would be useful to initiate an intercultural research and publication program that would identify and support anthropological studies of Western societies by members of various other cultures. Such studies should then be widely disseminated in Western circles as well. In other words, we should begin, as Rabinow suggests, to "anthropologize" the West, although not from our viewpoint, on the model of Montesquieu's Persian letters, but from that of scholarly and intellectual communities in other cultures. Of course, some of these studies may already and necessarily imply a Western "anthropological" component, as in the case of studies by non-Westerners, such as Edward Said and many others, who live and work in the West and "critique" Western mentalities largely on the latter's own terms. Other studies may not imply Western notions of "critique" at all and might, for example, be "neutral" reflections about Western values and ways of life in relation to those in their own cultures. All of these intercultural studies, however, with their mutual mirroring of cultural assumptions and topoi, may be of great use in creating fertile global learning environments.
16. For a detailed discussion of early Taoism and early Buddhism as an appropriate foundation for a contemporary ecology of science, oriented toward global intelligence, see *Global Intelligence and Human Development*, especially Chapter 5.

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Chapter 2

The Role of the Humanities in a Global Age

Some years ago, during the summer of 1997, I took part in a meeting on "The Future of the Humanities in Europe and the Americas," which I helped organize at the University of Santiago de Compostela in Spain. The event brought together a number of distinguished scholars from various parts of the world to announce the inauguration of an International School of Theory in the Humanities and to debate the intellectual direction that this School should take in the next decade or so. A number of position papers were distributed in advance of the meeting, outlining the authors' vision of the humanities and suggesting ways in which the International School's objectives could best be implemented. These position papers served as points of departure for animated debates on topics such as: Theoretical and Institutional Models of Interaction between the Humanities and the Sciences; New Paradigms for Humanistic Thought; Play, Aesthetics, and the Concept of Interdisciplinarity; National Identity, Cultural Diversity, and the Languages of the Humanities; The Role of Literature in Developing New Models of Human Interaction; and Future Modes of Intellectual Exchange between Europe and the Americas.

Several of the position papers started from the opening remarks that Ronald Bogue, Associate Director of the International School, and I included in our description of the proposed goals and themes of the conference. We defined the main objectives of the School as follows:

"The International School of Theory in the Humanities at Santiago de Compostela will explore the ways in which a much-needed qualitative integration of the humanities and the theoretical sciences may be brought about. It will also explore the ways in which the humanities in the West can redefine themselves in relation to cultural expressions of other, nonwestern societies that have become more and more prominent in the global arena. Finally, it will explore the ways in which the humanities can best continue their role as both

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the ethical conscience of the polis and an imaginative space within which fresh ideas are constantly generated, debated, and tried out, so that they may later on be adopted and implemented by the community at large.

The School will bring together leading junior and senior scholars from various fields and diverse cultures who will explore these intellectual issues from a transdisciplinary perspective, seeking to harmonize local and global exigencies and develop cooperative models both within and outside the academic world. Our immediate, practical goal is to establish an intercultural community of teachers and researchers in the humanities that will offer a new model of transatlantic cooperation among leading institutions of higher education."

Needless to say, these were provisional, schematic statements that were intended to get the discussion going, and as such they largely accomplished their goal. As a result of the many heated, yet constructive debates during the meeting, it became clear that the International School of Theory in the Humanities should attempt to move beyond Europe and the Americas, actively seeking participation of colleagues from other parts of the world. The School should thus focus on the humanities within a global reference frame, particularly on the ongoing cognitive and sociocultural changes that current globalizing trends have triggered throughout the world. It also became clear that its programs and activities should involve, in addition to scholars, teachers, and students from the humanities, informed academics from other fields of knowledge and nonacademic practitioners of all ages and from all walks of life.

Two related theoretical issues were raised by the position papers that commented on our tentative programmatic statements: a) the difficulty or, perhaps, even the impossibility of a real dialogue between the sciences and the humanities or between the so-called "two cultures" (C.P. Snow's term); and b) the logocentric bias of any dichotomy between Western and non-Western cultures. Both issues have considerable bearing on the future role of the humanities in a global learning environment. The first issue largely depends on how the various authors of the position papers define "science" and "humanities," or even "dialogue." Here, of course, one can also question, in the best deconstructive fashion, the very dichotomy between the two areas of human activity.

But, more to the point, if one accepts the ever-widening gulf between the two cultures (sciences and humanities) as an irreversible, historical "fact," rather than the result of certain reversible human choices, then one will also have to accept the overall increasing fragmentation of knowledge in all fields of human endeavor as an inevitable, entropic process. Such an entropic process will eventually lead to a breakdown in all communication not only among scientists and other researchers, but also among the scientists themselves, not to mention all other human beings. From the viewpoint of the humanities (as well as of the sciences), it is much more productive to assume that responsive understanding, dialogue, and other forms of intercultural and crossdisciplinary

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communication, whether specialized or nonspecialized, are desirable, possible, and, indeed, indispensable for sustainable human development.

The second issue is part of the same deconstructive problematic in which the term "non-Western" can simply be seen as the subordinated term of "Western" in a logocentric, binary opposition. One can even combine the two issues, showing how a denial of any possibility of genuine dialogue across disciplines corresponds to a denial of any possibility of dialogue across cultures. One can also show that the dichotomy between the sciences and the humanities, no less than that between the West and the rest, is also of Western extraction. For example, the opposition between human and other sciences does not really operate, say, in traditional Chinese culture, where such oppositions are allegedly unknown. In other words, one may place the concept of Western and other worlds in a larger, global reference frame and attempt to define, through intercultural research and dialogue, the similarities and differences between various world cultures as perceived by their various members. Extensive intercultural comparative analysis and nonreductive juxtapositions may well show that some of these perceptions are unfounded, deriving mostly from incomplete knowledge, received opinion, or other subjective factors. All of these subjective factors are nevertheless significant in understanding cultural attitudes and behaviors in various parts of the world. They will play a substantial role in our attempts to modify attitudes and behaviors that have been counterproductive, or to encourage those that have been helpful in furthering human development, oriented toward global intelligence.

One can finally point out that deconstruction itself is as much of a "Western" logical operation as any of the binary oppositions it seeks to dismantle and therefore is equally subject to critical scrutiny and ideological suspicion. Although it has as a rule presented itself as a liberal ideology in academia, deconstruction can also easily accommodate the nihilistic impulses of a certain conservative temperament that denies the possibility of any genuine intra- and intercultural dialogue. As such, it can help justify opposition to any change in the current academic and other institutional structures (especially once it has moved from the margins to the center of disciplinary power), on the ultimate principle that they will only accelerate the overall entropic processes of human and other life on earth.

In any case, once the dust settles around such academic arguments, we are, as often as not, left with two basic propositions: "humans are radically different" or "humans are essentially the same." Both propositions are arguably true, depending on the level of abstraction we choose to adopt. What is of more import, however, is not the logical truth of such propositions (which are always tautological), but their ethical implications, their practical, day-to-day uses, particularly within an intercultural, global reference frame. It is for this reason that the foregoing debate highlights the need to go not only beyond binary and linear ways of thinking, but also beyond deconstruction or any other hermeneu-

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tics of suspicion, as well as beyond the current malaise of threatened cultural identities. In other words, we need to steer the goals and practices of intercultural learning and research toward an ethics of global intelligence.

In this chapter, I shall use the story of our International School to highlight some of the current problems in the humanities and spell out the principles that would foster the kind of local-global learning environments and intercultural intellectual climate that are needed for sustainable human development in the next few decades. The humanities, in cooperation with other branches of knowledge, could play a renewed, vital role in these local-global undertakings. I shall also briefly outline the research programs and methodologies that such an International School might adopt in the future and then shall propose and discuss in some detail two concrete projects from the field of literary studies, understood as a transdisciplinary, intercultural enterprise.

1. The International School of Theory in the Humanities: Past and Future

The International School of Theory in the Humanities was meant to be a very modest beginning for the intercultural and transdisciplinary project that a liminal, local-global university ought to be. In fact, it was liminality and its conceptual fields that the organizers felt should be the first topic for the inaugural session that took place in Santiago de Compostela in the summer of 1998. The guiding premise of the session was that many reconfigurations of human knowledge occur at the margins of constituted fields, as well as in the grey areas between disciplines, which may be called liminal interstices. The session focused especially on the liminal features of literature, which has often been seen as a marginal activity, but which can, precisely because of its liminal marginality, elaborate and help implement alternative ethical, epistemological, and sociocultural models. Viewed in this light, literature is no longer an outmoded medium of mass communication, but an indispensable anthropological tool of self-exploration and self-fashioning that should, alongside other artistic productions, regain a prominent place in our future global communities.

This first session was attended by over fifty junior and senior scholars, who came from a wide array of disciplinary and cultural backgrounds. The countries or regions represented were the United States, Canada, Latin America, Western and Eastern Europe, Russia, Taiwan, and Hong Kong. The majority of the participants, however, were from Spain and the United States, mainly because of financial and logistical reasons. Several scholars from Southeast Asia and other places could not attend, for example, because of visa problems. In order to make the School both intellectually viable and financially accessible, we felt that all junior participants should be offered partial or full fellowships. To this purpose, we formed a consortium of over twenty universities

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from the United States, Canada, Taiwan, Spain and other countries that offered grants, through annual competitions, to a number of their junior faculty and advanced graduate students to enable them to attend the International School. George Soros's Open Society Institutes in Eastern Europe and Russia also offered grants, on a selective basis, to several junior and senior researchers from those regions.

From the very beginning, the language issue, attended by related issues of ethnic and cultural identities, became one of the main topics but also sources of controversy at the School. The two official languages of the School were English and Spanish, but most participants were English-speaking and had little Spanish and no Galician. Furthermore, this English-speaking majority made only sporadic and halfhearted efforts to accommodate their Spanish and Galician hosts. In turn, some of the hosts, especially among the students and the local community, understandably felt discriminated against in their own country and region and reacted, occasionally, with the kind of suppressed or open hostility not uncommon in cases where ethnic and cultural identities are perceived as being challenged or threatened.

Other issues of cultural difference such as housing, food, eating habits, business hours, public and private conduct, and so forth surfaced, especially between the North American participants and the rest of the fellows. These conflicts never reached a point of crisis or inhibited the operation of the School, but they were never resolved in a satisfactory manner, either. They illustrate the crucial importance of the local and the mundane in any intercultural, global project, no matter how innovative, ambitious, or generous its intellectual and ethical objectives might be.

The second session of the School, in the summer of 1999, was dedicated to the interaction between the sciences, the humanities, and the arts, and again brought together junior and senior humanists, scientists, and practicing artists from different countries and continents. That year, we paid more attention to the local, cultural, and academic communities, and we involved the local Centro Gallego de Arte Contemporanea in the activities of the School. The session of that year resulted in a collective volume, *Connecting Creations: Science-Technology-Literature-Arts*, edited by Margery Arent Safir and published by the Xunta de Galicia in 2000.

Although the second year of the School was considered a success by participants and organizers alike, the same nagging issues of conflictive cultural difference lurked in the background. These issues were now compounded by the divisions between the "two cultures," the sciences and the humanities. From what I could observe during the session, there was little inclination, with very few exceptions on either side of the divide, for genuinely transdisciplinary dialogue. Some participants came to the session with preconceived notions and preset ideological positions and would often talk past each other, either extolling the cognitive and methodological virtues of their own disci-

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plines or denigrating those of the others. They never attempted to put themselves into anybody else's shoes, as it were.

There were also, among the participants, humanists who admired the sciences, especially for their "rigorous," disciplinary methods, and used them as methodological weapons against their colleagues in the humanities. There were equally scientists who admired the humanities for their creativity and cognitive flexibility—indeed were poets and artists themselves—and used them, in turn, as a bully pulpit against their own colleagues. I have some sympathy for this position, on the Ruskinian principle that each discipline or field, but also any particular culture or community should, if necessary, critique its own shortcomings and leave it to others to critique theirs.[1] This is a *faute de mieux* principle, for which I implicitly argued when I discussed the Western notion of cultural critique in Chapter 1 of the present study. Of course, the notion of criticizing and reforming "one's own" does not yet amount to intercultural and transdisciplinary, responsive understanding, because it usually projects its own ideals onto the other's field or culture, without engaging it in a genuine dialogue. Nevertheless, it is at least a beginning of a gesture toward the other.

On the other hand, even though the controversies among some of the members of the "two cultures" sounded to me sterile at the time, they seem to have borne fruit subsequently, at least according to some of the junior participants at the School. These participants acknowledged, a year or so later, that they learned a lot from that kind of intercultural "contact" or encounter, frustrating as it seemed to be while it was happening. Many of them had not been exposed to intercultural and interdisciplinary experiences before, and their first reaction to them was understandably negative—they had had what one might call a "disciplinary knee-jerk reaction." But they discovered, later on, that their experience of cultural and disciplinary alterity had in fact benefited them, not least because it made them realize that they had felt needlessly threatened in their own professional credos and practices. They had, moreover, indiscriminately merged such prevailing professional credos and practices with their own personal identity, without reflecting on what that identity, and its professional guise, actually presupposed.

I continue, therefore, to believe that there is virtue in staging, indeed multiplying, such intercultural encounters, or what Fischer and Marcus call nonreductive juxtapositions and orchestrated engagements of cultural (and disciplinary) horizons, even though they may seem at first not to accomplish much. Besides, one cannot ignore the fact that, in our disciplinary cultures, intercultural contact can be, and often is, conflictive and messy. But, that is no good reason to avoid it, any more than it would be for a cancerous patient to ignore a malignant tumor in the hope that it will go away by itself. On the contrary, we need to face the reality of such conditions and work patiently and compassionately to change them, even if the process seems frustratingly slow, unrewarding, and full of setbacks.

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The third session of the School, in the summer of 2000, focused on cultural issues of globalization, and took place in Avignon, France. The session was moved to Avignon because, with the changes in the leadership of the School the previous year, administrative problems seemed to crop up, which were compounded by illness, by inability to raise sufficient funds for an overambitious agenda, and by personality clashes among some administrators. As in the case of many intercultural projects, or for that matter any other projects that seem at first successful, we probably attempted to do too much, too soon, and did not pay enough attention to various local conditions, as well as to the fluid dynamics of the intercultural team in charge of the development of the International School.

Looking back on it, I believe that the first phase of our experiment in intercultural learning was not as rewarding as it could have been, precisely because of the "disciplinary knee-jerk reactions" with which all of us approached various organizational and logistical problems that require completely different solutions within an intercultural reference frame. In such complex intercultural and transdisciplinary projects, issues of cultural difference are bound to arise and will inevitably lead to conflict and breakdown of communication, unless they are approached in the spirit of responsive understanding, patience, and sustained dialogue. Unfortunately most of us, born and raised in various disciplinary cultures and environments, have yet to internalize this spirit and turn it into automatic habit. On the other hand, as we have seen from the example of the subsequent shift in reaction to and positive reevaluation of an initially negative intercultural contact, we might also need to change our perceptions of success and failure, especially with regard to intercultural and transdisciplinary learning experiments, to which we should no longer apply the usual disciplinary criteria and standards of evaluation.

For the future development of this or a similar School—which we might wish to call The School of Intercultural Theory and Practice, in recognition of its new orientation—one should take into consideration all of these practical factors in devising a more suitable format under which such intercultural educational projects may attain their main learning and research objectives. The School should intensify its efforts to reposition the humanities in relation to the extensive reconfigurations of knowledge that continue to occur on a global scale. The humanities all over the world ought to join the environmental sciences and other academic and nonacademic fields of human endeavor in a genuine and sustained intercultural dialogue about the future of our planet. This intercultural dialogue should be based on the principles of global intelligence, grounded in a mentality of peace. But, such principles are far from being (pre-) established and should in turn become an object of extensive intercultural debate and negotiation.

The humanities should also initiate and carry out concrete intercultural research projects that will be part of and coordinated with the more compre-

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hensive programs of intercultural studies and of the local-global university as a whole. Indeed, one should start from the assumption that all sciences are "human sciences," because human beings produce them. In turn, all fields of specialization (not "disciplines"), whether we call them natural, or animal, or human, serve the same purpose within a local-global university, namely furthering human (self-) development. Globalization is slowly beginning to reveal that being human is not only a privilege, to be used and abused indiscriminately, but also—and in the first place—an enormous responsibility, because the well-being and development of other life forms on this planet depend on ours as well. To all of our human sciences we should then add one more, so far largely ignored: the science of being human, whether in a local or in a global, intercultural, reference frame.

The format of a future school should be based on the dynamic model of intercultural research teamwork that I outlined for the field of intercultural studies in Chapter 1 above. Relatively small, crossdisciplinary and crosscultural teams of researchers could meet for two- to three-week workshops during the summer session, as well as for shorter, follow-up workshops during an additional winter session. The summer sessions should be held for three years consecutively in the same location, whether in Europe or on another continent, after which the School should move to another site. The winter sessions should be held each year in a different location and should continue the research projects initiated during the previous summer. This way, one would assure both the continuity and the diversity of locality and intellectual effort, which are equally important factors in any intercultural learning project.

The research teams should be made up of academic humanists and scientists who are in the early and middle stages of their careers, as well as nonacademic researchers, thinkers, scientists, artists, journalists, civic entrepreneurs, and other worldwide practitioners of any age. During its first phase, the School recruited its participants mainly from the ranks of advanced graduate students and beginning assistant professors at North American universities. In the future, it should cut back on the number of graduate students and nontenured faculty, particularly from the United States. These students and junior faculty are as a rule too caught up in their immediate, utilitarian goals for a disciplinary career and, therefore, are in too vulnerable a position to have the economic security, intellectual detachment, and peace of mind necessary to work toward changing the disciplinary knowledge paradigm. The School should also increase the number of African, Asian, European, and Latin American participants, in order to make the intercultural research teams more balanced and diverse.

The research topics may be chosen from, although not necessarily limited to, any of the six general areas that I have mentioned in Chapter 1 as being crucial for intercultural studies in the next few decades: 1) Globalization and Local Strategies for Human Development; 2) Food, Nutrition and Healthcare

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in a Global Environment; 3) Energy World Watch and Environmental Studies for Sustainable Development; 4) World Population Movement and Growth; 5) New Media, Information Technology, and Intercultural Communication; 6) World Traditions of Wisdom and their Contemporary Relevance. The research teams may also be asked to design proposals for new research topics and even for the creation of new crossdisciplinary and intercultural fields of knowledge, such as the one I propose, for example, in Chapter 4 of the present study.

To those of my colleagues in the field of literary studies who may wonder where literature would fit into all of this and who may think that I have "betrayed" my first allegiance, I will answer that few "disciplines" could play a more important part than literary studies in creating new ways of thinking and acting within a global reference frame. First of all, however, literary studies should move away from the notion of discipline itself, preparing the way for transdisciplinary mindsets and practices in all fields of knowledge. By its very nature, literature is antidisciplinary, or, rather, transdisciplinary, and hence can have a leading role in proposing new cognitive models for our academic and nonacademic communities.

In future global and crosscultural interchanges, traditional cognitive fields and boundaries will increasingly be challenged and reconfigured. We literary people should help this process along by contributing to the development of specific blueprints for future reconceptualizations of knowledge. Such blueprints might well need to display the kind of ontological flexibility and epistemological inventiveness that have always been the mark of literary discourse. For that purpose, we need to give up our own territorial ways of thinking and doing things. We should cease looking upon literature as a traditional canon of literary texts and regard it, instead, as a form of liminal activity that generates new cognitive associations and interactions. In this respect, literature, and the humanities in general, may help substantially with the local-global university's project of (re) turning to its liminal vocation, which I propose and discuss at length in Part III of *Global Intelligence and Human Development*.

New intercultural and crossdisciplinary research programs to be initiated by literary studies might include, among many other possibilities, examining the history of the literary canon itself within a global reference frame. This history is in fact closely related to the history of the university and higher education, if not to that of Western and other disciplinary cultural paradigms in general. It therefore has the obvious advantage of transcending, by its very nature, the scope of a specialized discipline that might appear, at first sight, of purely "local" interest or relevance. Another research program could, in turn, reexamine the history of world literature and of other fields of knowledge in terms of works that stage complex (inter) cultural issues that remain equally relevant today, within both a local and a global frame of reference. In other words, this research program would begin the laborious process of gathering a solid body of historical and theoretical knowledge about the globalizing efforts

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of the past and their worldwide reverberations through the ages. Such historical and theoretical projects are absolutely necessary if we wish to avoid some of the grievous mistakes of the past and to redirect human development toward global intelligence.

I would, therefore, like to propose two research programs along these lines. They can be seen as originating in Western literary studies, but could best be developed within a crossdisciplinary and intercultural framework that includes, in addition to literary studies, a number of other human sciences, such as anthropology, art history, education, intellectual history, history and philosophy of science, history of religion, intercultural studies, legal studies, music, philosophy, political science, sociology, psychology, women's studies, and so forth.

The two research programs are: 1) the question of the literary and other cultural canons within a global framework; and 2) the issue of globalization as present in both Western and world cultural history throughout the ages. In the two remaining sections of the present chapter, I shall briefly indicate the lines along which such research programs might be initiated, at least from a literary and Western, local-global viewpoint. At the same time, I hope that colleagues from other fields and cultures will join me in refining the theoretical tools and undertaking the extensive historical research needed for these long-term projects. For this purpose, I shall provide two starting points: a very broad sketch of the history of the literary canon in the West; and a detailed case study of globalization in English Renaissance drama, specifically in Christopher Marlowe's play *Tamburlaine the Great.*

2. The Literary Canon in the West: Historical Outline and Global Prospects

Contemporary literary criticism in the United States and elsewhere has raised questions about the Western literary canon in terms of its ideological and political uses, specifically in terms of its purportedly colonialist, imperialist, racist, and gender-biased features. Feminist, Marxist, and postcolonial critics in particular have challenged the theoretical presuppositions that have controlled canon-building in Western culture and have argued either for replacing these presuppositions with their own ideological biases or for more equitable criteria of canonical selection and inclusion. Needless to say, these critics, far from attempting to abolish what they perceive as an authoritarian practice, often engage in their own kind of canon formation and authority building, simply contending for their share of the pie. Here, therefore, I am less interested in offering a generic definition or description of the canon, than in outlining, however briefly, what its major cultural uses have been through the ages and how these uses might change in a global learning environment. In the present

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context, it will also be helpful to keep in mind Wolfgang Iser's description of the four modes of interpretation (canonical authority, hermeneutical circle, recursive loop, and traveling differential) in the human and other sciences and their essentially disciplinary nature that I have discussed in Chapter 1 above.

My thesis is that the history of various literary and other canons has preceded, then influenced, paralleled and crisscrossed, the history of the university in the West, following the same dynamic of elitist versus democratizing tendencies and a similar disciplinary paradigm.[2] In fact, this history should provide a "classical" example of how a disciplinary cultural paradigm, within the framework of disciplinary Culture as a whole, functions both in terms of inclusion and exclusion and in terms of controlling the body of knowledge and practices associated with it. The elitist concept of the canon, which is as old as Homeric textual production and criticism in Classical and Hellenistic Greece, received periodical boosts throughout the ages, for example, at the beginning of the common era through the Biblical textual wars, then through the scholastic Aristotelian tradition in the Middle Age, and finally, through the Neoclassical concept of mimesis, which prescribed the imitation of ancient texts as the proper way of producing modern ones.

The elitist, Neoclassical view of the canon was in turn challenged by the Romantic, democratizing tendencies in literature (just as, earlier on, the various translations of the Bible into vernacular languages during the Renaissance could be seen as a democratic challenge to elitist, traditional Biblical exegesis). For instance, William Wordsworth, in his Preface to the *Lyrical Ballads*, challenges the highly stylized and canonical language of Neoclassical poetry, known as poetic diction, replacing it with the more "democratic" language of common prose. Of course, the Romantic idea of noncanonical language and spontaneous literary creation that ultimately led to "free verse" became in turn canonical, holding sway in Western poetry up to the present day. Ironically, it is also a Romantic mentality that reactivated the religious notion of the canonical in relation to literary works, substituting literature for religion in high culture and thus reintroducing elitist tendencies in literature.[3]

In Western societies, the literary canon has basically functioned within both a national and a crosscultural context. Within the national context, a body of literary texts acts as a standard of evaluation, emulation, and selection for other texts to be produced in the same culture. Here canon formation is inextricably linked to the formation of nations and national identities. Well-known examples are the Homeric epics, which served to create a Hellenic ethnic identity; Virgil's *Aeneid*, which contributed to the creation of a Roman national self-image; Chaucer's *Canterbury Tales*, Spencer's *Fairie Queene*, and Shakespeare's historical plays, which went a long way toward creating an English national identity, and so forth.

The canon may also be seen within a crosscultural reference frame, in which a whole national literature may act as a standard of evaluation, emula-

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tion, and selection for other, younger or emergent literatures. Within the Western literary tradition, for example, the Graeco-Roman-Judaic canon has served as a model for the emergent English, Spanish, French, and Italian literatures, just as the latter have in turn acted, later on, as canons for the so-called minor literatures of other emergent, smaller European nations and/or ethnic groups. In all of these cases, a body of literary texts is invested with cultural authority and is implicated in the political and ideological contests among various ethnic and national entities. It is clear, then, that the major critical concepts of the literary canon share the disciplinary mentality that has prevailed in Western civilization ever since its inception, in the Hellenic and the Hebrew cultures, and has never been seriously questioned even to this day. (As I have repeatedly pointed out, most contemporary schools of criticism, including deconstruction, feminism, and postcolonial cultural studies often question who is—or should be—in power, rather than the nature and desirability of power as such.)

The history of the literary canon crisscrosses the history of the university not only as a "citadel of knowledge," but also as a "factory of knowledge," with its democratizing tendencies. With the advent of the contemporary mass-produced education, the literary canon has also become either more "diluted" or more "inclusive," depending on the conservative or liberal ideological critical camps that make those judgments. Thus, works written by women, ethnic minorities, and others have been included, regardless of traditional aesthetic criteria. Indeed, as the differences between high culture and popular or low culture have become either diluted or greater and greater (depending, again, on a liberal or a conservative critical perception), the aesthetic criteria themselves have changed, presumably to accommodate the more "democratic" tastes of such "mass consumers" of literature as college students, as well as "lowbrow" and "middlebrow," general readers.

Literary and other canons have not lost their hierarchical quality, but have greatly multiplied under the marketing techniques of mass production, indeed are being themselves mass-produced. As Nicholas T. Parsons points out, the range of fields in which "it is now possible to build a canon has hugely expanded. … The appetite for canons is perhaps at its most voracious in the music sphere, where categories have proliferated as fast as music shops could build racks for them. If you want to, you can find out what is more or less 'canonical' in any genre from Opera through Rockabilly to Rembetika, simply by browsing in a well-stocked CD outlet."[4] Literary and other canons are now often used as marketing gimmicks, based on value judgments by New Media and other celebrities, whose endorsements of "good reads" or "must reads" boost sales tremendously. Not unlike the university as "halfway house" in general, the literary and other canons have also become commercial vehicles of moving around "intangible" goods in the "immaterial" service industry.

This very brief history of literary canon formation as a fluid dynamic between aristocratic and democratizing tendencies, on which disciplinary cul-

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tural paradigms of inclusion and exclusion are generally based, should also be tested in other fields of knowledge, where canons are constantly formed and reformed, such as in the history of music, painting and sculpture, science, and religion, to mention only the most obvious. In turn, the Western cultural paradigms of canon formation might be fruitfully compared to other such paradigms in non-Western societies, through a juxtaposition of cultural horizons and through extensive intercultural dialogue.

If the present thesis is borne out by comparative historical and intercultural research, then the question to be asked from various local-global perspectives would be: What are our future options in approaching the problematic of the literary and other canons? There are many possible, concrete answers to this question, which will become apparent only after our intercultural research teams have completed their research. But what I have proposed throughout this study, as a matter of principle, is that we, in the human sciences and the university as a whole, should consider moving away from our disciplinary paradigms, that is, from the ways in which we currently acquire, transmit, and utilize knowledge. So this shift would obviously affect our approach to literary and other canons, as well.

Several contemporary theorists, including Virgil Nemoianu, have attempted to make a distinction between the curricular and the canonical in literary studies, precisely in order to rescue the term "literary canon" from strictly ideological and political uses. Nemoianu, for example, argues that curricular literary works are "those chosen to be taught in class, to be included in anthologies, those that are read by and fed to large numbers of individuals in a linguistic and social community at any given time. . . . Curricular authors of the past are chosen for utilitarian reasons, to satisfy some needs—political, ethical, practical—and to create bridges of compatibility between an essentially recalcitrant phenomenon and the needs and preferences of structured societies with their ideological expressions."[5]

In turn, what we call a literary canon, Nemoianu argues, is a self-emergent and self-constituted body of works that have less to do with conscious choices by literary critics and ideologues than with the everyday practice of creative writers and the shifting taste of successive generations of readers. Here Nemoianu uses insights from contemporary scientific theories of self-emergence, specifically chaos theory: "As to how exactly literate communities select their narrative and imaginative providers, perhaps it is best to think of it by analogy with the theory of chaos in modern physics and mathematics. Inextricable collaborations of rational and predictable factors with irrational and sudden developments lead to stabilities and turbulences that alternate irregularly, or to nonperiodical regularities and recurrences. In literature we generally group such processes under the headings of sensibility and taste. These terms do not only indicate the metarational level on which decisions are taken, they also indicate the thin and pervasive nature of the value judgments

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involved, as well as a randomized, carefree, and unfocused interaction with all kinds of material interests and existential choices."[6]

Nemoianu's shrewd redefinition of a literary canon may be employed fruitfully within a global context, especially if we wish to renounce the disciplinary mentality that has largely determined the past cultural uses of literary canons. We would then no longer see a literary canon as a consecrated, quasi-religious body of literary texts, or as a political pie to be cut every which way, or as an ever-changing laundry list of cultural inclusions and exclusions, or as a commercial gimmick of moving around "intangible" goods or "intellectual capital." Rather, we would regard it as a potentially infinite network of artistic creations that belong to a multiplicity of open-ended, actual, and possible worlds. In other words, we would preserve a non-agonistic distinction not only between the curricular and the canonical, but also between literature as a cognitive field and literature as an object of critical study or as a "discipline," in all the senses of that word.

Finally, the question may be asked, always from the perspective of an emergent ethics of global intelligence, if it were desirable to work collectively toward the creation of a global literary or any other canon. My answer to that question is a definite negative, if only because such globalizing attempts are invariably doomed to failure. Indeed, the history of Western and other civilizations abounds in examples of improper globalizing projects, based on the idea of bringing the "global" (read Western or other local ways of thinking and doing things) to the "local" (a large number of diverse, alien cultures). An attempt to create a new global canon of any kind would be as impractical and counterproductive as rebuilding the tower of Babel—itself the Biblical archetype of a failed global project. It will soon degenerate into local squabbles about who has a better literature, a higher culture, and more material and intangible goods, or about who is more developed and more powerful (or, conversely, more of a "victim") than all the others.

If anything, a global intercultural dialogue should primarily center on the idea of building a common humanity, based on our interdependent relationships of mutual causality. Obviously, various members of diverse cultures will have different notions as to what the nature and purposes of this common humanity might be, and nobody could tell in advance what new forms of humanity would emerge out of this intercultural dialogue. But we can at least be certain that they will move away from many of the current forms that are revealing themselves to be less and less sustainable.

By the same token, our intercultural and crossdisciplinary research communities should devise new, noncanonical ways of speaking about our literary and other cultural traditions that will be based on resonance, rather than imitation, on cooperation and negotiation, rather than competition and conflict. From the perspective of global intelligence, we would no longer speak, for example, of a major or a minor culture or, specifically, of a major or a minor

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literature. In a properly globalized world, there will be no centers and margins, but only interdependent and interactive cultural areas, situated in a horizontal—rather than a vertical or hierarchical—symbolical order. This horizontal, rhizomic cultural model would apply to literary canons as well. Instead of using a body of literary texts as a disciplinary way of including or excluding different national, linguistic, and ethnic groups by affirming the superiority of one over the others, one would employ various literary corpuses to explore cultural differences, but without turning these differences into intractable, transcendental "others."

The question, then, would be not one of literary or cultural syncretism, of amalgamating various elements of diverse literatures and cultures into an all-encompassing global one—a sort of literary or intercultural supercanon—but of allowing cultural and literary differences to enrich us mutually and to delight us with their overflowing, generous abundance. Under those conditions, even literary criticism might change its function. It will no longer be called upon to establish canonical literary hierarchies and to promote or demote literary reputations, based on ever-shifting disciplinary paradigms of inclusion and exclusion. Nor will it be called upon to promote worldwide book sales in the interests of a global, cultural "capital." Rather, it will aim at healing and bringing together, instead of dividing, the local-global communities it will serve.

3. Marlowe's *Tamburlaine the Great:* An Early Analysis of the Will to Power as Global Impulse

As I have noted in the Introduction, there have been many past efforts at globalization, some of them driven by improper global impulses, some not. Some of them have been Western, and some of them have involved other civilizations. One task of contemporary research in the human sciences could be to reexamine these efforts in their proper historical and intercultural contexts and show their positive and negative impacts on human development in the past three thousand years or so.

Globalizing efforts seem to sweep over the planet in epochal waves (according to the principle of resonance?), although they cannot necessarily be predicted and might be studied, for example, with the nondeterministic methods of chaos theory. Some appear to emerge more or less spontaneously, such as the waves of migration from the East to the West in late Antiquity and the Middle Age. Some have a long gestation period, during which they appear, at least in retrospect, to be carefully prepared ideologically, politically, economically, and culturally. Examples include the Hellenistic, Roman, Arabian, and Mongolian imperial drives, the Christian and Islamic, as well as Communist, proselytizing drives, etc.

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Are these globalizing forces driven solely by material, economic, political, or demographic factors as most cultural historians, especially of the Marxist and/or materialist persuasion, seem to believe? Are there other, "immaterial," factors involved? A careful intercultural and crossdisciplinary historical study of these irregular tidal patterns may teach us more about the conditions of the possibility of their emergence and may even give us the collective means of interacting with the process in mutually advantageous and desirable ways.

Be it as it may, the late Middle Age and early Renaissance period in Western history seems to mark the beginning of one of these epochal tidal waves, with its drive toward the "New World" and other, "older," worlds that eventually resulted in the Western colonization of large areas of the globe and may be seen as being at the root of at least some of the globalizing trends today. Literary and nonliterary works in various Western and other traditions deal with the very complex issues that arise in the course of these globalizing processes, and it would be very instructive to look at the way in which they approach such issues. In the Western tradition, there are many examples of these kinds of works, ranging from the diaries of Columbus and other voyagers to the New World, to Spencer's *Fairie Queene* to Cervantes's *Don Quijote*, to English Renaissance drama, most notably in Marlowe's *Tamburlaine the Great* and Shakespeare's *The Tempest*. Here I shall concentrate on Marlowe's drama and briefly examine some of the issues that it raises in relation to the phenomenon of globalization in the Renaissance, in order to determine to what extent these issues might still be relevant today.

In his play, Marlowe stages and reflects on an instance of globalitarianism in the historical, but also legendary, figure of Tamerlan or Timur Lenk, a Mongolian Khan, who was born in 1336 near Samarkand, into a minor branch of a noble Turkic-Mongolian clan. Although he was lame and crippled in his right side (hence his name, Timur Lenk, which meant "limping iron man" in Persian), Tamerlan stunned his contemporaries with his conquests, rivaled in the Middle Age only by those of his predecessor Genghis Khan and, in the ancient world, only by those of Alexander the Great. Through his dramatic character Tamburlaine, Marlowe describes the will to power as global drive. Paradoxically, it is as such that power sheds all its "soft" cultural disguises and mediations and reverts to its archaic manifestation of a naked, warlike mentality, with its attendant ethics of might makes right.[7] Tamburlaine, as presented by Marlowe, is one of the most accurate embodiments of what I have called, in a different context, the *ethopathology* of archaic power (Spariosu 1997).

In order to describe this ethopathology, Marlowe very aptly appeals to the Homeric world of the epic. Homer, particularly in the *Iliad*, presents the same archaic ethopathology, in Achilles and some of his peers. In fact, Menaphon, one of the Persian emissaries in Marlowe's play, refers to Achilles when he describes Tamburlaine's physical appearance to Cosroe, the brother of Mycetes, the king of Persia, and would-be usurper of the latter's crown:

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Pale of complexion, wrought in him with passion,
Thirsting with sovereignty and love of arms,
His lofty brows in folds do figure death,
And in their smoothness amity and life.
About them hangs a knot of amber hair,
Wrapped in curls, as fierce Achilles' was,
On which the breath of heaven delights to play,
Making it dance with wanton majesty.
His arms and fingers long and sinewy,
Betokening valor and excess of strength.
In every part proportion'd like the man
Should make the world subdu'd to Tamburlaine. (120)

Here Marlowe idealizes the physical appearance of historical Tamerlan—who in reality was no Homeric giant, but a hobbling cripple of medium height—in order to make his heroic, Achillean stature plausible to his Elizabethan audience. He also shrewdly associates Tamburlaine with an earlier, Western paragon of archaic power, Alexander the Great. Alexander, we recall, was a careful student of the *Iliad*, under Aristotle's tutorship, and a self-avowed imitator of Achilles. He can also be credited (or faulted) with being the first globalitarian figure in the Western world. Marlowe thus shows the will to power as global impulse to be indifferently Eastern or Western, or, indeed, above cultural and ethnic, or even "class" and "gender" differences. In fact, it is the global will to power itself that sets up and erases all of these differences as it sees fit, in order to achieve its hegemonic objectives.

Although historical Tamerlan was of noble descent, Marlowe has his fictional counterpart claim that he is a Scythian shepherd by birth, in order to show that Tamburlaine has no social "complexes of inferiority" vis-à-vis his aristocratic rivals. To Zenocrate, the daughter of the Sultan of Egypt, Tamburlaine invokes the "old" nobility of strength, rather than the "newer" one of birth. He woos her the only way he knows how, namely with the promise of a future empire that he will conquer and lay at her feet by dint of his sheer physical prowess and cunning intelligence:

TAMBURLAINE: I am a lord, for so my deeds shall prove,
And yet a shepherd by my parentage.
But lady, this fair face and heavenly hue
Must grace his bed that conquers Asia,
And means to be a terror to the world,
Measuring the limits of his empery
By east and west, as Phoebus doth his course. (112)

Note also Tamburlaine's description of his future empire that will extend from East to West, and back again, just as the sun runs its course. This description uncannily prefigures the Victorian boast, of a later century, that "the sun never sets" on the British Empire.

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Tamburlaine's heroic boast (a commonplace in Homeric and other epic poetry) seems also to be accepted by his Persian rivals, who perceive him as an ambitious, Scythian "freedom fighter" who takes up arms against their empire. Their assumption is, moreover, that Tamburlaine, like many other freedom fighters throughout world history, can be co-opted and bought. For example, Ceneus, one of Cosroe's advisors, observes:

> He that with shepherds and little spoil
> Durst, in disdain of wrong and tyranny,
> Defend his freedom 'gainst monarchy,
> What will he do supported by a king,
> Leading a troop of gentlemen and lords,
> And stuffed with treasure for his highest thoughts! (121)

Cosroe and his allies attempt to co-opt Tamburlaine in their power bid for the Persian crown, but it is Tamburlaine who will eventually use them for the same purpose. His rivals underestimate his enormous appetite for power, as well as his cunning intelligence: Tamburlaine fully understands the fluid, reversible dynamic of center and margin and uses it to his advantage in order to move from the margins of the Persian Empire to its very center. When he "betrays" Cosroe in order to seize the Persian crown, the latter calls him "barbarous" and "tyrannical," with the characteristic double standard of any power contender who loses his or her bid. Cosroe forgets that he himself sought to wrestle the Persian crown from his brother, claiming that Mycetes was too "weak" to rule.

Furthermore, even though Cosroe claims to be superior to Tamburlaine, he bases this claim not on an archaic, but on a "modern" mentality of power that, in addition to a residue of archaic criteria, employs "modern," ethnic and cultural, criteria of social differentiation. As a result, Tamburlaine does not recognize him as a peer in any sense of that word and feels no obligation toward him. By contrast, it is "excessive strength" and "love of arms" that determine the hierarchy of values or the archaic ethical code that Tamburlaine lives by. According to this code, sovereign physical appearance must always match sovereign mental disposition and social behavior. Together, they must project an irresistible aura of power, as we can see not only in Marlowe's play but also from many descriptions of the Homeric warriors in the *Iliad* and the *Odyssey*. It is for this reason that archaic heroes can recognize inner attributes by outward appearance:

> THERIDAMAS: Tamburlaine!
> A Scythian shepherd so embellished
> With nature's pride and richest furniture!
> His looks do menace heaven and dare the gods;
> His fiery eyes are fix'd upon the earth,
> As if he now devis'd some stratagem,
> Or mean to pierce Avernus' darksome vaults
> To pull the triple-headed dog from hell.

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TAMBURLAINE: Noble and mild this Persian seems to be,
If outward habit judge the inward man.
TECHELLLES: His deep affections make him passionate.

TAMBURLAINE: With what a majesty he rears his looks—
In thee, thou valiant man of Persia,
I see the folly of thy emperor. (116)

Within an archaic reference frame, like attracts like, so that warriors instantly recognize and are drawn to each other. Tamburlaine and his friends recognize Theridamas, supposedly their Persian enemy, as one of their peers, just as the latter recognizes them as such. Here, again, we see that the archaic code of ethics does not primarily operate in terms of ethnic and cultural differences or dichotomies such as "barbarian" and "civilized," employed by Cosroe. Archaic warriors may become fast friends or fast enemies, irrespective of their ethnic or racial background, according to how they perceive each other in relation to the heroic order of rank. Equality of strength may lead to temporary alliances, but will eventually lead to contest, through which one of the rivals must be subdued or eliminated. Inequality of strength, on the other hand, will often lead to friendships and alliances. Thus, archaic social hierarchies are based on strength, or rather, on recognition of strength. In turn, friendships among archaic warriors are based on commonality of interest and recognition of their order of rank. Theridamas recognizes and does not challenge Tamburlaine's superior strength and, as a result, they become friends and allies.

For his part, Tamburlaine understands that friendships and alliances are based on reciprocal obligations between suzerain and vassal. Although he refers to the legendary friendship between Pylades and Orestes, he also promises to make good on his heroic boasts:

TAMBURLAINE: These are my friends, in whom I more rejoice
Than doth the King of Persia in his crown;
And, by the love of Pylades and Orestes,
Whose statues we adore in Scythia,
Thyself and them shall never part from me
Before I crown you kings in Asia
Make much of them, gentle Theridamas,
And they will never leave thee till the death. (118-19)

In return, Theridamas promises Tamburlaine a vassal's unflinching loyalty and support in his quest for global hegemony: "Nor thee nor them, thrice-noble Tamburlaine/ Shall want my heart to be with gladness pierc'd,/ To do you honor and security" (119).

Although archaic warriors are as a rule presented as a querulous and contentious bunch by a "modern" mentality (for example, in Shakespeare's comedies), they will rarely fight for the sake of fighting, but only when they have no choice. When Theridamas first approaches the Scythian camp, Tamburlaine

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asks his friends whether they should fight or parley. Even though they recommend a heroic stand against their numerically superior adversary, Tamburlaine chooses negotiation instead. In fact, as we can see from certain single combat scenes in the *Iliad*, a hero's boast can also be a strategy of prevailing over his adversary by the power of rhetoric, rather than that of arms.

But, Tamburlaine will, of course, not hesitate employing violent methods of discouraging others from fighting, even though he never employs violence for its own sake. His legendary cruelty is again in keeping with his archaic code of ethics: he posts a three-day policy toward his objects of conquest in the form of differently colored tents and helmet plumes. The first day, he pitches white tents in his camp and wears a white plume on his helmet, to signify that, if the city he has invested will surrender, he will be merciful and spare the whole population. The second day, he pitches purple tents and wears a purple plume to signify that he will spare all of those who do not bear arms. The third day, however, his black tents and helmet plume signify that "Without respect of sex, degree or age/ He razeth all his foes, with fire and sword" (151). This policy, strictly enforced, spares him many a battle and, more important, deliberately projects an image of irresistible power. For instance, when asked to spare the Virgins of Damascus who come to entreat him for mercy, he puts them to death all the same: "They have refus'd the offer of their lives,/ And know my customs are as peremptory/ As wrathful planets, death, or destiny." (166)

Throughout the play, Tamburlaine shows no pity—a Christian attitude, irrelevant to an archaic mentality. But he does show mercy, again as a calculated move in a power game. For instance, he makes an exception in the case of the Sultan of Egypt, Zenocrate's father, sparing his life, for shrewd pragmatic reasons: he earns Zenocrate's gratitude (instead of her odium) and gains a useful political ally in his father-in-law. In fact, the above examples have already begun to reveal that the ethical code of Tamburlaine and his world, including such cooperative values as are generally associated with friendship, loyalty, justice, love, sexual relations, family, children, aesthetics, and religion, is entirely derived from the power principle, which is the be-all and end-all of life on earth and beyond.

For an archaic mentality, the loyalty that is required between a suzerain and a vassal is also required between husband and wife, and father and children. Olympia, the wife of the Captain of Balsera, is a case in point. The Captain does not yield to Tamburlaine's three-day military policy and does not hand over the town of Balsera to him without a heroic resistance. He dies from his wounds, and his loyal son and wife decide to follow him. Olympia, his wife, stabs her son to death at the latter's request:

> SON: Mother, dispatch me, or I'll kill myself,
> For think you I can live and see him dead?

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Give me your knife, good mother, or strike home:
The Scythians shall not tyrannise on me.
Sweet mother, strike, that I may meet my father. (218)

In turn, Olympia has Theridamas kill her, through a stratagem. She spurns the Persian "enemy," who has fallen in love with her, and remains loyal to her family, even if this means death. Through Olympia, Marlowe presents a model of a warrior's family whose cooperative values include sharing his good or ill fortune. Theridamas compares her to Zenocrate, who has developed similar loyalty for her husband, despite her occasional disapproval of his bloody deeds.

Tamburlaine expects the same cooperative values from his family. He slays one of his sons when the latter proves to be a "weakling" who is more interested in the soft life of a courtier, than in the hard life of a warrior. Tamburlaine stabs him in front of his enemies to show them "war's justice," which he claims makes the "difference" between him and them:

And now you, ye canker'd curs of Asia
That will not see the strength of Tamburlaine,
Although it shine as brightly as the sun,
Now you shall see the strength of Tamburlaine,
And, by the state of his supremacy,
Approve the difference 'twixt himself and you. (230)

When the defeated kings accuse him of "barbarous tyranny," Tamburlaine invokes again the archaic ethics of war, which metes out a higher justice than that of their double standards. Like Cosroe, these kings cannot accept defeat as recognition of the archaic order of rank and therefore fail to live up to "war's justice":

The Scourge of God and terror of the world,
I must apply myself to fit those terms,
In war, in blood, in death, in cruelty,
And plague such peasants that resist in me
The power of Heaven's eternal majesty. (231)

Archaic power creates its own kind of "beauty" or aesthetic values. When Tamburlaine makes an exception in the case of Zenocrate's father, he fears that her beauty might have softened his heart and distracted him from his goal of world hegemony:

But how unseemly is it for my sex,
My discipline of arms and chivalry,
My nature, and the terror of my name,
To harbor thoughts effeminate and faint! (168)

At first, Tamburlaine regards his susceptibility to beauty as a sign of weakness, but then he co-opts it for his archaic code of ethics, equating it with love of warlike values that invest men with true nobility:

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Save only that in beauty's just applause,
With whose instinct the soul of man is touched,
And every warrior that is rapt with love
Of fame, of valor, and of victory,
Must needs have beauty beat on his conceits. (168)

Tamburlaine also displays an archaic attitude toward grief and illness. For example, in order to express grief at his wife's death, he burns the town in which she fell ill. This is his way not only of making the town share his grief, but also of punishing the local gods who sent the illness. By burning down their temples, that is, their supply of human worship that nourishes and sustains them, Tamburlaine actually threatens their very existence. When he in turn falls ill, he wants to assemble an army and go against the gods who have sent him the illness, because they are jealous of his power. This is again the warrior's attitude that we see displayed in the Homeric epic, for example, in the case of Achilles. Death itself is perceived by an archaic mentality as a clever invention of the gods, who are envious and fearful of human excessive strength and want to impose limits on it. Some Hellenic warriors are so powerful that they do occasionally defeat the gods and even Death himself. Tamburlaine repeatedly claims to be among their number, although this is one heroic boast he cannot make good on.

Religion itself is, then, seen in terms of an archaic value-system of might makes right. From this viewpoint, the pagan gods, as well as the Christian and Islamic God appear as almighty deities who are involved in the power struggles of mortals. Or, rather, the mortals see themselves as soldiers or pawns that their deities enlist or use as surrogates in the battles they wage against each other. In this sense, one might say that archaic warlike values hardly disappear in later ages or from later, monotheistic religions, but are largely transferred to the divine, transcendental world, including Christian and Islamic faiths. Consequently, deities expect the same kind of cooperative values from warriors and other powerful men that the latter expect from their women, offspring, vassals, servants, serfs, and other dependants, in return for offering them protection.

We have already seen that Tamburlaine presents himself as a Scourge of God whom, in keeping with his archaic warlike values, he considers indifferently as Christian, Islamic, Hellenic, Roman, or Hebraic depending on the faith of his enemies he is "called upon" to punish. Another good example of archaic interpretation of "modern" religion can be seen in the attitudes of a Christian king, Sigismund of Hungary, and of an Islamic king, Orcanes of Natolia. The two kings enter a military alliance against Tamburlaine, which each king secures and guarantees by solemn oaths to his own God.

When the occasion arises for Sigismund to attack Orcanes and eliminate him as a potential rival, his councilors advise him to seize this opportunity. At first, Sigismund objects on the grounds of his religious oath: this would be

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"treachery and violence," not so much against Orcanes, as against Christ, the guarantor of Sigismund's "oath and articles of peace."(199) Thereupon, Baldwin, advisor to Sigismund counters that one cannot rely on the "faith" or "true religion" of such infidels as Orcanes, so that what "we avow to them should not infringe/ Our liberty of arms and victory." (199) Sigismund sees through the Machiavellian casuistry of his advisor, however, and still believes that he should keep his oath:

> SIGISMUND: Though I confess the oaths they undertake
> Breed little strength to our security,
> Yet those infirmities that thus defame
> Their faiths, their honors, and their religion,
> Should not give us presumption to the like.
> Our faiths are sound, and must be consummate,
> Religious, righteous, and inviolate. (199)

Frederick, another advisor to Sigismund, intervenes in order to change the ground of the argument to the Bible itself. For this, he invokes the Old Testament's archaic notion of a vengeful God who exacts justice on the principle of "eye for an eye, and tooth for a tooth," which Christ attempted, of course, to turn away from:

> FREDERICK: Assure your grace, 'tis superstition
> To stand so strictly on dispensive faith
> And, should we lose the opportunity
> That God hath given to venge our Christians' death,
> And scourge their foul blasphemous paganism
> As fell to Saul, to Balaam, and the rest,
> That would not kill and curse at God's command,
> So surely will the vengeance of the Highest,
> And jealous anger of his fearful arm,
> Be pour'd with rigour on our sinful heads,
> If we neglect this offer'd victory. (199f)

Sigismund allows himself to be persuaded by this archaic argument and attacks Orcanes. Thereupon the King of Natolia, interestingly, does not appeal to Mahomet, but to Christ, taking him as witness for Sigismund's perjury. If Christ "be jealous of his name and honor/ as is our holy prophet Mahomet" (201), then he should give Orcanes the victory: "To arms, my lords! On Christ still let us cry:/ if there be Christ, we shall have victory." (202) Of course, here Orcanes equally employs an archaic argument, based on the same idea of a vengeful God, "jealous of his name and honor."

Sigismund is vanquished, despite his army's overwhelming numerical superiority, and is mortally wounded. Orcanes attributes his victory to Christ, despite the comment of his ally Gazellus, the Viceroy of Byron, who expresses an even more archaic belief, again echoing Heraclitus:

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GAZELLUS: 'Tis but the fortune of the wars, my lord,
Whose power is often prov'd a miracle.

ORCANES: Yet in my thoughts shall Christ be honored,
Not doing Mahomet an injury,
Whose power had share in this our victory;
… this miscreant hath disgrac'd his faith,
And died a traitor both to heaven and earth. (203)

The dying Sigismund shares this view, attributing his defeat to his having betrayed his oath. Before he expires, however, he repents of his sin, reverting to true Christianity: "And let this death, wherein to sin I die/ Conceive a second life in endless mercy!" (202)

This scene is illuminating not only in terms of the archaic mentality that both medieval Christianity and Islam display, but also in terms of the possibility of intercultural communication and cooperation even between warlike cultures. It is enough for both parties to hold to their own religious precepts for them to be able to understand and respect each other. It is also significant that Marlowe, a Christian, shows a Moslem to behave righteously, in keeping with his faith, and a Christian to behave abominably. Sigismund's bad councilors, moreover, resemble our contemporary Western *Realpolitiker* who justify their camp's unjust behavior toward others on mimetic, cultural, and ethnic grounds, such as the Islamic "propensity toward violence" (in contrast to Christian meekness), or Arabic "compulsive lying," "double-dealing," and "constitutional inability" to honor international agreements.

So far we have examined the archaic aspects of the global power drive. Tamburlaine himself aptly sums up these aspects, invoking the entire value-system of might makes right, when he answers Cosroe's accusations of barbarity and bloodthirstiness. His model of conduct is "mighty Jove" himself, whose "thirst of reign and sweetness of a crown" made him thrust his "doting father from his chair" and "place himself in the imperial heaven." (132) Tamburlaine further invokes the archaic, Presocratic theory of physical and human nature as a dynamic complex of four warring elements, in order to demonstrate the universality and ubiquity of the will to power and justify his own quenchless thirst for empire:

Nature, that fram'd us of four elements
Warring within our breasts for regiment,
Doth teach us all to have aspiring minds.
Our souls, whose faculties can comprehend
The wondrous architecture of the world,
And measure every wandering planet's course,
Still climbing after knowledge infinite,
And always moving as the restless spheres,
Wills us to wear ourselves and never rest,
Until we reach the ripest fruit of all,
That perfect bliss and sole felicity,
The sweet fruition of an earthly crown. (132-33)

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For Tamburlaine, the will to power is a "natural," incontrovertible reality that manifests itself as concrete physical, mental, and cosmic phenomena. He describes the global power drive not only in terms of endless contest, but also in terms of "climbing after knowledge infinite," a theme that Marlowe will develop at length in *Doctor Faustus*. The playwright therefore reminds us that the identification of knowledge and power so common in our contemporary world has archaic origins, for example in Hellenic thought.

For Tamburlaine, moreover, the global power drive can find its culmination only in the "perfect bliss" of an "earthly crown." Here, however, he no longer thinks like an archaic warrior, for whom contest and war are ceaseless and can end only in death, but like an empire builder. Thus, Marlowe shows that any empire building or globalitarian project has as a rule two phases: an archaic phase, in which the archaic mentality of might-makes-right prevails; and a consolidation and preservation phase, during which this mentality gradually recedes into the background or moves away from the metropolis to the margins of the Empire, even as it remains the foundation and guarantee of the latter's growth and prosperity, if not of its very existence.

Marlowe symbolically marks the passage from the first phase of empire to the second one through the liminal event of Tamburlaine and Zenocrate's wedding, at the end of the first part of his play. Before solemnizing their rites of marriage, Tamburlaine lists all his conquests that he claims he has carried out only to honor Zenocrate. Additionally,

> To gratify thee, sweet Zenocrate,
> Egyptians, Moors, and men of Asia,
> From Barbary unto the Western India,
> Shall pay a yearly tribute to thy sire;
> And from the bounds of Afric to the banks
> Of Ganges shall his mighty arm extend. (177)

Tamburlaine orders his vassals to cast off their armors, hang up their weapons, put on scarlet robes, and start making new laws for the kingdoms and provinces they have seized by force. In other words, he orders them to normalize and legalize their power. He crowns Zenocrate Queen of Persia, secures his alliance with her father the Sultan of Egypt, arranges a solemn funeral for Bajazeth and his wife, whom he now calls "this great Turk and his fair empress," as well as for Zenocrate's former fiancé, the King of Arabia, and "takes truce with all the world." (178)

The imperial wedding fails its liminal vocation, however, because it does not yield a new world dispensation, based on peace. For a mentality of power, peace is nothing but a temporary cessation, if not another strategy, of war. Michael Hardt and Antonio Negri are illuminating here when they point out that even though "the concept of Empire is always dedicated to peace—a per-

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petual and universal peace outside of history," its practice is "continually bathed in blood." (Hardt and Negri 2000: xv)

Although Marlowe is fully aware of the two different disciplinary paradigms or cultures, appropriate for the two phases of empire, he focuses mostly on the first, archaic one, because of historical reasons that are both internal and external to his fictional world: Tamerlan never lived to see his empire reach the second phase. In turn, Marlowe's Elizabethan age had just gone through its archaic, warlike phase (the War of the Roses and other bloody feuds, such as religious ones) and was undergoing a period of consolidation that would last for almost two centuries before England could fully pursue and realize its imperial and colonial dreams. Nevertheless, the global imperial model had already been worked out, and used again and again, since the times of Alexander Macedon and the Roman Empire, as Marlowe obviously was aware. He was also aware of the revived imperial dreams of the West, stimulated by the "discovery" of the New World and entertained by his own country, as well as by its continental neighbors, Spain, Portugal, and France. So he does describe the second phase of empire, even though in less detail.

That Marlowe deliberately staged the concept and strategies of Empire for the consideration of his contemporaries can be seen from Tamburlaine's favorite pastime: power fantasizing, inflamed by world geography and global maps. Like any globalitarian, Tamburlaine is fascinated by geography and cartography. To him they are both a challenge and a measure of his conquests. They are a challenge, because they project and sanction the power status quo: before Tamburlaine ever bursts upon the world historical scene, the globe has already been divided up many times over. Maps mark territories that are firmly in the grasp of past and present conquerors, territories that remain disputed, as well as uncharted or "liminal" lands. At the beginning of the play, we see Tamburlaine fantasizing about remapping the whole known world through his conquests:

> TAMBURLAINE: Those walled garrisons will I subdue,
> And write myself great lord of Africa.
> So from the East unto the furthest West
> Shall Tamburlaine extend his puissant arm.
> The galleys and those pilling brigandines,
> That yearly sail to the Venetian gulf,
> And hover in the Straits for Christians' wreck,
> Shall lie at anchor in the Isle Asant,
> Until the Persian fleet and men-of-war,
> Sailing along the oriental sea,
> Have fetch'd about the Indian continent,
> Even from Persepolis to Mexico,
> And thence unto the Straits of Jubalter,
> Where they shall meet and join their force in one,
> Keeping in awe the bay of Portingale,
> And all the ocean by the British shore;
> And by this means I'll win the world at last. (148-49)

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The world that Tamburlaine (or rather his historical prototype, Tamerlan) knows is the triple world of Asia, Africa, and Europe so that his task seems easier than that of Marlowe's contemporary would-be global conquistadors. By the end of Part 1, Tamburlaine has already accomplished two-thirds of his task: he has remapped Asia and Africa. It is significant, however, that Marlowe has Tamburlaine—a "Scythian," nomadic horseman-warrior—invoke the New World (Mexico) and naval expeditions in the preceding citation, not to mention the extensive knowledge of Hellenic and Roman mythology, poetry, and philosophy that he has this "Barbarian" display throughout the drama. The poet seems thereby to "nod," like his model Homer, slipping into anachronism and lack of aesthetic decorum. But it is highly unlikely that an accomplished University Wit such as Marlowe would commit gross historical errors unknowingly. It is more likely that he allows himself the kind of poetic licence that Aristotle calls a plausible impossibility in relation to his audience. He stresses the topicality of Tamburlaine's story, for the benefit of his spectators, by making direct references to the New World, as well as to the would-be imperial contestants for global hegemony in the Renaissance, particularly Spain, Portugal, the Venetian Republic, and England, whose budding hegemonic claims largely depended on the building and/or continuing projection of a credible naval power.

Like Marlowe's contemporary soldier-navigators, Tamburlaine wishes to conquer not only the known worlds, but also the unknown ones in order to satisfy his imperial power drive and to surpass all other global competitors:

> … when holy Fates
> Shall stablish me in strong Egyptia,
> We mean to travel to th'antarctic pole,
> Conquering the people underneath our feet,
> And be renown'd as never emperors were. (162)

Tamburlaine wants to confute all geographers and cartographers, by forcing them to follow him, rather than the other way round. In addition to occupying uncharted territories, he will rename all known and unknown lands after him and Zenocrate:

> I will confute those blind geographers
> That make a triple region in the world,
> Excluding regions which I mean to trace,
> And with this pen reduce them to a map,
> Calling the provinces, cities, and towns,
> After my name and thine, Zenocrate.
> Here at Damascus will I make the point
> That shall begin the perpendicular. (160)

In his quest for global hegemony, Tamberlaine wants to erase all past world geography and world history and rewrite them with one stroke of his "pen," which is his sword. Different maps trace, with the cartographer's pen,

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different territorial claims and therefore function as instruments of power: by means of maps, territories can be contested and traded back and forth. Indeed, pen and sword were working together, before, during, and after Marlowe's time, to conquer uncharted territories. In the New World, for example, soldiers, navigators, priests, ethnographers, cartographers, and other sword and pen wielders were staking out and defending new land in the name of the various imperial powers they served. By his pen-sword, Tamburlaine wants to reduce all of these competing territorial claims to "a map," in the sense of both rendering other maps ineffective as instruments of power and reducing them to a single, unchanging map, his own.

At the same time, and with the same stroke of his sword-pen, Tamburlaine wants to arrest the ceaseless global power game of naming and renaming geographical places as a way of taking symbolical, as well as physical, possession of them. To this purpose, he claims that he will confer his and his wife's name upon all of these places, once and for all. In the *Genealogy of Morals*, Nietzsche aptly describes this relationship between power and naming, as well as that between power and language in general, when he notes that archaic lords have the power of conferring names: "One would almost be justified in seeing the origin of language itself as an expression of the ruler's power"; by saying "this *is* that or that," the lords "seal off each thing and action with a sound and thereby take symbolic possession of it." (Nietzsche 1956: 160; italics in the original)

By the end of Part II, Tamburlaine has failed in his bid for global hegemony, just like Alexander the Great, because of illness, and it is again world geography that drives this point home to him. But he does not despair, nor does he renounce his global power bid. On the contrary, on his deathbed, he calls for a map and shows his sons what else is left to conquer, appealing to their greed for fame and riches, so that they will complete the job for him:

> Give me a map; then let me see how much
> Is left for me to conquer all the world,
> That these my boys, may finish all my wants. …
> Look here, my boys; see what a world of ground
> Lie westward from the midst of Cancer's line
> Unto the rising of this earthly globe,
> Whereas the sun, declining from our sight,
> Begins the day with our Antipodes!
> And shall I die, and this unconquered? …
> And from th'Antarctic Pole eastward behold
> As much more land, which never was descried,
> Wherein are rocks of pearl that shine as bright
> As all the lamps that beautify the sky!
> And shall I die, and this unconquered?
> Here, lovely boys; what death forbids my life,
> That let your lives command in spite of death. (253-54)

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From Marlowe's presentation of geography and cartography as Tamburlaine's global instruments of power, we can clearly see that an empire builder may start like a Homeric warrior, affirming war, in the manner of Heraclitus, as a creator and destroyer of all hierarchies, but that he will attempt to arrest all contest and "normalize" his power, as soon as he arrives at the top. Again, Hardt and Negri are illuminating here when they observe that "the concept of Empire presents itself not as a historical regime originating in conquest, but rather as an order that effectively suspends history and thereby fixes the existing state of affairs for eternity." (Hardt and Negri 2000: xiv) We have seen that this is precisely what Tamburlaine attempts to do through his games of geographical remapping and renaming. This attempt at uniformizing and standardizing his rule would ultimately have the side effect of leveling cultural differences within the Empire and banishing them outside its borders. But, of course, Tamburlaine is not concerned with such differences, because he remains within the first, archaic phase of empire building, in which physical prowess and cunning intelligence, not cultural difference, primarily determine hierarchies.

It might be useful to juxtapose briefly Marlowe's view of Empire to that of Hardt and Negri, even though the two postmodern authors advise against such a comparative method. They claim that in their book Empire functions as a "*concept*, which calls primarily for a theoretical approach," and not as a "*metaphor*," which would "require demonstration of the resemblances between today's world order and the Empires of Rome, China, the Americas, and so forth." (Hardt and Negri 2000: xiv; italics in the original) This claim does not prevent them, however, from drawing extensive and instructive comparisons, throughout their book, between their postmodern Empire and the Roman Empire, for example.

Hardt and Negri also claim that they are describing an entirely new historical development, completely discontinuous from past globalizing attempts. We may therefore call this allegedly singular development the "New Empire," in order to underline Hardt and Negri's ideological affinities with the modernist and postmodernist fashion of calling everything "new," from the New Age to the New Economy to the New Technologies to the New Media to the New Society. Yet, is Hardt and Negri's Empire really an entirely new power concept? And if not, is there any sense in which it may, nevertheless, be said to depart from previous concepts?

One can see from Marlowe's play that he is staging one of the avatars of the *concept* of Empire, as it was available in world history up to his time. And this concept already has the basic elements that Hardt and Negri claim to be unique to their New Empire. This is not surprising, because both Tamburlaine and the two postmodern authors follow a phantasmagoric, yet compelling script: the eternal fantasy of global hegemonic power. This script may continually be rewritten by different globalitarians who can add this or that new

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detail, method, or twist to it. But the concept of absolute, imperial power remains fundamentally unchanged, not unlike the Platonic realm of Ideas, which, as I have argued elsewhere, is equally an absolute power concept. (Spariosu 1991) On the other hand, what does change and becomes more refined are power's strategies of acting out this global hegemonic fantasy, and it is in relation to such strategies that we may ultimately identify the distinguishing features of the New Empire.

As we can see from both Marlowe's play and Hardt and Negri's informative analyses, it is in the very nature of power to dream of changelessness or stasis, while remaining engaged in a ceaseless, ever-shifting play of forces, or agon (contest). The semantic development of the Hellenic word *stasis* itself is instructive in this respect. Originally, it meant a ceaseless "dynamic" contest of all against all, as in Thucydides's history of the Peloponnesian War, for example, where it meant "civil war." But then *stasis* (civil war) came to mean the opposite of *dunamis* (power), as in our adjective "static," in the sense of stagnation or changelessness. Therefore, ceaseless movement (*dunamis*) and eternal cessation of movement (*stasis*) are the two conceptual poles into which power divides itself and between which it swings back and forth.

These two poles can be perceived either positively or negatively, depending on the position of the contestant in the power game. From the point of view of the contestant rising to power, *dunamis* is perceived positively as ceaseless play of forces, whereas *stasis* is interpreted negatively as stagnation, or death, or "nothingness." From the point of view of the contestant who has reached the top, however, *dunamis* appears as *stasis* in the sense of civil war and therefore anarchy (lack of hierarchy). He would now like to turn this "dynamic" stasis into eternal peace, understood as fixed hierarchical permanence (e.g., in the imperial *pax romana*), not as absence of power or "nothingness."

The mythological emblems of the two power poles are the Wheel of Fortune and Moira or Fate, conceived as immovable Necessity. Power constantly shuttles between these two "ideal" poles, which are no less interchangeable than *dunamis* and *stasis*, as can equally be seen from the semantic development of the terms involved: originally, the Hellenic word *moira* (for example, in Homeric epic) meant "share" or "war booty," for which warriors had to compete. Later on, in classical Greece, it came to mean implacable Fate, Necessity. Finally, in the ancient Roman world, the two concepts became reunited in the ambivalent figure of Fortuna, or Fortune. The relationship between this figure and power is discussed at length in the Renaissance, particularly in Machiavelli's *Prince*, and is reflected, for example, in the English expression "soldier of fortune."

Tamburlaine, like any globalitarian figure, would like to arrest this endless agon, or Wheel of Fortune, on the top position, and thus act as Necessity or Fate for every other contestant. But Marlowe shows that Tamburlaine's absolute power fantasies ultimately remain just that, defeated even by such mundane,

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trivial occurrences as illness and unheroic death. When Tamburlaine wants to assemble an army to go against the gods on two occasions (his wife's and his own illness), Theridamas calls him back to mundane reality. Thus, he acts as a sort of "reality check" both for Tamburlaine and for the play's audience.

There are almost no such "reality checks" for Hardt and Negri's New Empire, probably because the authors seem more often than not transfixed by its globalitarian power of seduction, treating its perceptions as if they were "natural," rather than phantasmagoric reality. Tamburlaine's concept of Empire as Necessity or Fate equally applies to the New Empire. Witness, for example, Hardt and Negri's shrewd observation that Empire "presents its order as permanent, eternal, and necessary." (11) Here, the key word, however, is "presents." They do not always distinguish, and seldom very clearly, between the New Empire's claims and its de facto operation, between "ideal" theoretical concept and messy practice. Consequently, they often make contradictory and confusing statements.

For example, Hardt and Negri write that "the concept of Empire is characterized fundamentally by a lack of boundaries: Empire's rule has no limits." (xiv) They should instead have specified that Empire *claims* that its rule has no limits, as we have seen in Tamburlaine's case. But, this claim is always preempted by the fact that power cannot function without "limits," or "margins," or something to resist it. As Orwell shows in *1984* (and Samuel Huntington, unwittingly, through his *Clash of Civilizations*) globalitarian power must invent its enemies, if no real enemies are around. Hardt and Negri themselves implicitly recognize this, when they state, in the very next sentence, that "the concept of Empire posits a regime that effectively encompasses the spatial totality, or reality that rules over the entire 'civilized' world." (xiv) In other words, they now implicitly acknowledge that the New Empire's rule does have limits, which are those of the "civilized" world.

The New Empire, like any past Empire, must stop at the barbarian borders, be it only in a "virtual" or symbolical manner, and must define itself in terms of those borders. Hardt and Negri themselves write in a different chapter, again contradicting their earlier statement: "The concept of Empire is presented as a global concert under the direction of a single conductor, a unitary power that maintains the social peace and produces its ethical truth. And in order to achieve these ends, the single power is given the necessary force to conduct, when necessary, 'just wars' at the borders against the barbarians and internally against the rebellious." (10) That is why, as Hardt and Negri equally point out, it is necessary for Empire, before it undertakes any police action, to vilify and/or magnify its enemies as barbarians, double-dealers, terrorists, conjurors in an axis of evil, and so forth. This is exactly the way in which the Persian king and other rulers against whom Tamburlaine fights define their empires in Marlowe's play. We have seen that they also define Tamburlaine as barbarian, from their temporary position on top of the Wheel of Fortune.

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Hardt and Negri continue their shrewd, if contradictory description of the dynamic of center and margin, characteristic of any Empire, including their own: "One might say that the sovereignty of Empire itself is realized at the margins, where borders are flexible and identities are hybrid and fluid. It would be difficult to say which is more important to Empire, the center or the margins. In fact, center and margin seem continually to be shifting positions, fleeing any determinate locations. We could even say that the process itself is virtual and that its power resides in the power of the virtual." (39)

This cogent description, however, does not support the authors's thesis of the uniqueness of the New Empire. We see, for example in Marlowe's play, that the empire created by a nomadic warrior such as Tamburlaine is also characterized by continuously shifting margins and centers. This ceaselessly shifting position does not mean that centers and margins do not exist, or that they do not function as such, be it only in an imaginary or virtual manner. Rather, the center of power is where Tamburlaine happens to be at a certain moment; indeed, it travels around with the nomadic warrior. In past empires, as well as in other power systems, centers and margins are equally important for power to be able to function at all. The "new" and "improved" element in this power mechanism might be precisely the rapidity with which margins and centers shift positions, so that even Hardt and Negri are mystified into believing that the power of the New Empire is now universal or, even more effectively, a "concrete universal." (39)

Hardt and Negri claim that the New Empire is historically unique, also because we "are dealing here with a special kind of sovereignty—a discontinuous form of sovereignty that should be considered liminal or marginal insofar as it acts 'in the final instance,' a sovereignty that locates its only point of reference in the definite absoluteness of the power that it can exercise." (39) In this respect, according to them, the New Empire "appears in the form of a very high tech machine: it is virtual, built to control the marginal event, and organized to dominate and when necessary to intervene in the breakdown of the system (in line with the most advanced technologies of robotic production)." (40) But, the virtuality and discontinuity of imperial sovereignty hardly impair "the effectiveness of its force: on the contrary, those very characteristics serve to reinforce its apparatus, demonstrating its effectiveness in the contemporary historical context and its legitimate force to resolve world problems in the final instance." (40)

This description of the mode of operation of the New Empire sounds plausible, although Hardt and Negri have it *à l'envers*: it is the high-tech machine that is built on the model of Empire, rather than the other way round. The two authors display the typical modernist and postmodernist fascination with the high-tech world that becomes as much of a Fate as the globalizing processes that it supposedly triggers. But, anyone using e-machines knows very well that, no matter how advanced or fancy they are, they can easily break down or

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malfunction, often at the slightest change in conditions, such as rainwater, or sand, or a virus getting into their systems, not to mention massive "power surges" and "power failures." Just as there is an enormous gap between the phantasmagoric claims and the actual, daily performance of Empire, there is a huge gap between the inflated claims and the actual, day-to-day performance of high-tech machines. Orwell is again instructive here, when he presents his globalitarian dystopia as plagued by trivial, daily technical malfunctions.[8]

A related problem is that Hardt and Negri regard the New Empire as liminal, thus "buying" its claim that it occupies all centers, margins, and interstices. By contrast, Marlowe is fully aware of the ambiguous position of power vis-à-vis the liminal. One example of a liminal, ambivalent figure in the play is Theridamas, who may be worth examining briefly in the context of Empire. As we have seen, from their first meeting, Tamburlaine correctly reads Theridamas as a "noble," but "mild" personality. The Persian lord understands power well, for example, when he praises kingship:

> To wear a crown enchas'd with pearl and gold,
> Whose virtues carry with it life and death;
> To ask and have, command and be obey'd;
> When looks breed love, with looks to gain the prize,
> Such power attractive shines in princes' eyes. (129)

Yet, when Tamburlaine asks him if he would be king, he answers: "Nay, though I praise it, I can live without it." (129) Theridamas does not have the same unquenchable desire for kingship that his friends do. His mild nobility is also recognized by Olympia, the "heroic" wife of the Captain of Balsera, who uses Theridamas's love for her to turn him into an unwitting instrument of her death. She spurns him because "no power attractive shines" in his eyes, in other words, because he does not share her dead husband's heroic values that she has fully internalized and instrumentalized. Olympia has literally no use for the Persian beyond making him the tool of her own self-destruction: she cannot entertain the possibility of a "mild" kind of life, outside the world of archaic power.

Yet, Tamburlaine, with his characteristic shrewdness, immediately sees the utility of having a liminal figure in his inner circle. Theridamas presents no threat to him, because he only partially shares his warlike values and his hegemonic objectives, contenting himself with accepting the subordinate position of Tamburlaine's "vassal." But, precisely because of that, Theridamas can offer him "neutral" and "disinterested" advice. Tamburlaine rarely relies on anybody else's council, and Theridamas is one of the very few vassals who can freely admonish the despot, without fear of his life. In Theridamas, therefore, Marlowe presents his audience with a nonhegemonic, if still power-oriented, standard—a "reality check," by which it can evaluate Tamburlaine's actions, as well as the fictional world of the play in general.

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On the other hand, Hardt and Negri, by conflating the liminal and the marginal, present the New Empire as a historical necessity and inevitability. If the New Empire occupies a liminal position, as it and they claim, then it cannot be viewed from a non-imperial locus, nor is there any passage or escape into a different, non-imperial world. That is why Hardt and Negri develop the theory that the only alternative to the New Empire is an even newer "Counter-Empire" that would operate from within and would be established by the New Barbarians. But, thereby, Hardt and Negri forget their own insight that the New Empire has already precluded this possibility by claiming to have erased all differences between the inside and the outside.

The two postmodern authors imagine that the New Barbarians will bring Empire down through violence, as well as through "nomadism," "desertion," and "exodus." (Note, again, the logical inconsistency: the barbarians, like their historical counterparts who brought about the collapse of the Roman Empire, are supposed to operate from both within and outside the New Empire's borders, even though, according to Hardt and Negri, such borders no longer exist.) To this purpose, Hardt and Negri quote Nietzsche: "Problem: where are the *barbarians* of the twentieth century? Obviously they will come into view and consolidate themselves only after tremendous socialist crises." (Nietzsche, in Hardt and Negri 2000: 213)

Although they state that Nietzsche was "oddly prescient" of the barbarians's role in bringing down Empire, Hardt and Negri confess they "cannot know exactly" what the German thinker "foresaw in his lucid delirium." So they advance the odd hypothesis that it is Nietzsche's "barbarians" that in 1989 brought down the Berlin wall (213f). They might be perversely right, though: the Wall was brought down, not by the will of the "multitude," as they claim (214), but by the will of the New Nomenclatura in Russia and Eastern Europe. This ruthless and highly shrewd, young elite, who had completely severed their emotional ties to the old Marxist-Leninist ideals of social justice that largely motivated their parents and grandparents, saw the necessity of governing their starving "herds" by other, more capitalist means. They equally saw the increased opportunities of power and wealth that such capitalist means would bring to their own ranks.

It is common knowledge, however, that Nietzsche referred precisely to his overmen as the New Barbarians who would guiltlessly embrace the archaic values of might makes right and would mold socialist and democratic Europe into a new, multinational Empire. In fact, his "lucid delirium" seems uncannily to predict one of the current globalizing trends. As he points out in *The Will to Power*, the possibility "has been established for the production of international racial unions whose task will be to rear a master race, the future masters of the earth—a new tremendous aristocracy, based on the severest self legislation, in which the will of philosophical men of power and artist-tyrants will be made to endure for millennia—a higher kind of men, who, thanks to their

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superiority in will, knowledge, riches, and influence, employ democratic Europe as their most pliant and supple instrument for getting hold of the destinies of the earth, so as to work as artists upon "man" himself. (Nietzsche 1968: note 504)

Hardt and Negri unwittingly disclose their own imperial project, the Counter-Empire, or shall we call it the New New Empire, which, according to them (and Walter Benjamin) is "a necessarily violent, barbaric passage" (Hardt and Negri 2000: 214-15). Of course, Hardt and Negri call their envisaged world order, not Empire, but New Republicanism. In this they would certainly earn Nietzsche's approval, because, after all, the New Barbarians would not wish to offend the sensibilities of democratic Western society—that would be entirely counterproductive in reaching their hegemonic goals. As in the case of any other would-be globalitarian, Hardt and Negri's transparent fantasy is to replace one Empire by another, not without first reenacting, through the New Barbarians, the archaic, "dynamic" phase of empire building, described in Marlowe's play. To use a not entirely inappropriate metaphor from the world of TV games, Hardt and Negri wish to spin the Wheel of Fortune once again, to compete for new "booty."

In this light, Hardt and Negri's idea of the multitude defeating Empire through Christian love (see especially the last section of their book) is logically inconsistent, misleading, and phantasmagoric. First, this would be a historical "repetition" of the circumstances of the Roman Empire's collapse, despite the fact that Hardt and Negri proclaim the historical singularity of the New Empire. As such, one cannot expect that the New Barbarians, reinfused with Christian love, will do any better than the old ones: the latter were converted and "tamed" by the Christian message of love that was, however, immediately co-opted by the prevailing mentality of power, as the violent history of Christianity and of the Christian Church sadly attests. Second, if Christian love is the privileged means of defeating the New Empire, what would happen to all of the other faiths, such as Islam, Buddhism, Hinduism, Judaism, and so forth? Would they also need to be converted to Christianity, possibly through New Crusades, before they could join this new dispensation, based on Christian Universal Love? Third and most important, violence of any kind, be it in the name of Love or of any other generous principle, will not bring about the desired changes in current human mentalities, but will only perpetuate them ad infinitum, as Marlowe's play clearly implies.

A much better strategy for human (self-) development would be to recognize, like Theridamas, that we could very well live without Empire and simply walk away from it. Marlowe's play, no less than Hardt and Negri's book, dramatizes once more the need for literary studies and the human sciences in general, to work together toward creating a mindset conducive to alternative, irenic ways of relating to each other within our profession and within our communities at large.

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Notes

1. See John Ruskin, *The Crown of Wild Olive*, p. 33. I discuss this work at some length in *The Wreath of Wild Olive*, pp. 275-89.
2. This section can therefore best be read in conjunction with Part III of *Global Intelligence and Human Development*, where I present a brief paradigmatic history of the university in the West. An excellent historical account of the humanities in American academia is offered by Kurt Spellmeyer in *Arts of Living. Reinventing the Humanities for the Twenty-First Century* (Albany, NY: SUNY Press, 2003). Spellmeyer and I have arrived (independently) at similar conclusions regarding a number of contemporary issues in the humanities, including the counterproductive effects of critique in the present academic environment, the necessity of bringing together the humanities and other branches of learning and making them relevant to current world concerns, and the cultural importance of the notion of resonance. I also admire his converting the writing program at Rutgers into an interdisciplinary effort to make students aware of and address a number of current global concerns. I am less excited about his professed pragmatism (despite my own interest in resolute civic action at the local level), which ultimately leads him to extol the benefits of an (idealized) Athenian-style democracy and a competitive, "free" market, in which the humanities must become "service providers." (Spellmeyer 2003: 20) I also do not share his negative view of theory (although I agree with him about its egregious abuses in the contemporary human sciences), nor do I share his unqualifiedly positive view of the so-called hard sciences. Above all, his home-grown, North American pragmatism, which historically has often gone hand in hand with reductive utilitarianism, blinds him to the creative role of "disinterestedness," liminality, and play at the intersection of cultures and academic disciplines (even though I again agree with him about the politically opportunistic, postmodernist abuses of these concepts).
3. For a useful discussion of the Romantic extension of the canonical from religion to literature up to the present day, see Pierre Walker, "Arnold's Legacy: Religious Rhetoric of Critics on the Literary Canon," in Virgil Nemoianu and Robert Royal (editors), *The Hospitable Canon: Essays on Literary Play, Scholarly Choice, and Popular Pressures* (Philadelphia/Amsterdam, 1991), pp. 181-97. A good example of a reaffirmation of "elitist" or "aristocratic" literary critical values in a mostly "democratic" age is Harold Bloom's *The Western Canon: The Books and the School of Ages* (New York, 1994). Bloom's arguments in defense of high literary critical values occasionally reach the high pitch of religious fervor, if not bigotry, recycling his youthful interest in Romantic poetry as a new form of theology. A comprehensive recent feminist perspective on the canon can be found in Griselda Pollock, *Differencing the Canon* (London/New York, 1999). The issue of canon-formation and national identity is also discussed by several contributors to the collective volume, *National Heritage - National Canon* (Budapest, 2001), including the editor of the volume, Mihaly Szegedy-Maszak. This collection is remarkable for its diversity of multidisciplinary and multinational viewpoints, even though it does not amount yet to an intercultural research project of the kind I am proposing here. Each contributor does his or her own thing, and very few attempt to engage the others in an intercultural dialogue. Finally, the controversy about the role of the literary canon in relation to humanistic knowledge in general is equally relevant to the present discussion. For this larger debate see, among others, Robert Scholes, *Textual Power: Literary Theory and the Teaching of English* (1985), Allan Bloom, *The Closing of the American Mind* (1987), Gerald Graff, *Professing Literature* (1987), Jacques Barzun, *From Dawn to Decadence: 500 Years of Western Cultural Life. 1500 to the Present* (2000), and Kurt Spellmeyer, *Arts of Living* (2003).
4. See Nicholas T. Parsons, "'Sweetness and Light' or 'Tyrannical Schoolmaster'?" in Szegedy-Maszak (ed.), *National Canon - National Heritage*, p. 56.
5. See Virgil Nemoianu, "Literary Canons and Social Value Options," in Nemoianu and Royal (eds.), *The Hospitable Canon*, p. 219.

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6. See Nemoianu, in *The Hospitable Canon*, p. 232.
7. I discuss this issue at length in *God of Many Names: Play, Poetry and Power in Hellenic Thought from Homer to Aristotle* (Duke University Press, Raleigh, N.C., 1991). There I make a distinction between an archaic and a median mentality of power, and show how these two mentalities engage in a relationship of mutual causality throughout the history of Hellenic thought.
8. For a good discussion of the "mechanical materialism" of the Western mentality that reaches its climax in postmodernism, with disastrous consequences for the global environment, see Gare, *Nihilism Incorporated*, pp. 110-55. See also Chapter 3 below. As to the "mechanical failures" of the New Empire, an instructive, if tragic, case is the failure of the various intelligence services in the US to prevent the terrorist attacks of September 11. Even though these services had enough specific information in their data pool to track down at least two of the terrorists and thus possibly stop all of the attacks, such information slipped through the bureaucratic cracks and was discovered only after the fact. The lesson to be drawn is not primarily that the intelligence services need better coordination, but that no amount of preparation and coordination can in the end prevent some of these attacks from succeeding. The dream of total security is as phantasmagoric as the dream of total control or hegemony, which will always founder on some mundane, unanticipated sequence of events or unintended consequences. In this respect, the so-called "war on terror" will, unfortunately, be no more successful than the so-called wars on poverty, drugs, and so forth. Lasting national and global security can be achieved only by giving up imperial ambitions and participating in the creation of a planetary society that is organized on principles other than power.

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Chapter 3

Information and Communication Technology for Human Development

An Intercultural Perspective

The past century has seen a veritable explosion of Western-style science, technology and engineering, spawning a number of crossdisciplinary and overlapping *technosciences*, such as cybernetics, computing technology, microprocessing and nanotechnology, robotics, artificial intelligence (AI) technology, biotechnology, genetic engineering, molecular electronics, bioinformatics, and so forth. These technosciences, collectively also referred to as *information and communication technology* (ICT), are said to engender a revolution in human history, inaugurating the so-called Information Age, which will in turn give rise to an "information" or "knowledge" society. In this chapter, I shall explore the validity of these claims, will examine some of the intercultural consequences for introducing current ICT worldwide, and shall stress the necessity of creating different forms of ICT, oriented toward global intelligence. I shall also highlight the important role that the humanities can play in assessing and in helping develop such ICT forms.

1. The Information or Knowledge Society: A New Global Paradigm?

The case that a number of scholars (Bell 1976; Weiser 1991; Castells 1996; Archibugi and Michie 1997; Moravec 2000; Kurzweil 1999) have been making for the emergence of a radically new, postmodern, "network" society, based on information or knowledge and ushered in by the new information and communication technologies (ICTs), appears, at first sight, to be compelling. But it is compelling mostly to those who assume that technology is the determining factor in the development of a certain society, driving its economy and,

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through the latter, all other social and cultural arrangements. Let us test this assumption against the broader, cultural historical background of the new ICTs and then explore their most likely impact on the future of human development, including the emergence of a global "information" or "knowledge" society. Then we might be in a position to decide whether we are indeed moving toward a genuinely new global paradigm or are simply extending the currently dominant one.

Some scholars (Castells 1996; Dertouzos 1997; Naughton 1999, among many others) note that the new information and communication technologies are not all that new after all, being extensions of such modern communication media as the telegraph, telephone, radio, and television, or of even older ones, such as writing and printing. Most of the activities related to processing information, such as data collection, analysis, organization, transmission, and utilization have been around ever since the advent of humans on this planet. But, the same scholars point out that what is now different is the speed, accuracy, range, and reliability of processing and utilizing information, which have increased exponentially in the past few decades and seem to continue to increase at a faster and faster pace.

In contradistinction to older forms, the new ICTs enable a large number of individuals and organizations throughout the world to send and exchange a huge volume and wide variety of messages, transactions, and services almost instantaneously, at an ever-lower cost. This development is made possible by the mass production and utilization of computers. The so-called "Information Age," therefore, is computer-based, resting on "five pillars" (Dertouzos 1997): 1) All information is represented by numbers; 2) These numbers are sequences of 1s and 0s that are basic information units, called bits; 3) Computers translate information into bit sequences by arithmetic; 4) Communications systems move information around in this numerical or "digital" form; 5) Computers and communications systems combine to form computer networks. In turn, computer networks will eventually create a global information infrastructure (still in its very early building stages), which will then constitute the basis for a global Information Market Place. (Dertouzos 1997: 54)

The rapid development of computer-based technologies is most dramatically highlighted by Moore's law, so called after Gordon Moore, the founder of Intel, who predicted more than a decade ago that the capabilities of computer microprocessors would double every two years or so. His prediction seems still to be holding, although some experts expect this fast pace to level off by the end of 2010. (Dertouzos 1997) But quantum mechanical computing, for example, should it indeed become technological reality, promises to bring even more prodigious gains in computation speeds and memory capabilities than digital computing. It will certainly open the avenue for the creation of new generations of software, including the self-organizing or autopoietic kind, based on DNA and human-emulated thought processes.

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To quantum computing, one may add molecular electronics and other nanotechnologies; adaptive or reconfigurable computing, based on chips with flexible circuitry; as well as optical computers, using light pulses instead of electrical impulses, and thus approaching the speed of light. All such multiprocessor, parallel computers and neural net computers would allow simultaneous rather than sequential processing, speech and voice recognition, multilanguage translation, AI autonomous operations, and so on. By 2030 we might be able to mass-produce computers that would be a million times as powerful as the current PCs. So Moore's law might well remain in force, or even be exceeded, by the middle of the twenty-first century and beyond. (Miller et al. 1998)

Network technology looks equally promising, with ever-faster fiber optical systems and ever- wider coverage for satellite-mediated mobile communications. Personal networks (PNs) should soon become available for home installation at an affordable cost. Communication services as a whole are supposed to reach almost zero cost by the third decade of this century. One can also expect considerable progress in human-computer interfaces, involving human voice and gesture recognition and leading to instantaneous, real-time, translation. All text-based data sources, as well as audio and video data will become digital and most likely open to universal searches. At the same time, experts believe that most technical issues related to computer security, privacy and operational compatibility should be resolved by the end of the first quarter of this century. (Miller et al. 1998)

Of course, most of these predictions need to be taken with a grain of salt, as they come largely from computer and other ICT development "experts," who have a vested interest in the industry. To offer just one example, an article in *Business Week* (8 March, 1982), entitled "Artificial Intelligence. The Second Computer Age Begins," cites Nils J. Nilsson, at that time director of the Artificial Intelligence Center at SRI, to the effect that AI will soon "change civilization in a profound way." Thinking computers will "change the way we work, the way we learn, and even the way we think about ourselves." In turn, the author of the article estimates that by 2000, they "will be radically altering society." Twenty years later, this prophecy has yet to be fulfilled, with most experts now estimating that the mass commercialization of AI technology will not happen before the middle of the 21st century. By that point, barring any unforeseen global cataclysm, they also expect that ICT will have penetrated every aspect of human activity, with most parts of the world being fully wired, networked, and interactive. What is certain, however, is that we are nowhere near this goal at the time of this writing, in 2003.

Understandably, the prospects of such prodigious technological developments and their likely impact on our economical, political, cultural, and social arrangements as well as on our daily lives are perceived by various scholars, experts, and practitioners with various degrees of optimism or pessimism.

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Optimistic attitudes range from guarded, all the way to euphoric. The euphoric analysts are mostly advocates of a neoliberal brand of global economies. They are also the most enthusiastic promoters of the concept of information- or knowledge-based societies, extolling the potentially "limitless" technological growth in terms of the old ideology of private entrepreneurship, capitalist competition, economic laissez-faire, and boundless economic development. They regard ICTs as the principal "instruments of knowledge" that have revolutionized our ways of doing business in both financial markets and the production and exchange of services and goods.

Many optimistic analysts point out that, like never before, technological advances are directly and rapidly linked not only to scientific research, but also to the economy. (Archibugi and Michie 1997) In the United States, for example, the 1980 Bayh-Dole Act (1980) has allowed the patenting of inventions resulting from federally-funded research projects in not-for-profit institutions such as the research university. It has thus significantly contributed to creating close research partnerships between universities and private industry, particularly in the domains of software, biotechnology, pharmaceuticals, and medical devices, spawning many of the crossdisciplinary technosciences that I have mentioned above. In fact, it is the health services industry, as well as the related agro-alimentary sector, that the ICTs are expected to revolutionize most, thereby leading the entire economy to new heights of growth, due to spectacular scientific advances in molecular electronics, genetic engineering, and bioinformatics.

Optimists also point out that there is an unprecedented speed at which information or "knowledge" that has commercial value is being created and accumulated. Thus, there is a rapid rise of so-called "intangible" capital (investment in the production and dissemination of knowledge, as well as in human resources, or so-called "human capital") over tangible capital, such as operating equipment, physical infrastructure, natural resources, etc. There is a great proliferation of new jobs in such booming sectors of the economy as pharmaceuticals and scientific instrumentation, information and communication technologies, aeronautics, new materials, and so on. (Foray and Lundvall 1996) There is also an increased emphasis on innovation, not only as research and development, but also as organizational learning and experimentation, development of ICT systems with a view to regenerating older fields of activity, better coordination between systems and subsystems of production and marketing, and so forth. Computer-assisted design (CAD), computer assisted manufacturing (CAM), and computer integrated manufacturing (CIM) have been introduced on a large scale in various industries, allegedly raising productivity and cutting costs, and thus making these industries highly competitive on the world markets. (Mansfield 1995)

But what most analysts—optimists and pessimists alike—agree on is that the ICTs have brought about and enabled a shift from a market economy to a

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network economy, with cyberspace gradually replacing geographical space as the locus of commercial transactions. (Rifkin 1995) The traditional market is a physical encounter, in geographical space, between a seller and a buyer who negotiate the exchange of goods or services. The seller makes a profit based on the percentage obtained on the transaction, multiplied by the volume of exchange. The network economy, on the other hand, functions primarily in terms of an exchange between provider and consumer, rather than between seller and buyer. This exchange increasingly takes place in cyberspace, rather than in a physical location, with provider and consumer hardly ever meeting face to face.

In a network economy, private ownership does not disappear, but it is less and less exchanged, remaining increasingly in the hands of the producer. Thus, the production and exchange of goods and services becomes as it were "marginalized." Just as in classical capitalism agricultural production moved to the margins of an industrial economy even as it was incorporated by it, in network capitalism industrial production is gradually moving to the margins of a services economy. What the provider sells to the consumer are segments of temporary access to the commercial network, in the form of a subscription, leasing, or user's licence. A common example is automobile leasing versus buying, which is increasingly becoming the norm. As a result, industrial giants such as General Motors are no longer driving the economy.

Whereas General Motors remains the biggest and most powerful company in the world in terms of tangible capital, it is no longer the one that makes the biggest profits, nor is it ranked among the top forty companies on the New York Stock Exchange. Instead, a company such as Nike, which has no tangible capital and farms out the production of its footwear to Asian subcontractors, has become the commercial paragon. What Nike sells is its brand or its name, that is, a concept. Customers pay for the "privilege" of becoming part of the Nike legend. It is this legend that is Nike's most valuable, "intangible" or "intellectual" capital. In a network economy, therefore, advertising, marketing, and selling through the Internet and the other New Media have become indispensable commercial tools.

One positive outcome of the network economy, at least according to optimistic analysts, is the phasing out of Fordism and Taylorism as models of mass production and the gradual introduction of so-called Toyotism, where customers or "users" have more and more of a say in the designing and marketing of certain mass-produced goods. Interaction between producers and consumers is supposed to stimulate creativity and innovation at all economic levels and to contribute to the development of a new, more "democratic" economy, based on the principles of rapidly generated and widely distributed material wealth, as well as increased equity, transparency, and freedom of choice. (Foray and Lundvall 1996; Foray 2000)

According to optimistic forecasts, moreover, advanced energy and materials technology will soon allow humanity to embark upon global projects that

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have so far been the province of science fiction. Among these emerging technologies, one may list lightwave technologies (fiber optics, optical scanners, lasers, and so on); solar technologies (passive solar heating and cooling, Trombe walls, ocean thermal, tidal and wave power, hydroponics, photovoltaics, space-based solar collectors, photochemical and bioenergy conversion); imaging technologies (TV images, liquid crystal screens, magnetic imaging diagnostics); biotechnologies (gene splicing, molecular engineering, immunology, tissue culture, cloning, plant hybridization and redesigning, bioremediation); and nanotechnologies, such as gene machines, assembling and/or repairing molecules. They are creating the possibility of economically beneficial, regional and global projects beyond our wildest dreams, such as iceberg-towing for arid zone irrigation, ocean mining, waste disposal into the earth's mantle, earthquake prevention, weather modification, fail-safe nuclear power plants, automated farming and animal husbandry, integrated water supply systems on a continental scale, robotic assists for people, nanoscale products and systems, planning for terraforming, and so forth. (Miller et al. 1998) Finally, they may soon enable contemporary geneticists, medical scientists, and brain technologists to decode and duplicate the processes of life itself, thereby helping humans live a longer, healthier, and physically more satisfying existence, if not changing the very definition of life on earth. Indeed, robotics scientists and other futurists estimate that humanity's agelong dream of immortality will soon be realized through a fusion of robot and human, resulting in near-immortal mutants. (Drexler 1985; Stock 1993; Kurzweil 1999)

In the social and political domains, some analysts see equally tremendous benefits from the ICTs, creating the possibility of more democratic, transparent, and equitable social arrangements on a national, regional, and global scale. The personal computer and the Internet have created a global communication medium through which each participant becomes a node in an easily accessible and readily affordable informational network. Thus, the Internet can facilitate not only commercial transactions, but also political and social action. (Castells 1996) National and international governments as well as political parties and individual politicians are fully aware of this enormous potential of interfacing with their constituents and are in the process of creating a wide array of electronic public services, from health, food, medicine, and other consumer information, to educational drives, to grant and subsidy programs, to national emergency hotlines, to political propaganda, electoral campaigns, and online voting, among many others. These services are known in Internet parlance as e-government, just as one now speaks of e-commerce, e-travel, e-learning, e-health, e-religion, and so forth.

In turn, nongovernmental and civil society organizations (NGOs and CSOs) have set up their own Web sites, offering a large number of alternative public services, from consumer information and education, to ecology and health watches, to monitoring corporate and governmental accountability, to

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political action groups, to religious teaching and/or proselytizing, and so on. In addition to political action groups, private citizens have joined other online, common interest groups. These largely informal groups can be of a professional nature, based on specific fields of research, such as medicine, education, natural science, or based on crossdisciplinary topics. Recent examples of such informal professional groups are the so-called "bloggers" in North American academia. Blogging or Web logging has become fashionable among scholars from various disciplines who share an interest in a specific crossdisciplinary topic and contribute informal comments to it by logging on to a colleague's personal Web site or chatroom. Most recently, it has also been used effectively in the political process, for example in Howard Dean's campaign for the 2004 presidential election.

Online discussion groups, or "virtual newsrooms," or "bulletin boards" can also be recreational, based on hobbies such as chess, golf, baseball, soccer, car racing, horseback riding, mountain climbing, art and coin or stamp collecting, fishing, and so on. Forming "virtual" artistic ensembles whose members will come together in order to perform instrumental and vocal music, dancing, and drama in real time, for their own pleasure and for that of their families and friends, is an interactive electronic feature that should also become available through the Internet in the near future. Such common interest groups amount to "virtual communities" (Rheingold 1993) or "wired neighborhoods" (Doheny-Farina 1996), or "virtual neighborhoods" (Dertouzos 1997), which link together thousands of people, even if they live hundreds or thousands of miles apart, in different physical neighborhoods, countries, or cultures. They could obviously log in from anywhere in the world, thus transcending ethnic, racial, physical, intellectual, and other differences. The Internet has equally given a boost to interpersonal relationships across ethnic, racial, and religious lines, resulting in virtual and physical friendships, romantic involvements, and even long-term commitments, such as marriage. The Internet has thus created what one may call an "e-culture" of global dimensions that is enormously diverse and may lead one day, at least according to some optimistic analysts, to a common global society.

The new electronic media are equally seen as an important engine of sociocultural development. They are said to produce, together with mass migration, "a joint effect on the work of the imagination that has now become a collective, social fact and, therefore, the basis for unprecedented, if uneven, social changes throughout the world." (Appadurai 1996: 5) The global media and mass consumption are supposed to stimulate people into social action. Through the New Media, various transnational networks that have arisen as a result of globalization, such as the activist civil movements involved with the environment, women's issues, and human rights, are generating an important "virtual space" of transnational discourse and can be regarded as "the crucibles of a postnational political order." (Appadurai 1996: 23)

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Other analysts stress the revolutionary, epistemological, and ontological impact of the new ICT. By employing computer-based technologies of information and communication, our ways of acquiring, transmitting, and using knowledge are said to undergo sweeping changes: cognitive paradigms appear to be shifting from linear, binary forms that promote disciplinary and compartmentalized modes of knowledge, to nonlinear, holistic forms that promote transdisciplinary, integrative modes. Because of the open-ended, networked nature of computer-based ICT and the Internet, the information or knowledge that flows through them is intended, at least in principle, to be accessible to and shared by all.

On the ontological level, the PC and the Internet are said to create a cybernetic space that is paradoxically devoid of spatial and temporal dimensions, because it instantaneously relays communications between users located at opposite corners of the earth, erasing the difference between here and there, then and now. Within cybernetic space, physical obstacles and temporal distances seem to disappear as if by magic. Analysts also speak of cybernetic space as "virtual space" or even "virtual space-time" where new realities can emerge, independent of the individual users' intentions or actions. Indeed, one science writer sees the Internet as a globally networked, electronic, sentient form of life that is beyond anyone's control, evolving in mysterious and unpredictable ways. (Dyson 1997) Some philosophers are working out what they call a "digital ontology" (Eldred 2001; Capurro 2002; 2003), seeing ICT as generating new forms of reality and/or alternative worlds.

Additionally, the interface between humans and computers is reaching ever-higher levels of sophistication, with microprocessors fast becoming not only exterior but also inside extensions or prostheses of human beings. Consequently, it is claimed that the new technologies will create a new type of sentient being or the "metaman" (Stock 1993), a combination of human, computer, and other high-tech ware that will vastly exceed the physical and mental capabilities of *Homo sapiens*. The cyborgs and the bionic men and women of science fiction seem to be on the brink of becoming an all too immediate (and, to some, threatening) reality.

While most optimists see the socioeconomic changes brought about by the new ICT as extensions of the same capitalist modes of production and social organization (whether in the old guise of a so-called "free market" or in the new guise of a network economy) that seem to have triumphed on a global scale after the fall of communism, some bold analysts attempt to go even farther. Thus Bard and Soderqvist (2002) speak of a postcapitalist, "netocratic age," in which the Internet will replace current social, economic, and cultural values with "attentionalism," a new mode of production and societal relations, if not a new mode of being in the world. The most important asset in this networked society will be not capital, or the private acquisition and accumulation of material wealth, but the ability to acquire exclusive information that com-

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mands attention in the select circles of decision-makers and power brokers. Class differences will not disappear, but they will no longer be the traditional ones, such as the aristocracy, the bourgeoisie, and the working class or the proletariat. The question will be not who is in charge of production, but who is in charge of consumption. The new elite will be a "netocracy," displaying social intelligence, flexibility, and receptivity and, above all, an ability to network and to acquire and process valuable information. The underclass will be not the proletariat, but the "consumptariat," who lives only to consume, at the bidding of the netocrats.

According to Bard and Soderqvist, one consequence of an attentionalist society will be that traditional learning, education, and diplomas will be useless in attaining the status of a netocrat, because what you learn today will have become obsolete tomorrow. Far more important will be one's ability to chase after what will next command the attention of those who matter and to keep learning as one goes along. The idea of traditional employment will in turn become outdated, with companies becoming more and more "virtual," that is, mere instruments for gathering a certain expertise at a certain time around a certain project—an ever-shifting commercial partnership, based on pure opportunism, rather than on human solidarity or affinity.

Another consequence of attentionalism will be the "death of democracy." Bard and Soderqvist argue that this trend is already present in today's so-called "Western democracies," where people can't be bothered to vote any more, because they realize that voting has become a futile and hypocritical exercise. They sense that power is becoming increasingly diffuse, shifting away from traditional government to more or less opaque and elusive global networks, ruled by a continually shifting netocracy. Although *Netocracy* reads like a witty, sardonic combination of George Orwell, Evelyn Waugh, and *Empire*, the authors are apparently dead serious (or perfectly deadpan) about their arguments: they seem to share the netocratic values expounded in the book or, at least, a belief in the inevitability of the netocratic future of humankind.

But, there are also a large number of thinkers, artists, researchers, educators, and other practitioners who are deeply skeptical, or at least ambivalent, about the likely impact of the new ICT on our local and global communities, as well as on our private lives. Attitudes in this respect range from noncommittal ambivalence to fatalistic prophecies of doom to Luddite rage. Economists, usually of leftist leanings, compile long lists of adverse socio-economical effects that the introduction of the new ICT has had on the local and global economies. In addition to the devastating effects for the world economies that the technological "hype" or "bubble" of greedy financial speculators has created on the world markets, these scholars point out that some new forms of ICT are far from being universally cost-effective. Despite neoliberal arguments to the contrary, they do not necessarily give the competitive edge to many of the enterprises that adopt them, not least because they need

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continual maintenance and updating, which can be very costly and can often cause "change fatigue." Anyone owning a PC is painfully aware of the fact that present-day computers and their "standard" software, to say nothing of their servers, are not as "smart," reliable, or user-friendly as their manufacturers tout them to be, and much remains to be done to make them less demanding on, and wasteful of, the user's time and energy.

ICT has also further widened the wealth gap between the so-called "developed" and "developing" economies, creating a "digital divide" between them. According to official UN statistics, with the advent of globalization, seen as being largely driven by ICT, the world's dispossessed have become even poorer, and the rich, even richer. Economists and sociologists now speak of "information-poor" and "information-rich" countries. Information-poor are those countries that do not possess the new ICTs and therefore cannot participate as equal partners in the global network economy, created and controlled by the information-rich countries. The result is that developing countries, which more often than not also turn out to be the information-poor ones, are again shortchanged in the world markets, continuing to be used by the developed countries both as a source of cheap labor and as a dumping place for obsolete technology. (Gray 1998)

Skeptical analysts further point out that the great advances that the pharmaceutical industry and other Western-style health care providers are said to accomplish with the assistance of bio- and nanotechnology are offset by serious and unprecedented global dangers. These include the appearance of new diseases caused by antibiotic-resistant bacteria with multi-drug resistant genes and by new viruses or mutants of older ones, which seem to have created their own global network, as masses of displaced migrants and of business and pleasure travelers move ceaselessly around the world. (Garrett 1994)

Furthermore, genetic clones, genetically modified foods, and other biotech products have largely unknown long-term effects on the health of humans, animals, and plants, despite scientific studies to the contrary, conducted as a rule by "experts" with vested financial interest in biotechnology. Human interference with very complex living systems, involving an infinite number of interactions and feedback loops among a large number of subsystems lead to genetic mutations and other changes that are very difficult to predict and may eventually have disastrous effects on the biosphere.[1] The potentially irreparable damage resulting from the rapid and indiscriminate introduction of biotechnology in the world economies, including the agro-alimentary and the health sector, may eventually offset and far exceed its immediate economic gains.

The most dangerous aspect of genetic engineering, nanotechnology, and robotics (GNR) is their frighteningly rapid, self-replicating power. Deadly genetic replicators can conceivably escape from a scientific laboratory's control into the biosphere or can, no less disastrously, fall into the hands of a

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fanatic individual or terrorist group. As Bill Joy, cofounder and Chief Scientist of Sun Microsystems, points out, through GNRs we have now created "the possibility not just of weapons of mass destruction but of knowledge-enabled mass destruction (KMD), this destructiveness highly amplified by the power of self-replication." Joy, who is hardly an anticapitalist, radical discontent, estimates that, with the present indiscriminate commercial development of GNRs, there is "no exaggeration to say we are on the cusp of the further perfection of extreme evil, an evil whose possibility spreads well beyond that which weapons of mass destruction bequeathed to the nation-states, on to a surprising and terrible empowerment of extreme individuals."[2] Given all of these very clear and present dangers, we might do well to heed the warning contained in Goethe's poem about the sorcerer's apprentice who has enough knowledge to unleash powers that replicate themselves at a catastrophic rate, but not enough knowledge to stop them.

Skeptics also point out that we are still very far away from the global information infrastructure and the liberal Information Market Place that Michael Dertouzos pleads for. There are hopeful developments in this respect, for example, in the Open Source Movement on the Internet.[3] This movement consists of programmers (some of them at Dertouzos's home institution, MIT) who want computer software to be distributed free of charge. Independent teams of programmers publicly disclose and develop the codes behind open-source software. This allows companies who adopt such software to customize their programs and to pay only for services that will improve their performance. The open-source movement would thus like to create a so-called "gift economy" (Naughton 1999) where there is free exchange of information leading to the development of free of charge, universally compatible, software. But, despite this movement, protectionist, obstructionist, and antitrust practices remain the norm in the software industry.

For instance, Microsoft, the leading industry giant, keeps most of its source code secret. One is by now familiar with Microsoft's antitrust law violations and the fierce, often underhanded competition that it engages in with other software companies. According to a *New York Times* article (15 May, 2003), moreover, Microsoft top-level executives are constantly preoccupied with countering the open-source movement, particularly Linux, whose open-source operating systems for large data-serving computers are popular in Europe and other parts of the world. Thus Steven Balmer, CEO of Microsoft, once characterized Linux's licensing as "a cancer that attaches itself in an intellectual property sense to everything it touches."[4] Balmer's metaphor is appropriate, ironically, not for Linux's, but for his own company's aggressive, territorial, and self-destructive behaviors that create blockages in the free flow of information and will eventually lead to terminal illness, unless Microsoft mends its ways.

We are equally far away from solving security, reliability, and intellectual property issues. If the Internet has spawned e-commerce, it has also spawned

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a huge wave of e-crime, perpetrated by "virtual" international crime rings, ranging from virtual bank heists to child pornography to virtual hate crime. The most serious global threat that, given the present global political climate, seems almost to have become inevitable, is cyberterrorism. In addition to getting hold of or building homemade bioweapons, terrorist hackers could fairly easily break into a country's network systems and disrupt the proper functioning of local and national governments, businesses, vital services such as electricity and drinking water, and so on.

Intellectual property issues also remain an enormous problem. International pirating and scarcity of global agreements and/or rules, as well as the absence of effective means of enforcing them are most frequently mentioned as urgent issues to be addressed. But less frequently mentioned are the primary reasons for such absence or infringements of rules: the double-standard attitudes and unfair practices of those who seek to institute and enforce intellectual property laws on a global scale. Current rules and regulations are often loaded in favor of the "information-rich" countries, which mistakenly believe that it is in their best interest to maintain and continually enhance their high-tech superiority over the "information-poor" ones.

Nor have the new ICTs been the great social equalizers and purveyors of democratic values that some analysts tout them to be. On the contrary, they have polarized our world even further. As Zygmunt Bauman, among many others, points out, ICT has created a new "elite of mobility" (if not exactly a netocracy), who seem to "possess an unprecedented freedom from physical obstacles and unheard of ability to move and act from a distance." (Bauman 1998: 18) But they have also created a new class of dispossessed, the immobile class, who are no longer at home even in the single locality they inhabit and see the socioeconomic ground shifting from under their feet. According to Bauman, ICT has also produced a new "absentee landlord" phenomenon, whereby the mobility acquired by those with capital leads to "an unprecedented disconnection of power from obligations: duties towards employees, but also towards the younger and weaker, towards yet unborn generations and towards the self-reproduction of the living conditions of all; in short, freedom from the duty to contribute to daily life and the perpetuation of the community." (Bauman 1998: 9)

Although democratic values may in principle be diffused through the Internet, the current uses of ICT point in the opposite direction. In a post-September 11, global political climate, certain Western governments increasingly use the new information technologies to curtail, rather than to expand civil liberties. Under the guise of patriotism and homeland security exigencies, national governments adopt "extraordinary" measures that infringe upon the individual's rights to privacy, freedom of speech, religious belief, and so forth. Most recent North American examples are the proposed Total Information Awareness Plan (TIAP), currently modified as Terrorist Information Aware-

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ness Plan, and LifeLog. These two related projects are part of the "cognitive computing" research of the Defense Advanced Research Projects Agency (DARPA), which has contributed to the creation of the Internet itself (originally conceived as a nuclear-safe, military communications system) and of other defense projects such as the stealth bomber.

TIAP proposes to combine all commercial credit data and individual bank and academic records with F.B.I. and C.I.A. files. In turn, LifeLog involves the development of a personal digital super-assistant called PAL (the "perceptive assistant that learns") for which the user will collect, "store, retrieve and understand data about his or her past experiences." Users will supposedly "determine the types of data to collect and when to collect it." The data can include everything the user can see, smell, taste, touch and hear on a daily basis. Although users are, allegedly, "in complete control of their own data-collection efforts, decide when to turn the sensors on or off and decide who will share the data," the description of the LifeLog project says nothing about the persons that may be the targets of this super data-collection effort.[5]

One can plainly see the nefarious uses that such devices can be put to by criminal organizations or by an overzealous (or ideologically motivated), information-gathering, governmental agency. One can also easily imagine how PAL could lead to a nightmarish, paranoid world in which people would sneak around and snoop on each other, recording and sharing information of the most private and sensitive sort with their government, financial company, or the highest bidder. Even without PAL, advertisements for electronic snooping and anti-snooping devices are pouring daily through the Internet—a sign that such devices must already be doing a booming business.

Along similar lines, if with slightly less ominous implications, the new ICT has facilitated the development of new techniques of public space control, appropriate for a global age. Bauman (1998), for example, points out that classical capitalism controlled public space on the disciplinary model of the Panopticon—Jeremy Bentham's prison project (analyzed in detail by Michel Foucault among others), constructed in such a way that the prisoner (or the factory worker) felt he was always being watched. Today, at least for the time being and despite the DARPA projects just mentioned, the Internet is far from being a Superpanopticon or a perfected instrument of discipline and control, as some Marxist critics claim. This does not mean, however, that it cannot act as a much more subtle and insidious instrument of selection, separation, and exclusion, especially of those who are "information-poor" and lack advanced technological know-how. The Internet thus "keeps the globals in the sieve and washes out the locals. Certain people it admits to the exterritorial cyberspace, making them feel at home wherever they go and welcome wherever they arrive; certain others it deprives of passports and transit visas and stops from roaming the places reserved for the residents of cyberspace." (Bauman 1998: 51)

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On the other hand, the New Media in general do have a voyeuristic dimension that they share with the Panopticon. For that reason, Thomas Mathiesen (1990; 2001) sees the multinational television networks as forming a global Synopticon. In the Panopticon model, the few (jailers, factory owners, etc.) watched the many. In the Synopticon model of today, the many watch the few, or the locals watch the globals, that is, billions of telespectators watch and aspire toward the lifestyles of celebrities from the world of politics, finance, sports, science, show business, and information. One might add that, through the Synopticon of the New Media, the few (who in this context may appropriately be called netocrats) also send direct, indirect, or subliminal messages to the many, telling them what to eat, wear, or buy, how and where to spend their moments of leisure, and generally what to think, feel, and do about their lives and the lives of others.

Although the New Media can in principle communicate diverse sets of values and to some extent they actually do, at present they nevertheless remain largely focused on promoting mass consumption and other staples of the network economy and popular culture. The so-called "mainstream" media seem to be the worst offenders in this respect. Our giant transnational television networks, film industries, and newspapers, based both in the United States and in other parts of the world, communicate and support mostly Western-style commercial values, trite democratic and religious pieties, as well as crime, sex, and senseless violence, in their profit-driven, "blockbuster" movies, mud-raking investigative journalism, "soft" news and entertainment programs, and so on.

Nor have the new ICTs brought us any closer to a global society, with a coherent set of values conducive to global intelligence. The e-culture created by ICT is not only diverse, but also highly heterogeneous and fragmented. Judging from the statistics that monitor the volume and types of activities flowing through the Internet, the current global e-culture is predominantly a utilitarian one, geared toward commerce, politics, religion, and entertainment. For example, until recently, by far the largest number of daily "hits" or Web site visits were paid to the global sites dedicated to so-called "adult" entertainment. It might appear encouraging that, of late, education and learning sites are beginning to exceed in popularity the "adult" ones. But statistics say little about the quality and content of the education offered through the Internet. A large number of learning organizations seem, in any case, to be geared toward training individuals in practical or applied fields, such as commerce or the ICT itself, so that they largely disseminate and perpetuate the utilitarian values of Western-style, global capitalism.

Indeed, by "knowledge" and "information" in the ICT context, most analysts mean utilitarian or instrumental knowledge, that is, information and/or know-how deemed to possess significant commercial value. This knowledge or information becomes obsolete almost as fast as it comes into being, sharing the throwaway quality of all the other products of a consumerist society. It is

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this throwaway quality that allows Bard and Soderkvist to argue that a college education or a college diploma will soon become irrelevant in the netocratic age, where today's "knowledge" or information becomes yesterday's news and where ethics turns into mere pragmatics.

Many scholars do make a distinction between knowledge and information. They usually define "knowledge" as capability for intellectual or physical action, and "information" as formatted or unformatted, inchoate data, waiting to be processed, interpreted, and put to use through knowledge. (Foray 2000) But few of them realize that this distinction is equally based on an instrumentalization of the two terms. Defining knowledge as capacity for (any) action already presupposes an asymmetrical binary opposition, in which the term "action" is privileged over nonaction, contemplation, intuition, imagination, and so forth. Translated into moral terms, this opposition could easily be pressed into utilitarian service, by pitting the "virtues" of the so-called capitalist work ethic, such as competence, efficiency, industriousness, thriftiness, punctuality, and practicality, against such "vices" as incompetence, inefficiency, laziness, wastefulness, tardiness, improvidence, and irresponsibility.

When speaking of information- or knowledge-based economies, therefore, Western analysts implicitly refer only to a Western system of commercial values and practices and, within that system, only to a small, if currently privileged, fraction of it: the subsystem of utilitarian values. Thus, neoliberal analysts often operate with a tacit distinction between (commercially) profitable or relevant knowledge/information and unprofitable or irrelevant one, typical of the utilitarian value subsystem. This economic subsystem has taken shape during the last three centuries, with the rise and successive development of industrial, market, and network capitalism, paralleling the rise and development of rationalist, reductionist, and positivist kinds of science, with which it forms a complex network of feedback loops. Far from being universal instruments of knowledge, the new ICT and the new technosciences that support it are merely expressions of this economic subsystem that wishes to impose itself not only on Western culture as a whole, but on all other cultures, as well.

By the same token, for many neoliberal and other scholars, a "knowledge" or "information" society in effect means a society that embraces Western-style, instrumental values. These values include privileging the kind of knowledge that leads to the creation and accumulation of material wealth. (Berthoud 1992; Gare 1993a and b) Calculation in all senses of the term is at the basis of this society, where quantitative values and measurements largely replace qualitative ones.[6] It is no wonder, therefore, that in the current "knowledge" society, everything must be expressed in numerical terms and must have commercial value, with a price tag attached to it. What is incalculable has no value, i.e., no potential for commercial profit, and consequently is irrelevant. It is this assumption, moreover, that allows some Western economists and sociologists to speak of "information-poor" and "information-rich" societies,

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substituting information that is commercially relevant or irrelevant for all other kinds of information or knowledge.

As we have seen, the great "discovery" of the network economy is that even intellect and abstract knowledge can be quantified and assigned a market value under the concept of "intellectual property." So, in the network economy, a practitioner of the human sciences must speak of intellectual, cultural, and human "capital," "symbolic-analytic services" (Reich 2001), and otherwise show how s/he remains (commercially) relevant. Even contemporary "ecologists of commerce," such as Paul Hawken (1993) and Amory and L. Hunter Lovins (1999), must speak of "natural capitalism" and the "next industrial revolution" in order to get a hearing from the current business and political elites.

These ecologists are fully aware of the utilitarian turn in most mainstream natural science, which has now largely become the handmaiden of ICT, in the guise of technoscience. In "A Tale of Two Botanies," for example, the Lovins point out that the "new botany," based on genetic engineering, "aligns the development of plants with their economic, not evolutionary success."[7] Notwithstanding, one of their major strategies is to make a case for ecological sanity on the neoliberal economists' own ground, showing that natural resources such as clean water and clean air, as well as natural and cultural diversity, are left out of the utilitarian computation. Consequently, the Lovins, as well as most other ecologists, demand that a price be put on them as well, thus, ironically, reinforcing the utilitarian value system that they otherwise decry.

In turn, humanities scholars are beginning to use similar strategies. For instance, Mikhail Epstein (1995) has coined a new term, "techno-humanities," in order to stress the importance of literature, the arts, and cultural diversity as a whole in the network society. In turn, Kurt Spellmeyer suggests that the humanities "must become 'service providers' in a free-market climate." (Spellmeyer 2003: 20) Although these strategies are undoubtedly useful, they do not touch the core of the issue, any more than the well-meaning efforts to bridge the "digital divide," undertaken by the UN and other global organizations. We need to turn away from the current trend toward a global instrumentalization of all knowledge, instead of regarding it as a *fait accompli* and jumping onto the utilitarian bandwagon with a vengeance. At the same time, we need to explore viable alternatives to it, without discounting the positive role that future forms of ICT can play in these explorations as well.

It is this kind of alternative thinking and action that should be undertaken by such global initiatives as the upcoming World Summit on the Information Society (WSIS) to be held in Geneva (2003) and Tunis (2005). Unfortunately, the organizers of the summit seem unaware of the pitfalls inherent in their well-meaning call to bridge the "digital divide." They assume that the information society is "an economic and social system where knowledge and information constitute the fundamental sources of well-being and progress." The

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information society, the organizers continue, is "one in which highly developed ICT networks, equitable access to information, appropriate content in accessible formats and effective communication can help people to achieve their potential, promote sustainable economic and social development, and improve the quality of life of all." Finally, the information society is "one that reduces poverty and creates wealth to satisfy the basic needs and rights of all peoples. It offers great potential in promoting international peace, sustainable development, democracy, transparency, accountability and good governance."

In order to achieve these goals, the organizers propose such concrete measures as 1) developing "national e-strategies for all countries within three years, including the necessary human capacity building;" 2) the launching "of a 'Global Digital Compact' as a new pattern of partnership and interaction between governments and non-governmental stakeholders, based on division of labor and specialized responsibilities, as well as on identified specific and common interests"; 3) creating "an ICT development index and report, where the ranking of countries will be accompanied by analytical work on policies and implementation." They also suggest such benchmarks of development as: "1) All villages to be connected by 2010, with a community access point by 2015; 2) All universities to be connected by 2005 and all secondary schools by 2010 and all primary schools by 2015; 3) All hospitals to be connected by 2005 and health centers by 2010; 4) 90 per cent of the world's population to be within wireless coverage by 2010 and 100 per cent by 2015; 5) All central government departments to have a website and e-mail address by 2005 and all local government departments by 2010."[8]

Although these goals and benchmarks of ICT development may be attainable, they will certainly not lead to universal material wealth, democracy, transparency, accountability, and good governance, any more than the telephone, radio, television, or writing and printing did, before the advent of the new technologies and the network society. The likelihood is, on the contrary, that many of the current uses of ICT will further aggravate world problems, including poverty, insecurity, and violence. The worldwide campaign to reduce the "digital divide" will probably have the unintended consequence of even further disseminating a utilitarian, reductive, economic and scientific mentality over the entire globe. So, in speaking of an "information" or "knowledge" society, the first questions to be asked by the WSIS ought to be: what kind of information and what kind of knowledge? Whom does it serve and to what purpose? What are the sociocultural and ecological perils of introducing certain ICTs and what precautions should collectively be taken before introducing them? Can we develop alternative ICTs, more friendly to people and to the environment than what is commonly offered on the market today?

On the other hand, it would be counterproductive, if not completely useless, to advocate resistance against all forms of ICT development, as some radical antiglobalization and fundamentalist movements do; or, even worse, to

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advocate the kind of extreme, violent or terrorist actions that are occasionally practiced by the very scientists who are thoroughly familiar with the computing world. Such a Luddite position is mentioned, for example, by Ray Kurzweiler in his book on *The Age of Spiritual Machines* (1999), which otherwise is a euphoric endorsement of a new, computer-based social utopia, brought about by the fusion of humans and robots. It would be instructive to look at the Luddite frame of mind in some detail, as it could bring us closer to the core issues that need to be resolved, if humanity is to develop further.

The high-tech Luddite position starts from the assumption, which it shares with mainstream, utilitarian, and reductive technoscience in general, that computer scientists can indeed develop super-intelligent machines that will easily outperform humans. If that is the case, then humans will be faced with two choices: 1) to allow machines to make their own decisions without human supervision; or 2) to retain human control over decision-making. In the first scenario, a point will eventually be reached "at which the decisions necessary to keep the system running will be so complex that human beings will be incapable of making them intelligently. At that stage the machines will be in effective control. People won't be able to just turn the machines off, because they will be so dependent on them that turning them off would amount to suicide."

In the second scenario, on the other hand, human control "over large systems of machines will be in the hands of a tiny elite—just as it is today," but with an important difference: the new technologies will effectively enable the elite to have the power of life or death over the masses. If the elite is ruthless, it may "simply decide to exterminate the mass of humanity," which will have become useless and too costly to maintain. Or, if the elite "consists of softhearted liberals, they may decide to play the role of good shepherds to the rest of the human race. They will see to it that everyone's physical needs are satisfied, that all children are raised under psychologically hygienic conditions, that everyone has a wholesome hobby to keep him busy, and that anyone who becomes dissatisfied undergoes 'treatment' to cure his 'problem'. Of course life will be so purposeless that people will have to be biologically or psychologically engineered either to remove their need for the power process or make them 'sublimate' their drive for power into some harmless hobby. These engineered human beings may be happy in such a society, but they will most certainly not be free. They will have been reduced to the status of domestic animals." (Kaczynski 1995)

The citations in the preceding two paragraphs come from the "Unabomber Manifesto," by Theodor Kaczynski, a frustrated mathematician turned Luddite-terrorist and convicted as a serial murderer. It would be easy to dismiss Kaczynski as a twisted version of the mad scientist who, having failed in his bid to rule the world, turns against his own machines and technocratic establishment. Yet, the disturbing fact remains that his reasoning and basic premises are very similar to those of the brilliant computer scientists he attempted to

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stop by sending them booby-trapped packages through the US mail. Kaczynski and many of his colleagues believe that, for better or for worse, technology is the overriding factor in the development of humanity. More to the point, they believe that technology is nothing but an instrument of power. Indeed, the current Western infatuation with high-tech is an infatuation with (unlimited) power, whether it manifests itself in fantasies of immortality or of world conquest. This infatuation is most obvious (and most dangerous) in the "stealth" aircraft, "smart" bombs, self-guided missiles, and other deadly toys of the high-tech Western military establishment of today. But it is equally obvious, and perhaps no less dangerous, in their "virtual" counterparts, the electronic war games that permeate our popular culture, from Hollywood movies to children's cartoons to video game parlors.

For Kaczynski, as for many members of Western intellectual and other elites, life is "purposeless" if the "need for the power process" or the "drive for power" is "sublimated" or neutralized. For him, all values, including freedom, are grounded in the power principle. Utilitarian values themselves are subordinated to this principle: one judges what is useful or useless, relevant or irrelevant, exclusively in terms of what may enhance or may impede one's "drive for power."

Of course, power itself transcends any utilitarian value system, even as it grounds it. As George Orwell showed in *1984*, power is exercised purely for the sake of power. Kaczynski engages in terrorist actions not because he wants to rid the world of ICT. He knows very well that by detonating a few bombs he cannot arrest our triumphant march toward the technological brave new world we have set out to build. He does it simply for the sake of enhancing his own power drive. Better to exercise destructive power, than no power at all. Kaczynski cannot even imagine alternatives to the power principle and therefore obeys its logic to the bitter end.

If machines are our extensions, they will simply replicate and enhance our will to power or any other principle around which we choose to organize our lives. By the same token, fear of machines is fear of ourselves, of the kind of unspeakable monsters that our power-enthralled imaginations might awaken and drag to the surface. Unless we turn away from our mentality of power, and transvaluate all of our values in the process, including the utilitarian ones, our culture will continue to spawn and release into the world a plethora of "monsters" like Kaczynski, together with countless other dangerous self-replicators. Therefore, instead of further enhancing a power-oriented high-tech mentality by "bridging the digital divide," the World Summit on the Information Society should first debate and agree upon the kind of intercultural values that our ICT should promote throughout the world, as well as the kind of technologies that could subsequently be developed, in order to best support such values.

Finally, one may wish to question what by now has become accepted dogma in neoliberal and other Western intellectual circles: that the new ICTs have brought about a historical rupture, ushering in a new global paradigm.

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Although shifts in modes of production/distribution and supporting technologies can certainly make a substantial difference in people's daily existence, they do not amount to paradigmatic shifts. Such shifts come from human mentality, involving radical changes in human modes of thinking, behavior, and interaction. For the time being, we do not seem any closer to such a paradigmatic shift than we were two thousand years ago, and remain within the same mentality of power that has produced our past and current modes of production and ways of relating to each other.

For example, a network economy might be a new type of economy, replacing former economic systems such as agrarianism, mercantilism, and industrial and free-market capitalism, but it certainly does not transcend the asymmetrical human relations embodied in the previous capitalist modes of production and distribution, nor does it supersede the power-oriented system of values and beliefs on which all of these economies have been based. Nor does a netocratic society or the New Empire (Hardt and Negri 2000) supersede capitalist societies: it simply reorganizes the class system and redistributes power according to differential principles other than material wealth or tangible capital. Information or knowledge might be the new, "intangible" capital of choice, but the restrictive, privative, and power-enhancing modes and ends of its use remain the same.

By the same token, a certain mentality or mindset creates a certain technology, which in turn promotes and amplifies this mentality, but cannot radically transform it. So, radical breaks do not come from changes in technology, but from changes in mentality, which will then generate other technologies, in keeping with its main values and goals. In this sense, the New Media and their electronic narratives, which Appadurai and many other analysts regard as triggering radical, worldwide changes, do no more than preaching to the choir, as it were. The local collective imagination has its own inner resources to renew itself and may use certain aspects of the electronic media to do so. The electronic media do not "cause" the change, but are themselves an effect of this change, at the same time that they may help speed it along. In other words, mentality and technology interact through constructive (or destructive) feedback loops, according to the nonlinear principle of mutual causality or causal reciprocity.

In conclusion, I hope it has by now become clear that my own position toward the new technologies and their likely socioeconomic and cultural impact on our world communities remains, overall, a skeptical one, at least in terms of the mentality that has so far created and driven them. In this respect, I very much doubt that the ICT wave we are currently riding is headed toward a radical paradigmatic shift in human history. Such claims of revolutionary change are typical of Western modernity, with its ideology of continuous growth and progress, and its other linear notions of time, space, and human or natural history.

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On the other hand, there is always the exciting possibility that this technological wave might be redirected toward global intelligence and a genuine shift in human mentalities. But, such a reorientation would involve a sustained, unprecedented effort on the part of all of our world communities. It would also involve much preliminary and preparatory work on the part of all of us, consisting primarily of developing worldwide intercultural learning environments, oriented toward global intelligence.

2. Intercultural Learning and ICT Development

From the preceding remarks, it should be obvious, then, that speaking of a "knowledge" society obscures rather than clarifies the most important issues that humanity is confronted with and should be working on in the foreseeable future. Far from assisting us in resolving these urgent issues, the concept of a "knowledge" society appears, within a global framework, as smug, (self-) deceptive, and overreaching, perpetuating some of the exemptionalist Western attitudes that have arguably led us to our present global plight.[9] Instead of a "knowledge" society, one would be much more advised to speak of a "learning" or an "intensive learning" society. This would stress the fact that in the increasingly complex global environment in which we are now living, the notion of "developed" and "developing" countries has become obsolete. It belongs to a national, capitalist industrial subsystem of values that should be replaced with a value system that is more in line with an emergent ethics of global intelligence. From that standpoint, there is no country that is more "developed" than the rest, and all countries, geographical regions, and world cultures can bring their specific, invaluable contributions to human (self-) development.

Our most urgent task, then, would be to launch local-global, intercultural learning initiatives throughout the planet. What we need to learn or relearn in the first place is how to relate to each other and to our environment in mutually beneficial and enriching ways. There is a most urgent need to educate our world leaders and world populations in the spirit of global intelligence. This task can certainly be greatly facilitated by developing and using new ICT in the same spirit. It could also be greatly facilitated by a thorough exploration and understanding of the systems of values and beliefs that have produced the current socioeconomic, political, and cultural institutions in various parts of the world, the ways in which these systems and subsystems have been interacting with each other throughout human history, and the best ways in which we can negotiate and resolve apparent and real conflicts among them, or consolidate and amplify their mutually beneficial feedback loops.

The humanities could play a major role in this global learning process, at the same time that they need, in turn, to reorganize themselves within larger, intercultural frameworks and reorient themselves toward global intelligence,

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as discussed in previous chapters. In the remaining section of the present chapter, I shall briefly look at some of the ways in which the humanities could be of great help in a worldwide educational drive, by spearheading reform of some of the technology-assisted educational programs currently in use and by helping develop alternative learning programs, including electronic ones, based on the principles of global intelligence.

One may begin by reintroducing and reflecting on the traditional distinction between education and training, as well as that between knowledge and wisdom. Education is the process by which certain systems and subsystems of values and beliefs are passed down from generation to generation, whereas training is the process of transmitting various professional skills or know-how. As I argue at some length in Part III of *Global Intelligence and Human Development*, most of our large research universities in North America have effectively given up their traditional educational goals and have become primarily places of training. Even worse, they have largely adopted the utilitarian equation of training with education. Of course, the distinction between the two terms is not essential but functional, because training and education are continuously involved in amplifying feedback loops, with one reinforcing and nurturing the other. The consequence for the research university is that utilitarian values are reinforced at both the level of training and that of education.

There are also complex amplifying feedback loops between education, training, and knowledge. A utilitarian education will largely base training on utilitarian values, including utilitarian knowledge or "know-how," with the main educational goal of attaining "professional competence" and "expertise." Furthermore, utilitarian knowledge, reinforced by utilitarian education and training, will masquerade as a universal, eternally valid category. It thus obscures the cultural, ethical, and relativist dimensions of any kind of knowledge, validating, in turn, utilitarian education and training. Finally, it equally recasts the distinction between knowledge and wisdom in a utilitarian form.

For example, what appears to be vital knowledge or information in some cultures, such as sailing at night by the position of the stars without the help of a sextant, or distinguishing among various animal and bird calls, taboo and non-taboo foods, acceptable and unacceptable social relations and behaviors, or composing and reciting oral poetry/ narratives as a means of codifying and transmitting the community's system of values and beliefs may, from a purely utilitarian standpoint, appear to members of other, "developed" societies as useless information, poverty of knowledge, illiteracy, or even misinformation. Consequently "developed" societies either discount or actively denigrate traditional knowledge, which in traditional cultures is often entrusted to old sages of both sexes. In these cultures, the difference between knowledge and wisdom is one of degree, rather than one of kind: knowledge is only the first step toward wisdom. In modern societies, by contrast, there is either a sharp separation between knowledge and wisdom, or an equation of wisdom with utilitarian knowledge. This has led in modern soci-

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eties (but also in traditional ones) to a gradual loss of traditional wisdom/knowledge, including valuable socioeconomic and ecological practices that are increasingly replaced by reductionist scientific dogma and Western-style technological know-how, in the name of modernity and progress.

The first task of an intensive learning society, then, is to become aware of its complex links to traditional culture and fully fructify such links, instead of rejecting or repressing them. At the same time, it should move toward a larger, intercultural reference frame, away from myopic, reductionist, and utilitarian views. Adopting such a larger frame is more important than ever in the current global circumstance, unless we in the West wish to continue clinging to the cultural imperialistic practices of "free-market" capitalism, with the same unhealthy prospects for genuine human development. It would involve reforming our current educational institutions, as well as developing alternative ones, appropriate for local-global, intercultural frames. Alternative forms of ICT could greatly help in this process by participating in the development of both distance learning institutions and intercultural, learning and research technological platforms, oriented toward global intelligence.

Our current distance learning outfits are in need of extensive reform. So far we have two kinds of distance learning: one is organized by universities as extensions of their academic curricula, and the other is organized by specialized, distance learning providers, sometimes in partnership with an institution of higher learning or other organizations involved in "continuing education" and "on the job" training. The first type of distance learning, organized by universities, largely consists of disciplinary courses posted online and open to qualified students from all over the world, who can take them for credit, if they pay tuition fees. Most major American and British universities have developed such disciplinary academic programs online. These programs are electronic versions of the older, academic courses "by correspondence," delivered through "snail mail," and have about the same low rate of success as the latter.

There are a number of reasons why such e-academic programs have not drawn as many students as their developers hoped and why they have generally been financial flops. One reason is the lack of trained personnel, such as online teachers, new media professionals, programmer librarians, and programmer/system support specialists. Online teachers, for example, need to develop different skills from those of classroom teachers, such as how to format and present online course content, how to provide online student feedback, and so on. They also need real time, public relations and administrative skills, such as coaching, facilitating, and moderating, not least among the members of their own team. In short, online course developers need a variety of crossdisciplinary skills that can in turn be developed only through appropriate training or, more often than not, only by experiment or by "trial and error." Consequently, effective online courses are difficult and costly to develop and even more costly to maintain, revise, and update on a timely, ongoing basis.

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The second type of distance learning services is delivered by specialized, academic providers, such as universities online, e.g., the Open University in the UK or Phoenix University in the US. There are also a large number of nonacademic e-learning organizations that offer their own online professional training in a wide variety of fields, or work with learning organizations to provide a comprehensive and flexible e-learning platform, which can be customized according to the specific training needs of the individual client. Such e-learning platforms typically offer 24/7 access to an extensive array of online academic and/or nonacademic courses and tutorials, assessment tools to evaluate current competencies and objectives of learners, search and problem solving tools, access to online consultants, administrative tools to monitor and to manage the learning process, and so forth.

All of these e-learning providers serve the purpose of disseminating and redistributing old and new knowledge throughout the world, yet their mission and objectives are not primarily educational, but professional, i.e., utilitarian: they train their clients in certain skills and competencies that can, at least in principle, be acquired without the physical contact and experiential dimension that are integral to the educational process. As such, current distance-learning organizations are carriers of utilitarian values, designed to reinforce a Western-style, utilitarian mentality. If reoriented toward a global framework, they could indeed become important disseminators of global and intercultural competencies and expertise. But, a thorough intercultural education, leading to global intelligence can hardly be acquired through electronic means or "virtual" reality. It could only be reached through the learners' real-time, intercultural experience and practice of living, working, and playing together over extended periods, in various cultures and learning environments.

Information and communication technology, then, can certainly be levered to achieve and sustain closely interwoven, local-global communities of students, teachers, scholars, and other practitioners who support each other's research and learning efforts toward acquiring global intelligence. It can also help disseminate the results of these learning efforts to the world community at large. But it can never replace the actual process of learning or acquiring intercultural knowledge, which emerges through daily physical contact and interaction among diverse human communities. Much less can it replace local-global wisdom, that is, intercultural knowledge that emerges only after years and years of crosscultural experience, based on sustained and patient intercultural research and practice.

Therefore, the humanities could help develop appropriate forms of ICT that would serve local-global systems and subsystems of values and beliefs, grounded in a mentality of peace and intercultural, responsive communication and understanding. One could think of two broad areas in which the humanities and the arts could prove particularly helpful: A) Initiating extensive historical-theoretical reflection, as well as sustained intercultural and transdis-

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ciplinary dialogue on past, present, and future ICT within local-global reference frames; B) Participating in the creation and development of new Internet projects and software concepts, based on, and further amplifying, emerging intercultural knowledge/wisdom.

A) Sustained Historical-Theoretical Reflection and Intercultural Dialogue on ICT

The humanities are ideally positioned to initiate and mediate this kind of intercultural and transdisciplinary reflection and dialogue. They possess the analytical and theoretical tools, as well as the historical perspective, that are indispensable for such intercultural dialogue to be successfully translated into meaningful action at various local-global levels. In the previous chapter, I have exemplified this kind of humanistic approach through my discussion of canonic, disciplinary thinking within a global reference frame, as well as through my analysis of an early instance of globalitarianism in Elizabethan drama. In the present context, one could examine, for instance, the neoliberal claim that the new ICT creates an unprecedented effect of space-time compression on a global scale. Obviously, there is some validity to this claim, particularly with respect to the virtual spacetime created by the Internet and the ever-increasing speed of some of our physical communications and transportation. Yet, one could easily qualify and temper such claims, if one placed them in an intercultural reference frame.

As I show in Chapter 1 of *Global Intelligence and Human Development*, space-time compression is operative only within the global subculture generated by the utilitarian mentality of network capitalism, that is, within a clearly circumscribed sphere of cultural reality. Therefore, it can hardly be treated as a universal phenomenon. Cultural spacetime may vary greatly from civilization to civilization, indeed, even from human community to human community. Therefore, it is imperative for any theory of globalization to explore these variations, and for any proper globalizing effort to submit such concepts to the same process of sustained intercultural research, dialogue, and negotiation that is appropriate for other culture-specific notions and practices.

As to the temporal and spatial dimensions of the Internet, the humanities might wish to reflect on an alternative definition of cyberspace. Currently, cyberspace is looked upon as a specific spacetime with definite characteristics or qualities. Yet, upon close examination, it reveals itself to be a liminal space that enables the generation of a theoretically limitless number of spacetimes. This line of thinking has already been initiated by Timothy Leary in his book on *Chaos and Cyberculture* (1994) and, in his wake, by a number of performance theorists such as those included in Michael Benedikt's collective volume, *Cyberspace: First Steps* (1991), Phil Morle in his *Communitek: Performance at the Electronic Frontier* (1995), posted at http://www.cyberstage.org/archive/cstage12/intperf12.htm, and Toni Sant, in his "Liminality

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and Altered States of Mind in Cyberspace" (2001), posted at http://limen.mi2.hr/limen1-2001/toni_sant.html. What all of these studies have in common is the assumption that cyberspace is a liminal state, reached through surfing the Internet, understood as an electronic rite of passage from everyday consciousness to a higher level of consciousness. At this heightened, altered state of consciousness (whether mouse click- or drug-induced), everything becomes virtually possible and alternative worlds begin to emerge.

One may, however, note that, not unlike Iser's concept of liminality as vortex or black hole that I discussed in Chapter 1 above, this "altered consciousness" approach mostly limits cyberspace's potentialities to enabling the emergence of power-oriented worlds and thereby obscures its limitless nature. It is this limitless or indefinite nature that cyberspace shares with other liminal spaces, making it a locus where any kind of reality might emerge, including alternative worlds that operate on organizing principles other than power. On the other hand, cyberspace, like other liminal spaces, receives its definite or specific spatial-temporal structures through what the human imagination can conceive at a given place and time. Consequently, despite the virtually infinite potentialities of the Internet as a liminal space, most of its current uses show a remarkable failure of imagination, reproducing the same communal structures and human relations that have been in force for the last two millennia.

The cultural-theoretical and historical reflection of the humanities can be, and has been, supplemented with artistic staging of what it would be like to live in a world permeated by the kinds of ICT that we are currently developing. In this regard, the contemporary technosciences have seized the imagination of our popular fiction writers and filmmakers, who have produced a large amount of artistic works, indeed an entirely new artistic genre, devoted to robots, cyborgs, and other human-machine hybrids. Among these, the science fiction of Isaac Asimov and William Gibson; Stanley Kubrik's film, *2001: A Space Odyssey*; and the ever-popular television series *Star Trek* can be considered as creative trendsetters. Yet, far from being new, most of these works take up and adapt traditional themes from world literature. In addition to Marlowe's and Goethe's *Faust* (as well as the latter's "Sorcerer's Apprentice"), one may cite the story of the Golem or that of Frankenstein, or that of Dr. Moreau's Island, as forerunners of the current futuristic dystopias that stage the fatal dangers of a technoscientific mentality, driven by the will to power.

Since these popular culture productions have received more than enough attention from Western-style, cultural studies, here I shall instead examine *Crabwalk* (2002), the most recent novel by Nobel-Prize winner Gunther Grass. I have chosen this particular novelistic example because it imaginatively uses e-culture and hypertextual techniques to comment on contemporary German society's infatuation with ICT. Grass reveals this infatuation to be an extension of an earlier, Nazi fascination with the will to power and its utilitarian war machine. But he also extensively explores the cultural effects of electronic

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spacetime compression within the Western world, complementing the preceding theoretical remarks on this topic.

The narrator, journalist Paul Pokriefke, sets out to tell the story of the sinking of the *Wilhelm Gustloff* at the end of World War II. This German cruise ship was originally designed to promote the national socialist propaganda of a "classless society." But because, during the war, the *Gustloff* was turned into a military hospital and refugee carrier, it was eventually attacked and sunk by a Soviet submarine in the Baltic Sea in 1945. This event involved a human tragedy far exceeding that of the sinking of the *Titanic*, including the drowning of thousands of children, women, and wounded soldiers. Yet, it was largely swept under the historical carpet both by the "denazified," postwar German authorities and by the Stalinist Soviet regime. Pokriefke is apparently the only child who was born at the very moment of the sinking of the ship (and one of the very few to be saved), on the fatidic date of 30 January, which coincided with the Nazi accession to power twelve years earlier.

Until now, however, Pokriefke has been very reluctant to tell the story of the ship, despite his mother's continuous prodding. He first attributes this reluctance to qualms about his professional ethics as a journalist, whose "objective" reporting of the facts would presumably be colored by his personal involvement in the tragedy. Later on in the narrative, however, he admits the possibility that he has used his professional ethics simply as an excuse to avoid tackling a highly sensitive political issue—according to his own confession, he has hardly ever taken a risky political stand on anything and has not even voted for years, even though he considers himself a liberal. He finally gives in to the pressure of telling the story, which now comes not only from his mother, but also from his boss at the newspaper. The latter presumably wants to cash in on the reawakened public interest in Germany, after the reunification, in discussing the country's recent past that has effectively been repressed in both the West and the East for decades.

From the outset, then, the journalist appears as an unreliable narrator who is mostly in bad faith when it comes to explaining his own motives and actions, as well as those of others. One cannot take his judgments at face value, so that the reader learns much more about the fictional world of the novel *through* him, rather than from him. The gap between the narrative persona (Pokriefke) and the authorial persona (Grass) also accounts for the ironic structure of the novel, ranging from good-natured parody to devastating sarcasm.

As is his practice with other journalistic assignments, Pokriefke turns to the Internet for "background research" on the *Gustloff* tragedy. He is not sure, however, about how to tell his story: "should I do as I was taught and unpack one life at a time, in order, or do I have to sneak up on time in a crabwalk, seeming to go backward but actually scuttling sideways, and thereby working my way forward fairly rapidly?" (Grass 2002: 3) He chooses the second narrative technique, which also happens to be that of the hypertext—the synchronic, asso-

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ciative principle on which the Internet is based and which gives the surfer the illusion of the annulment of time and space that I have previously mentioned.

Searching the Internet, Pokriefke soon comes upon a neo-Nazi Web site, devoted to the *Wilhelm Gustloff* tragedy. And according to the Internet logic of everything being connected to everything else, he soon discovers that on this particular Web site he has "a familial connection" (142): the site turns out to be designed and run by his teenager son, Konrad ("Konny") Pokriefke. Unlike his father, Konny has already obeyed the Siren call of his grandmother and has engaged in extensive, if biased, research on the sinking of the ship, which he uses as pro-Nazi and anti-Soviet propaganda.

Konny is a typical broken-marriage offspring who goes through his rebellious phase by challenging his parents' supposedly enlightened values, especially those of his mother, who considers herself a liberal and a "successful," secondary-school educator. He also challenges his teachers' reluctance to debate Germany's Nazi past openly or to entertain any views of it that are not officially endorsed. Although Konny adopts an extreme political view, he is too much of a "nerd" to remain involved with one of the local neo-Nazi skinhead gangs that have sprung up in East Germany in the wake of reunification. After a short brush with them, he decides to turn to the Internet in order to vent his anger and frustration with his parents and the so-called democratic, yet thoroughly repressed and hypocritical, society that they and their generation have created.

Because Konny cannot communicate with his parents and teachers any more than the latter seem to be able or willing to communicate with him, he chooses an anonymous persona in cyberspace to express his thoughts and interact with others. But he also chooses to place these thoughts and interaction within a historical reference frame that directly involves his family, particularly his father. Thus, Konny attempts, through the Internet, both to communicate with his father indirectly, at the subliminal level, and to understand his own place in relation to the family history, so closely interwoven with the larger, national, European, and world histories.

Konny's Internet persona is "Wilhelm," which is also the first name of Gustloff, a Nazi activist from Schwerin, the East German hometown of Konny's father and grandmother. During the mid-1930s Gustloff had settled in Switzerland, where he had recruited new Nazi party members from the German and Austrian communities. For that reason he had been shot to death, at his Swiss residence in Davos, by David Frankfurter, a Jewish medical student from Serbia. As a result of his assassination, this minor party henchman became a Nazi "martyr" who was buried with great pomp and circumstance in his hometown, in the presence of the Führer himself. Gustloff also had a monument erected in his honor, as well as a number of places and institutions named after him, including the Nazi cruise ship on which Paul Pokriefke was born. Konny has obviously decided, to the dismay and acute embarrassment of

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his father, to adopt Wilhelm Gustloff as his role model and to revive and perpetuate his hero's memory on the Internet.

In the chat room of the same Web site, however, appropriately entitled www.blutzeuge.de ("www.stigmata.germany"), another Internet user, who identifies himself as "David," assumes the persona of David Frankfurter and presents the "Jewish perspective" on both the assassination of Gustloff and the sinking of the cruise ship by the Soviet submarine. At first, the narrator believes that this second persona might also belong to his son, who would split himself in dialogical fashion to present both sides of the issue, in the interest of historical fairness and objectivity.

However, this Web site user turns out to be another discontent teenager, with "good," liberal, middle-class parents who are reluctant to discuss the Holocaust with their son. As the narrator speculates, the heated debate between the two teenagers, who seem to share many interests and hobbies and seem to have learned a lot of German and European history in the process, could be regarded as harmless, perhaps even useful. After a period of mutual venting of virtual anger, they seem to have reached the cordial position of "agreeing to disagree" and even to have become friends of sorts.

Yet, the two teenagers attempt to turn this virtual friendship into a real one and agree to meet in Schwerin, at the site of the by now long dismantled memorial hall of the Nazi "martyr," Gustloff. The "Jew" David spits upon the erstwhile gravesite to express his disdain for what it represents. In turn, "Wilhelm" reacts by shooting him to death, in the name of the "German people." Thus he allegedly avenges the assassination of his hero—carried out, according to the assassin David Frankfurter, in the name of "all Jews"—more than half a century before.

Ironically, the murder weapon is a World War II Soviet pistol that Konny's grandmother has given him (in addition to the Mac computer), in order to defend himself against the neo-Nazi skinheads who had tried to rough him up. Even more ironically, at the trial, it turns out that the "Jew" David is not at all Jewish, but from "solid," German Protestant stock. Just like "Wilhelm," he has tried out a different virtual identity on the Internet, with fatal consequences in real life.

Konny's prison term seems to bring about the expected reformation and, perhaps, as in *Crime and Punishment*, the promise of the spiritual redemption of the murderer. It also seems to bring reconciliation and mutual acceptance between father and son. Yet, when Paul Pokriefke checks the Web sites devoted to the "accursed ship" for the last time, before closing this tragic chapter in his life and becoming reconciled with his own past, he comes upon a brand new development: "At the URL www.kameradschaft-konrad-pokriefke.de, a Web site introduced itself in German and English, campaigning for someone whose conduct and thinking it held up as exemplary, someone whom the hated system had for that very reason locked up. 'We believe in you, we will wait for

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you, we will follow you….' And so on and so forth." (Grass 2002: 234) The journalist concludes his narrative on a fatalistic, despairing note: "It doesn't end. Never will it end." (234)

I have greatly simplified Grass's novel, which works on many fictional levels and reference frames, in order to highlight his skillful use of the Internet as a narrative device. But *Crabwalk* is also a devastating critique of what Paul Pokriefke calls, when referring to the World Wide Web, "our global playground" and "vaunted ultimate venue for communication". (Grass 2002: 142) Obviously, this critique does not concern the medium itself, but the unimaginative, trite, and destructive uses that it has all too often been put to. Grass explodes some of the common neoliberal myths about the socially and morally redeeming value of our new ICT, viewed as a super-powerful, magical instrument that will help us overcome all of our physical, human, and historical limitations. Particularly relevant to the present context is Grass's critique of two, closely interrelated, euphoric concepts of the Internet: 1) that it annuls physical time and space as if by magic and 2) that it generates new social and physical realities, including new personal identities and communal solidarities.

As we have seen, Internet analysts have argued that cyberspace replaces physical time and space with virtual spacetime that enables us to perform extraordinary physical, commercial, and even spiritual feats. While it is true that cyberspace is a form of liminality that could, in principle, facilitate the emergence of new ontological and epistemological reference frames or alternative realities, *Crabwalk* shows why such alternative realities have so far failed to emerge. The much-vaunted annulment of physical time and space has tended, on the contrary, to produce confusion and scrambling of existing ontoepistemological and historical reference frames. Because on the Internet all events appear as both independent of any specific locality and simultaneous, or virtually interconnected, surfers can easily lose their sense of place and circumstance and, therefore, of history. But what will replace this sense, in the absence of any alternative ontoepistemological frames of reference?

At first, Pokriefke is unaware of the far-reaching, potentially dangerous, implications of the virtual annulment of specific time and place, for he notes: "Only this much is certain: Nature, or to be more precise, the Baltic, said yea and amen more than half a century ago to everything that will have to be reported here." (Grass 2002: 3) As it turns out, however, this may be the case for a linear view of history, such as Pokriefke's, but not for a nonlinear view of it, such as is often produced by the Internet. Where there is no sense of history or, even worse, when this sense becomes repressed, the fatalist logic of the eternal return of the same will often take its place. To be more specific, the modernist concept of time as linear, continuous progression will as a rule be replaced by its symmetrical opposite, the Nietzschean, circular concept of time as the eternal return of the same, which, to Nietzsche, means the return of the same will to power.[10]

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Pokriefke begins dimly to realize the adverse effect of physical time-space annulment when he complains, always from his linear, historical perspective, that "since the *Gustloff* was launched into cyberspace, making virtual waves, the right-wing scene has been vocal online. Jew bashing is in season again. As if the murder in Davos had taken place just yesterday, radicals are demanding on their Web site 'Revenge for Wilhelm Gustloff'!" (Grass 2002: 64) Or, again, when he notes that "Webmaster Wilhelm" celebrates the deployment of the *Gustloff* off the English coast with "such up-to-date enthusiasm that you would have thought this propaganda coup had been pulled off only recently, not almost sixty years earlier." (65) But the narrator slowly begins to realize that the Internet does nothing but obey the logic of its users, in this case, the logic of the eternal return of the same will to power.

One such return is that of fatidic dates (symbolic numerology was one of the well-known Nazi obsessions), specifically of what Pokriefke calls that "damned date," 30 January, which is his birthday, as well as the date of the Nazi takeover and the sinking of the *Gustloff*: "How it clings to me, marks me. What good has it done that I have always avoided celebrating my birthday—whether as a schoolboy or a university student, as a newspaper editor or husband, whether among friends, colleagues or family members? I was always afraid that at a party someone might pin the thrice-cursed significance of the thirtieth on me—in a toast, for example—even when it looked as though this date, once force-fed to the point of bursting, had slimmed down over the years, becoming innocuous, a day on the calendar like any other. By now, after all, we Germans have come up with expressions to help us deal with the past: we are to atone for it, come to terms with it, go through a grieving process." (Grass 2002: 122) Yet, the Internet has brought all of it back, as if it had happened yesterday: "flags had to be displayed—still, or again—on the thirtieth, the state holiday. At any rate, my son highlighted the day of the Nazi takeover as a red-letter day, for all the world to see." (122)

Of course, Pokriefke could have offered a different, positive interpretation of the "fatidic" 30 January. For example, he could have linked the sinking of the cruise ship in 1945 with the impending fall of the Third Reich later that year, and his birth and miraculous survival, with a fresh beginning for his family and for Germany. But, he remains caught up in the *amor fati* of power, the implacable logic of the eternal return of the same. The nonlinear metaphor that he applies to Germany's historical "fate," closely interwoven with his own and his son's, is less elegant than Nietzsche's Ouroboros (or the snake that bites its tail) in *Thus Spake Zarathustra*, but it is no less appropriate; it could easily be extended, moreover, to a lot of the historical (and commercial) flotsam and jetsam that pops up again and again on the Internet: "History, or, to be more precise, the history we Germans have repeatedly mucked up, is a clogged toilet. We flush and flush, but the shit keeps rising." (Grass 2002: 122)

To change metaphors (without necessarily making them more palatable), Pokriefke, by entering his story via the Internet, finds himself caught up in a

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vast and intricate spider's web. In the end, he sees no escape out of this (worldwide?) web, neither for himself, nor for his nation. It would take another frame of reference, or another type of mentality altogether—the authorial persona, rather than the narrator seems to imply—to turn the Internet into a celebration of life in all its symbiotic diversity, instead of an eternal return of the same cycles of violence and suffering.

A second issue that *Crabwalk* throws considerable light on and that is closely interrelated with the first one is the Internet's vaunted ability to facilitate the creation of new personal identities, social role-playing, and communal solidarities. (Turkle 1984; 1996) While this ability cannot be denied, it has also produced many unfortunate, largely unintended consequences. Because of its easy accessibility, anonymity, and global reach, the Internet is an ideal, safe place to express *any* views and to project *any* identity, no matter how fancy, extreme, or self-aggrandizing they might be. There will always be another logger to share your special vision, interest, or obsession.[11]

Furthermore, the Internet is a medium of communication that does not necessitate direct physical contact or interaction and, therefore, no deep ontological commitment. In cyberspace, one could safely ignore conflictive difference, whether ethnic, racial, religious, or ideological, and focus on binding commonalities. But even in the case of conflict, individual differences cannot escalate beyond the level of verbal violence, and virtual communities can usually arrive at reasonable compromises, in the name of the special interest or hobby that has brought them together in the first place.

Yet, as we have seen in the case of "Wilhelm" and "David," their role-playing on the Internet turns deadly in real life, not least because they choose to become actors in the mimetic drama of the eternal return of the same. The narrator claims he cannot understand the behavior of the two teenagers: "Whatever had induced the virtual David to respond to a vague invitation and travel, in the flesh, by train all the way from Karlsruhe, where the eighteen-year-old schoolboy lived with his parents, the eldest of three sons? And what had got into Konny to make him seek an actual encounter that would convert into a reality a bosom-enemy relationship that had developed over the Internet and was essentially a fiction?" (Grass 2002: 184)

But the narrator himself provides an indirect clue to this "inexplicable" behavior when he comments on the murder scene: "In front of the youth hostel, closed at this time of year and seemingly lifeless, something happened that was not predestined yet played itself out on the mossy foundation of the former [Gustloff] memorial hall as if rehearsed." (184) Indeed, the two teenagers are compulsively reenacting an ancient script: the sacrificial, scapegoat ritual. This ritual is merely a special instrument of the "eye for an eye" or revenge mentality that is, in turn, merely one act in the worldwide drama of the will to power, where aggressors and victims constantly change places, in a never-ending *danse macabre*.

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Yet, it is again the authorial persona rather than the narrator who points to the failure in imagination on the part of many Internet users. Instead of availing themselves of the Internet as a great opportunity to create individual identities, human solidarities, and local-global communities, based on alternative organizing principles and values, they rehearse the same interests and obsessions that have preoccupied the ruling classes of the world for the better part of its known history. Just like Konny and David, such users become mere actors in the mimetic drama of the eternal return of the same will to power, which is now also being played out on the Internet.

The narrator actually skirts the fundamental issue, by trying to present the conflict between the two teenagers as a special case of the ontological confusion between fiction and reality or illusion and truth that is a common theme in world literature. In this case, the Internet would be simply a virtual or fictional world, or a World Wide Book of immense proportions, where everything relates to everything else as in Baudelaire's "correspondences." Although in a certain sense it is also that, the Internet ultimately transcends any traditional ontological divisions or binary oppositions, engaging in subtle and complex feedback loops with the various realities or reference frames that traverse its cybernetic, liminal space. In other words, the Internet, like Nature, will return to us anything that we bring to it. So the issue is not that we should keep the Internet and "real life" separate, as the narrator implies (and as if we could), but that we should approach it with the same regard and sense of responsibility that we ought to have toward other human beings and all other living and nonliving things.

The foregoing theoretical reflections on the idea of electronic space-time compression, complemented by Grass's fictional exploration of this idea, have thus highlighted the need to take into consideration the (inter) cultural dimensions of technology when creating and developing new forms of ICT, appropriate for local-global learning environments. In terms of a concrete program of action, the humanities and the arts should, in close cooperation with the social and the natural sciences, as well as with prominent, nonacademic researchers and practitioners in various ICT fields, organize worldwide colloquia and workshops, collaborative projects, and other forms of intercultural and transdisciplinary activities. They could set the agenda of a worldwide, sustained dialogue on the ethical and social implications of current ICT and on the type of ICT that should be developed in consonance with the values and goals of global intelligence. Indeed, the most important task of such worldwide deliberations would be to reach a general consensus as to what these values and goals might be in the first place.

B) Internet Projects and Technology Platforms for Local-Global Learning Environments

A number of studies have already explored the role that humanistic fields such as rhetoric, linguistics, semiotics, reception theory, and aesthetics have played

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in organizing and presenting, as well as controlling, the content of the electronic information that flows through the Internet or the other New Media. (Stockinger 2001) In addition to such auxiliary functions of designing and treating received content, largely of a commercial, political, or entertainment nature, the humanities could launch a large number of Internet projects that would have their own research and learning content. The purpose of such projects would be to remap intercultural knowledge and reorient it toward global intelligence. A few such projects are already afoot, even though their explicit goal may not necessarily be that of global intelligence.

For example, there is a research project of creating a world encyclopedia, entitled New Encyclopedia of Knowledge-New Archive of Knowledge, or NEP-ARK for short (complete details about the project can be found at nep@tcs.ac.uk). This encyclopedia of global knowledge will be available through the Internet and will be compiled according to hypertextual principles. It is being developed by an intercultural and interdisciplinary team of researchers from a number of countries, including China, Japan, Korea, India, Singapore and the UK, under the leadership of the *Theory, Culture, and Society* group (Mike Featherstone, Scott Lash, Bryan Turner, Roy Boyne, and Couze Venn), at Nottingham Trent University.

NEP-ARK proposes to rethink the framework of knowledge in the social sciences and the humanities from a global standpoint and has set itself two major tasks: to examine critically the dominant, Western-style paradigm of acquiring, classifying, and distributing knowledge; and to recover, as well as to generate, alternative cognitive methods, belonging to Western and other traditions that have been neglected or suppressed in the past. So far, the encyclopaedia has not advanced much beyond its critical task, which, at least to me, seems to be the easier part of the project. As I have pointed out in the previous chapters, we modern Westerners are very good at "critical thinking," but not so good at intercultural dialogic thinking, the development of which, I believe, is one of the principal objectives of NEP-ARK that will, in the end, define its success.

In turn, one can propose, as a complement and supplement to NEP-ARK, a World Encyclopedia of Cultural Terms, to be compiled by interdisciplinary and crosscultural research teams of linguists, semioticians, cultural anthropologists, sociologists, psychologists, philosophers, political scientists, economists, computer scientists, humanists, historians, artists, and the like. The encyclopedia would not be eclectic, as most such compilations are, but would present each major cultural term in its historical perspective and in the context of a comparative analysis and cross-referencing with another similar or related term in a different culture or system of values and beliefs. Just as in the case of NEP-ARK, the project would involve innovative use of high-performance data mining and management systems, based on advanced, AI computing methods. Once posted online, the encyclopedia will never reach a "definitive" form, but will be continuously updated and refined, with additional entries pro-

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posed by users and evaluated and processed by the original teams and/or by the automatic management system.

There are other innovative projects in the humanities that use the Internet in a creative way. To give just one more example, the Russian-American thinker and educator Mikhail Epstein has founded the InteLnet, which stands for "Intellectual Network" and can be found on the Internet at http://www.emory.edu/INTELNET/ This is an interactive site and a "virtual community" devoted to generating and debating interdisciplinary ideas in the humanities. For Epstein, the Internet is "analogous to the human mind, with its conceptual links and associations." (Berry and Epstein 1999: 276) Since the World Wide Web arose primarily as a technical concept, however, InteLnet seeks "to bring the humanistic 'message' of the Internet in line with its electronic 'media', to elaborate the methodology of thinking adequate to the multidimensionality and interconnectedness of computer networks." (277)

The InteLnet has five objectives, presented as five separate projects: 1) The Bank of New Ideas, which promotes "new ideas that reconfigure the paradigms of humanistic knowledge and transcend the borders of existing disciplines"; 2) Thinklinks, which explore "meaningful connections of concepts and ideas among the diversity of disciplines"; 3) InteLnetics, which seeks to elaborate "the methodology of a new humanistic metadiscipline responsive to the demands and possibilities of an electronic environment"; 4) InteLnet Journals or specific electronic sites promoting the "crystallization of new humanistic disciplines and areas of research"; and 5) the Interactive Anthology of Alternative Ideas, devoted to the creation of "interactive textual bodies that might grow in time and involve the collaboration of many minds." (Berry and Epstein 1999: 277)

Although the five projects are presented as separate, they are obviously interrelated. All of them are intended to stimulate out-of-the-box or alternative thinking in the humanities, away from a disciplinary mentality that Epstein regards, just as I do, as the largest stumbling block in the further development of not only humanistic, but also all other knowledge. Of course, the point is to encourage not so much interdisciplinarity (which preserves disciplinary thinking intact) as transdisciplinarity or thinking that frequently emerges at the borders, or within the liminal spaces, between constituted disciplines. As Epstein aptly observes, in disciplinary academia (and in other domains of intellectual and practical activity as well), "the most innovative ideas are usually found on the borders between various fields, so that they have difficulty 'passing muster' with specialized scientific councils and committees and are subsequently lost to that larger science for which they were intended. A truly new idea seldom fits into ready-made spheres of knowledge; rather, it wrenches itself away from the established set of dissertation topics to create its own sphere." (Berry and Epstein 1999: 278)

The InteLnet projects are also intended to nurture constructive, rather than "critical" thinking, along the lines that I have suggested in Chapters 1

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and 2 of the present study. For example, The Bank of New Ideas will not accept deposits of "purely critical or polemical ideas" (Berry and Epstein 1999: 280), which are judged to be counterproductive in a transdisciplinary and, one may add, intercultural context. Epstein also develops the term "positive deconstruction" to counter the critical type of deconstruction, inspired by the work of Michel Foucault and Jacques Derrida, which remains fashionable in certain academic circles. Positive deconstruction, Epstein writes, "deploys a series of constructive alternatives for a concept or theory; instead of focusing critically on the given discourse, it potentiates new ones, inscribes each concept into a broader framework where it can be posited as only one in a whole family or cluster of concepts. This is a logical potentiation of a term, multiplication of its possible meanings, the process of building it into a larger field of consciousness." (291)

Here Epstein displays the kind of reference-frame thinking that is at the foundation not only of systems theory, contemporary cybernetics, and "deep" ecology, but also of the Internet itself. As he himself points out, cybernetics and inteLnetics as a humanistic metadiscipline can be traced back to the same "spiritual father," the German philosopher and mathematician Leibniz, who proposed the project of a "universal science capable of characterizing not only quantities but qualities." (Berry and Epstein 1999: 285) Later on, this project split into technical and humanistic parts with adverse consequences for both areas of knowledge. According to Epstein, the World Wide Web is an excellent opportunity and ideal medium to reunite cybernetics and inteLnetics, although I would beware of calling this project a "universal science" just as yet, lest we unwittingly reinforce Western cultural globalitarianism. We would obviously need extensive intercultural research, dialogue, and negotiation before we could arrive at this kind of universal or global science, which, in any case, can be only an emergent phenomenon, or a World Wide Book, eternally in progress.

In addition to using the Internet creatively as Epstein does, the humanities could go even farther and contribute to the development of innovative intercultural software programs and advanced technology platforms. The humanities are well equipped to make this contribution at both the conceptual and the design level. The existing technology platforms for most applications are largely monolingual and monocultural and are not geared toward intercultural learning, communication, and understanding. The reasons for this inflexibility and inadaptability of our current ICT are many, ranging from insufficient computing capacity, to rigid rather than reconfigurable computing, to software incompatibility, to protectionist company policies, to cultural insensitivity, and so forth. Above all, however, most of the programs and platforms are produced by Western-style software companies and are based on reductionist, linear scientific notions that are typical of contemporary, mainstream technoscience. Even those software programs that are supposedly designed for automatic

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translation are not flexible or complex enough to render anything but Anglo-American scientific and technical terms into other languages with any degree of accuracy.

The overwhelming majority of software programmers focuses entirely on utilitarian, financial goals and has neither the interest nor the necessary knowledge to write intercultural programs that would be even more complicated and expensive than the current, "standard" ones. The prevailing attitude in the ICT sector and our technocratic establishment in general is that other cultures should adopt Western (largely Anglo-American) business and technological methods, or else miss the great financial benefits that accrue to members who belong to the "information-rich" country club. Consequently, intercultural information becomes more and more "standardized," that is, ever poorer, while communication becomes more and more monological. Indeed, one may speak of an increasing loss of diversity not only at the global ecological, linguistic, and cultural level, but at the global information and communication level as well, with disastrous consequences for the further development of humanity.

The advent of quantum computing and quantum information technology might offer some viable solutions to these problems, at least at the conceptual and design level (but certainly not at the level of cultural behavior or human mentality). The idea of quantum computing has arisen in relation to Moore's law, which I mentioned in the previous section: if microprocessors continue to shrink in size, the individual elements of the circuitry packed on silicon chips will eventually become as tiny as a few atoms. This would mean that the behavior and properties of the circuit would become quantum mechanical in nature. Therefore, quantum physicists such as Richard Feynman (1982) have raised the question whether one could devise a computer based on the principles of quantum mechanics.

In a serial, digital computer, binary bits (represented numerically as either 0 or 1) are encoded so as to obtain a useful computational result. In a quantum computer, bits are called "qubits," because their structure is not binary, but quaternary. Following the principles of quantum physics, a qubit can exist not only in a state of 1 or 0, but also simultaneously as both 0 and 1, with a numerical coefficient representing the probability of each state. This superposition of states, known as quantum interference, would allow for enormous calculation power. Any quantum operation on that system could compute not just on one machine state, as serial computers do, but on 2 500 states at once. This quantum parallelism, achieved through superposition of states, is the equivalent of performing the same operation on a digital computer with ~10150 separate processors—of course, no such giant, digital supercomputer could ever be designed and manufactured.

Several difficulties need to be surmounted before actually building a quantum computer, including the interrelated problems of decoherence and error correction. "Decoherence" is the tendency of a quantum computer to decay

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from a given quantum state, just as, in a controlled quantum mechanics experiment, two paths that a quantum particle travels simultaneously collapse into a single path upon measurement. Thus, if one directly measures the state of a qubit, one will destroy the superposition of states in which it exists, turning it into either 1 or 0. Decoherence leads to computing errors that must be corrected, if quantum computing is to become effective. Although some advances have been made in this respect, resulting in the construction of small-scale quantum computers, the immediate prospects of building large quantum computers, let alone mass-producing them, remain rather dim.

The idea of quantum computer hardware has also stimulated efforts to design applications and software programs that would use them. Such software programs would process enormous amounts of data and would need to reach a level of complexity much beyond that of any of the current standard software programs, which, despite promotional hype, remain rather primitive and unsophisticated in both concept and design. Feynman himself thought that quantum computers could actually model quantum physical events, thus becoming an important instrument of studying such events. A commercial (and military) application would be encrypting and cracking codes that are usually based on the limited capacity of digital computers of handling extremely large numbers, which, by contrast, quantum computers could handle with great ease. Much more interesting, from the standpoint of an emergent ethics of global intelligence, would be those AI applications that would be able to process extremely large amounts of data in order to model human thought in all its diversity, including its almost infinite number of sociocultural and intercultural contexts. I am familiar with at least one such advanced technology platform, based on what its creator, Hardy F. Schloer, appropriately calls Quantum Relations Theory.[12]

As its name indicates, Quantum Relations Theory, or Quantum Relations (QR) for short, starts from the basic insights of quantum physics. At the same time, however, it argues that these insights should apply not only to the physical world, but to the human world as well. In this sense, QR is both a critique and an extension of the principles of quantum mechanics and of the theory of relativity. Although these theories recognize that the presence of the observer modifies the nature of the phenomena observed, they do not act upon this recognition in a radical and consistent manner. Moreover, QR incorporates the insights of general systems theory, as well as those of Whitehead's philosophy of process. It also meets the criteria of a transdisciplinary, integrative science, "capable of characterizing not only quantities but qualities," to adopt Epstein's description of Leibniz's cognitive model.

Just like systems theory and Whitehead's process ontology, QR moves away from the Western classical ontological premise of the independent existence of a knowing subject and a knowable object. It postulates that nothing exists independently in our universe and that reality arises primarily not as

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objects and entities, but as dynamic networks of relations among such objects and entities, which are in a state of continuous flux. Everything arises contingent on conditions or events (understood in both a physical and a mental sense). Things do not possess an unchanging, abiding essence. They arise codependently, so that reality can be described only in terms of relations among objects, entities, and self-organizing systems, nestled within each other and within our universe. In turn, our universe is nestled within larger universes or relational frameworks.

Schloer subscribes to the assumption of general systems theory that our universe is a web of interrelated systems that mutually affect each other when they interact. QR is a theoretical account of the ways in which such systems interact (and not of the way systems "are"). If different systems present different accounts of the same sequence of events, then each description of reality can be understood only as relative to a particular system. A system can have a reciprocal relationship with another system, but any description of reality by one system is "interaction-dependent" and can only be viewed through the relationships that arise between the "observer" system and the "observed" system at any given moment. If this relational process applies equally to all systems in our universe, then it should also apply to any possible description of the human mind. We can thus describe mind or "consciousness" by the same relational processes that we use to describe physical and other systems.

According to Schloer, whereas quantum mechanics and general relativity provide reasonably accurate descriptions of how nature works, they leave out a crucial component that is the basis of any scientific observation and insight: the human mind. Although some physicists have suggested that consciousness or awareness is a quantum process (Bohm 1990; Nanopoulos 1995; Stapp 1995), no successful attempt has so far been made in the physical sciences to incorporate the mind in our description of nature.[13] QR seeks to fill this gap.

QR further departs from Cartesian dualism by postulating a relationship of mutual causality between subject and object, or mind and matter. Modern science has mostly seen itself as an objective and impersonal search into the nature of reality. QR emphasizes the need to shift scientific thinking away from the quest for objective Truth towards the recognition that all scientific data are observer-dependent and that all approaches to reality, including scientific ones, are influenced by subjective experience. QR, then, acknowledges the inherent unity of the body and mind through the complex networks of relations that emerge among its components.

This holistic viewpoint is essential in describing consciousness in its full subtlety and in exploring its complementary relationship with the physical world. At the same time, QR acknowledges that the conventional notion of causality, defined as a linear, local, and physical relation, is inadequate for describing the complementarity of mind and body. QR replaces this conventional notion with the nonlinear and nonlocal concept of mutual causality, thus

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providing a much more complex, qualitative account of the reciprocal relations among the systemic networks that our minds and bodies constitute.

According to Schloer, a human mind forms quantum relations with other systems and builds an internalized universe (state-space) composed by these relationships. QR defines a "quantum relation" as the relationship or interaction that arises between an observing system (*System S*) and the observed system (*System O*), involving a mutual exchange, transfer, or conversion of small, discrete units of energy, or any other quantum between the two. QR further assumes that a human mind is a network of associations between "quantum instances." A quantum instance is a discrete unit of reality as perceived or imagined by a human mind. It also refers to a family of properties that describe one or more mental states. Quantum instances may include individual thoughts, ideas, emotions, sensations, perceptions, dreams, images, or any other category that pertains to a mind's conception or description of physical/mental phenomena. One should, however, not attribute absolute reality to any single mental quantum instance, because, according to QR, the only reality constitutive of a human mind resides in the relations that arise between quantum instances, and not in the quantum instances themselves.

In QR, as in quantum mechanics, all information about the internal relations among quanta is embodied in the mathematical relations between the vectors and operators that represent them, just as the information about the relations between locations in a city is contained in the spatial relations between the points that represent them on a map. The only difference between QR and quantum mechanics in this respect is that states and quanta in quantum relations represent mental/physical systems or subsystems, instead of merely physical systems or subsystems, and that the network of relations among their members reveals an individual mind's perception of reality.

Quantum instances are structured within the mind in spaces according to their "observer-dependent" properties. At any given moment, the state of a human mind consists of a complete specification of its quantum instances or "state-dependent" properties, which change with time. In quantum mechanics, relations in physical systems can determine the structure of its properties. By the same token, in QR the values given to mental quantum instances reveal the relations that exist among its properties, and therefore, the state of a human mind. A bivalent mental unit, for example, forms a set with two valences. In QR, a "valence" is a value that could denote, say, the degree of attraction or aversion of a quantum instance toward another specific quantum instance, the degree of truth or falsehood attributed to a given experience, and so forth. Thus, humans can mentally associate an instance of physical reality by determining its "observable" properties. The mathematical objects that represent the elements in some mental set of valences tell us about the quantum relations among them.

To model conscious experience, QR represents the state of a human mind by vectors within normalized state-spaces. In quantum mechanics, the state-

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space of a system is the space formed by the set of its possible states. A state-space also refers to the mathematical model that represents that space, or one that provides a map of the set of possible states. In turn, QR employs state-spaces to describe the internal processes of a human mind and the behavior of its mental quanta, or the quantum instances that comprise it. State-spaces in QR, as in quantum mechanics, are different from those of classical physical models, being special kinds of vector spaces, called "Hilbert spaces." Thus, in QR a mental system is associated with a Hilbert Space, with every unit vector in the space corresponding to a possible state of the system, and vice versa. QR assumes that the internal structure of mental vector spaces and the dynamical rules that specify the paths through which those vectors travel provide an adequate description of a mental/physical system.

Furthermore, since quantum mechanics attempts to model subatomic reality as dynamic flux, it graphs the occurrence of physical quantum events in terms of probability, dealing with continuously variable probabilities, such as the x-coordinate. Because there are an infinite number of possible points on a line, the probability of determining the exact value of x is infinitely small. Instead, one works out the probability of x lying within a small interval on the axis and gives it a range of possible numbers. In turn, QR interprets the dynamic of mental quantum instances exclusively in terms of probability. Since human minds tend to describe reality in a subjective and fluid way, resulting in widely different descriptions of the same physical/mental event, a mental quantum instance will assume different values. Like quantum mechanics, QR uses an x-coordinate space and works out the probability of a value x lying within a small interval on the axis. When placed on a multi-dimensional, coordinate space, this value reveals the position of the mental quantum instance and the types of relationship it has with other quantum instances.

QR revolves around two fundamental concepts that can equally be translated into the mathematical language of quantum mechanics and constitute the cornerstones of any technology platform based on QR principles. These concepts are "frames of reference" (FORs) and "data fusion objects" (DFOs). They are described in some detail in Schloer and Gagner's "Quantum Relations: A Brief Overview" in the Appendix of the present book. Here I would like to add only a few technical points. In QR, FORs are special vectors in a normalized state-space, representing mental states at a given moment. FORs also form coordinate spaces, where each possible state of the mental system corresponds to a point in the space, and each point in the space corresponds to a possible state of the system. The associations between the mathematical objects that represent FOR spaces reveal the quantum relations that arise between them. For example, a given FOR with x quantum relations between quantum instances can show the way in which an individual perceives a certain object or observes its properties. Vectors can graph such quantum relations, while the distances between points in a coordinate space can reveal informa-

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tion like degrees of attraction and repulsion, of truth and falsehood, of real and imaginary, or any other metric that defines relational behavior.

In turn, data fusion objects or DFOs can be defined, metaphorically, as mental elementary particles. These particles interact according to well-defined rules, and the result of their interaction can equally become a computed function. DFO particles arise within multiple FORs. Each FOR can be represented as a metric space, i.e., as a set of DFO elements, with one or more functions. Furthermore, any FOR can also be a DFO and vice versa, depending on their respective positions in the hierarchic space structure. Thus, a DFO can be an elementary particle in a higher-level FOR. In turn, this FOR can be a DFO of another, higher-level FOR structure, and so forth.

What are the technical advantages of implementing the DFO/FOR model? To begin with, this model is self-adaptable and will automatically search for the best method and the shortest path to accomplish its goal. Since the metric distance between a DFO and an FOR is stored as a property of the FOR, one can easily change metrics. A metric change is the equivalent of asking for a different interpretation of the underlying data. Because metric distances between DFOs/ FORs are implemented in a hierarchic fashion, one can easily change perspective on an entire data set. Because DFOs implement class inheritance, such changes might ripple down through various levels of sub-DFOs, triggering recomputation of intermediate results in a controlled and natural fashion.

Even more importantly, the DFO/FOR model is capable of self-organization, because data and functions are implemented as sets of hierarchic objects. For example, if the metric of an FOR is differentiable over the set, data in that set can be concentrated by finding the minimum of the differential, just as in the case of physical models. An FOR containing many DFO structures can also contain rules for, among other things, the creation of new DFOs; the interaction between its DFOs; and the calculation of functions between smaller DFOs, including the creation of new objects that embody certain relationships between these smaller DFOs.

DFOs and FORs are based on a complex network of parallel relationships. These relationships can be expressed as positive (attraction) or negative (repulsion). The interaction between two DFOs can include changing properties of the mental particles themselves, much as, in a physical system, an attraction is a function of space that operates to change the position of objects. A reasonable FOR can implement certain rules of symmetry and conservation among its DFO objects. In this way, the model uses mathematical and physical methods to create a framework within which large-scale computations can be performed.

Thus, DFOs and FORs provide a natural model for general parallel computation. Since DFOs and FORs are discrete objects, they can be implemented on multiple processor systems, and calculations can be performed in parallel.

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The DFO/FOR model is not bound to the theoretical requirement that either the metric or other functions provided by a frame of reference be Turing computable functions. Any function that can take one or more data structures as arguments can be implemented within the DFO/FOR model. Therefore, this model can also provide conceptual methods for implementing quantum computing, as soon as hardware becomes available for such applications. On the other hand, it can equally simulate non-local functions, such as are found in quantum mechanics, and implement them on a Turing-Church type of processor (digital computer).

Furthermore, the DFO/FOR model is both modular and extensible. This means that a set of computations on one data set can be transformed into another data set and used by the second data set to define a set of new functions, translating the preceding FOR into the new one. In addition, an FOR can contain rules for logical inference and deduction that operate on its component DFO objects. The fact that FORs are also considered DFOs for higher-level frames allows lower-level frames to define data properties. DFOs could equally be used to pose queries on other DFO frames. This means that both the query DFO and the answer DFO would exist within the same FOR structure until a computation would achieve the goal of relating them. In this manner, the DFO/FOR model can implement AI functional and rule-based languages such as Prolog in order to solve real-world and hypothetical problems. It can also translate and incorporate any software program or computer language into its database, thus solving the currently intractable problem of systemic compatibility and interchangeability in computer programming.

Finally, the DFO/FOR model is compact and adaptable, expressly designed to handle extremely large quantities of data, on the scale of gigabit and terabit sets, and to provide methods for manipulating them through parallel processing systems. DFO/FOR structures can be compiled, i.e., translated from a symbolic form into a compact set of machine instructions and can also run continuous restrictions on data in order to prevent database errors. The DFO/FOR model can handle data storage, recuperation, and processing with great flexibility and practically no data loss. It assumes that no piece of information or knowledge from its database can ever become obsolete, because it may always turn out to be relevant in a different DFO/FOR configuration, or coherence, or correlation between data sets.

QR could provide an excellent theoretical basis for developing advanced technological platforms for local-global learning and research. In *Global Intelligence and Human Development*, I discuss at length the theoretical advantages of general systems theory and its offshoots, the theories of complexity and self-organization, over their scientific, reductionist counterparts, especially within a global reference frame. I have also pointed out the close similarity between the nonlinear view of reciprocal or mutual causality in these theories and that of early Buddhism and Taoism.[14] QR obviously shares the

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same theoretical advantages. The DFO/FOR model is based on the "web of life" (Capra 1997) in its most diverse and complex aspects, including human relations and interactions. Unlike most reductionist scientific theories, QR implicitly acknowledges diversity and alterity as the very conditions of existence. Whereas the reductionist theoretical models perpetuate the globalitarian pretensions of mainstream Western science, attempting to impose its dualistic, Cartesian perspective on all cultures in the guise of objective, universal knowledge, QR can take into account and process widely different cognitive perspectives, including linguistic, philosophical, cultural, sexual, and other observer-dependent variables. Like other contemporary strands of systems theory, QR acknowledges that hierarchies as modes of organization are best understood not as "centers of command and control," but as reference frames or levels of complexity embedded or nestled within each other and engaged in constant communication and mutual interaction. QR thus supports and enhances a cooperative, symbiotic view of our universe, in which all living and nonliving components of the global system and subsystems depend on each other for their well-being and in which each perspective needs to be acknowledged and respected as potentially valuable for the common good.

The quality and nature of the QR applications in a global learning and research framework will obviously depend on the quality and nature of the intercultural databases that they will draw on and, above all, on the mentality and principles that will inform the collection and processing of such databases. It is here that the humanities can bring their most decisive contribution. Intercultural and crossdisciplinary groups of researchers such as philosophers, cultural historians, anthropologists, environmentalists, sociologists, psychologists, educators, historians of science, linguists, literary scholars, and many others, could compile intercultural data from a comparative perspective, delving into the systems of values and beliefs of various cultures, their philosophical, scientific, religious, and literary traditions, their specific economic, sociocultural, environmental, and legal practices, institutional arrangements, and so on. Such intercultural data, placed in a comparative perspective, but generated from the local viewpoint of each culture or subculture, whether large or small, and not from the so-called "objective" and "universally valid" perspective of mainstream Western science, would go a long way toward creating the local-global learning conditions that would lead to the adoption of the values and practices of global intelligence. It is precisely the spirit of global intelligence that should infuse any DFO/FOR-based learning and research technological platform, programmed for the benefit of all (not just some) of our world communities.

To give just one concrete example, there is a proposed QR application in the domain of global health services, called AlphaMedic Systems. This project would develop a global management and data processing system, designed to automate, manage, and record the day-to-day healthcare efforts of medical

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practitioners worldwide, through a centralized, supercomputer system with real-time global network access. It would employ QR-based, artificial intelligence technology to provide a 24/7 accessible online medical diagnostic center, as well as innovative genetics research systems for medical scientists and practitioners from all over the world. Any participating doctor, medical office, or hospital, as well as any participating genetics research institute, would have real-time access to sophisticated diagnostic and reasoning functionalities.

The system would be kept up to date with the most current medical knowledge and would utilize fully automated, "cause-and-effect" tracking technologies. It would enable any participating medical provider or researcher to suggest a causal relationship between data and test its validity against the system's enormous medical database, or to ask the system itself to suggest relationships and correlations between data sets. In addition, the system would use its own automated, advanced AI technologies to find important cohesions that determine "cause-and-effect" micro patterns and amplify them to macro information. The system would then automatically message such information to the medical practitioners and researchers who seem to be working on problems most closely related to the patterns discovered.

Whether this medical technological platform will be successful or not (and here, obviously, I do not mean primarily technological or financial success, but, rather, success in furthering the goals of global intelligence) will depend, again, on the quality and nature of its databases and the principles that inform their collection and processing. A project of this kind could go either of two ways: it could content itself with creating a healthcare and medical research technological platform based solely on the principles and practices of mainstream, Western, "allopathic" medicine; or attempt to integrate the perspectives and methods of all other traditional and nontraditional forms of medicine, such as Chinese, Ayurvedic, homeopathic, and so on. In the latter case, the project would become considerably more complex (and more expensive), but also much more worthwhile, having the potential of entirely remapping global medical knowledge.

In either case, however, one would have to take into consideration local medical research and cultural practices, which differ vastly even within the reference frame of what to some might appear as a unified body of medical knowledge, whether allopathic or not. For example, simple medical facts such as a patient's temperature, diet, blood pressure, pulse taking, blood work, and the like are attributed different values in different allopathic subcultures. Other nonmedical, cultural problems will involve synchronization of different methods of collecting, storing, and interpreting data, synchronization of national and/or local administrative and legal systems related to healthcare, and so forth.

The proper resolution of such issues will, again, necessitate intercultural and crossdisciplinary teams, composed not only of healthcare providers and administrators, medical and biological researchers, and computer scientists,

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but also legal researchers, cultural anthropologists, historians of science, cognitive psychologists, linguists, sociologists, ecologists, politicians, conflict resolution specialists, and other negotiators. But, the steepest obstacles that a project of this kind will face will certainly not be of a technical, or even of a cultural nature. Rather, they will concern a certain human mentality that is far from being restricted to the West. The project will, above all, involve skillful negotiation and harmonization among various powerful special interests and will need to address in a creative way the current, worldwide exemptionalist, protectionist, and territorial practices, not least those of the big multinational pharmaceutical companies, without whose cooperation this project has very little chance of success.

Although QR is implicitly and naturally sympathetic to a symbiotic, cooperative approach to the web of life and to global intelligence and could lead to the creation of exciting technological applications in that spirit, it could also lead, like any other technology, to less desirable applications that will have unintended, distressful consequences for future human development. For example, QR technological platforms can also be easily employed to implement some of the DARPA projects in cognitive computing that I have mentioned in the previous section. The DFO/FOR model provides for large-scale computation of observer-dependent properties, whether they belong to observing and observed systems that are configured within power-oriented frames of reference or those of any other organizing principle. Again, it is a particular human mentality that will determine the uses of QR technology, and not the technology itself that determines this mentality.

Whether we move from the digital age to the quantum age and beyond, the future of human development will depend less on advanced technological platforms and much more on our collective ability and, above all, willingness to shift to a mentality and practices that are oriented toward global intelligence. As I have stressed again and again throughout the present book, this is an arduous task, involving much preparatory work on the part of all of our world communities, consisting primarily, and most importantly, in developing local-global, intensive learning environments, whether supported by advanced technological platforms or not. The humanities, once they shed their own disciplinarian mentality and practices, can obviously have a crucial role in initiating and stimulating the development of such environments, as well as in remapping past and present intercultural knowledge within the framework of global intelligence.

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Notes

1. For the perils of antibiotics and other Western-style drugs, see Laurie Garrett, *The Coming Plague: Newly Emerging Diseases in a World Out of Balance* (New York: Penguin, 1994). For the worrisome effects of pesticides and genetical engineering on plants and animals, see, among many others, Amory B. Lovins and L. Hunter Lovins, "A Tale of Two Botanies," at www.rmi.org/biotechnology/ twobotanies.html.
2. See William Joy, "Why the Future Doesn't Need Us: Our Most Powerful 21st-Century Technologies—Robotics, Genetic Engineering, and Nanotech—Are Threatening to Make Humans an Endangered Species," in *Wired* (April 2000).
3. For full information on the Open Source Movement, see their Web site at www.open-source.org/
4. See "How Microsoft Warded Off Rival," *The New York Times*, May 15, 2003.
5. See LifeLog, at www.darpa.mil/ipto.
6. For an early history of this calculating, utilitarian mentality, see Alfred W. Crosby, *The Measure of Reality. Quantification and Western Society, 1250-1600* (Cambridge: Cambridge University Press, 1997).
7. See Amory and L. Hunter Lovins, at htt://www.rmi.org/biotechnology/twobotanies.html
8. See http//www.worldsummit2003org, under Summit Documents: "WSIS Declaration of Principles" and "WSIS Plan of Action."
9. For exemptionalism and its connection to the will to power, see especially *Global Intelligence and Human Development*, Chapter 3, "Sociobiology in a Global Framework: An Intercultural Evaluation."
10. For a full discussion of the logic of the Will to Power as eternal return of the same, see *The Wreath of Wild Olive*, especially Chapter 1, "Nietzsche or Schopenhauer?" and Chapter 5, "Allegory, Power, and Postmodernism."
11. To give just one extreme, but not unrelated example (which would have undoubtedly interested Grass), there is the recent legal case of a German ritualistic cannibal, who advertised for a sacrificial victim on the Internet and, sure enough, found someone willing to be sacrificed and eaten. The two Internet users met, and the cannibal killed and ate his victim, but not before the two shared a meal consisting of the victim's cooked penis. The trial posed serious problems for the prosecution, because German law does not provide for bizarre cases such as cannibalism.
12. I would like to thank Hardy Schloer, Director of OSAQA Institute in Spain and CTO of RavenPack AG of Munich, for giving me access to his unpublished papers on QRT, as well as to privileged and confidential information regarding his advanced technology platform, RavenSpace II. In this chapter, I shall comment only on QR theory (which serves as a theoretical basis for RavenSpace II) and its possible ramifications for intercultural learning and research. Needless to say, I do not possess sufficient expertise to offer any technical evaluation of the platform itself, even if I were not bound by a confidentiality agreement. I have also included, in the Appendix of the present book, a brief overview of QR, as presented by Schloer and his close collaborator, Philip Gagner, who worked, during the early stages of his career, under Marvin Minsky, in his AI laboratory at MIT. This overview should give the reader firsthand information on QR and complement my understanding of the theory, which I first gained from the sources I have cited in this endnote.
13. For an exciting attempt to incorporate the mind in the theory and practice of modern medical science, see Deepak Chopra's *Quantum Healing*. Chopra creatively combines concepts from ancient Ayurvedic medicine and from quantum physics to develop a body/mind medical practice. There is also the very seminal research of Ken Wilber, from *Quantum Questions* (1984) to *Integral Psychology* (2000). The latter book is a monumental treatise, attempting to integrate the various theories of mind and consciousness that have arisen

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through the ages in both the East and the West. The works of Chopra and Wilber are excellent examples of the kind of intercultural research projects that I have been pleading for in the present book.

14. In addition to Einstein and Whitehead, a large number of contemporary scientific and philosophical works have emphasized the dynamic and weblike nature of reality that also constitutes the QR basic philosophical premise. See, among many others, Ervin Laszlo, *Introduction to Systems Philosophy* (New York: Harper, 1973), Fritjof Capra, *The Web of Life: A New Synthesis of Mind and Matter* (London: Harper-Collins, 1997), as well as his earlier *The Tao of Physics: An Exploration of the Parallels between Modern Physics and Eastern Mysticism* (London: HarperCollins, 1975); and Arran Gare, *Beyond European Civilization. Marxism, Process Philosophy and the Environment* (BungaSdore, Australia: Eco-Logical Press, 1993). For an excellent comparative study of the nonlinear thinking of systems theory and that of early Buddhism, see Joanna Macy, *Mutual Causality in Buddhism and General Systems Theory: The Dharma of Natural Systems* (Albany, NY: State University of New York Press, 1991). For early Buddhism, Taoism and systems theory, see also Chapter 4 of *Global Intelligence and Human Development.*

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Chapter 4

The Intercultural Studies Academic Program

A Pilot Project in Global Learning and Leadership

In *Global Intelligence and Human Development* I proposed the creation of a doctoral program in a new field of study and practice, called Intercultural Knowledge Management (IKM). In the present chapter, I would like to propose its complement, a combined BA and MA degree program in Intercultural Studies. I shall largely use the concise format and technical language of an academic proposal (although I might occasionally stray from it to make my theoretical points). Thereby, I wish to convey the practical nature of this project that could be implemented even under the present state of world education. There will necessarily be some overlapping between the two programs, because they share the same mission and objectives, namely higher education oriented toward global intelligence. So I apologize for repeating some of the material from the previous proposal, but I wish to make the present one as freestanding as possible. Ideally, of course, both proposals should be read in conjunction, as a hypertext.

I should also note that the Intercultural Studies Program (ISP, for short) is substantially different from the combined BA/MA degree programs currently offered at our universities, insofar as it goes well beyond the scope of one or two disciplines at one or two universities. It is based on a worldwide network of academic and nonacademic institutions, through which students, teachers, researchers, and practitioners will work together toward generating local-global, transdisciplinary, and intercultural knowledge. The creation of this program will involve not only working out institutional arrangements among a number of host universities and research organizations, but also building local-global learning environments throughout the world. Above all, it proposes a concept of leadership that is entirely different from the one that currently prevails in our world. This concept is based on an emergent ethics of global intelligence, grounded in a mentality of peace.

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1. General Considerations

Our times are often referred to as an information age with knowledge-driven, global economies and cultures. Yet education in general and higher education in particular, which ought to be in the forefront of such knowledge-related developments, are lagging behind. The causes of this lag are many, but a number of them can be traced back to the fact that our current educational systems are rooted in the nineteenth-century transition from agricultural- to industrial-based economies and the creation of the modern nation-state. Therefore, they have largely been structured to prepare our youth for citizenship, employment, and a moral and productive life within the nation-state, focusing mostly on the national economy, security, and welfare. But, we are now moving toward an entirely different world, in which old national boundaries will no longer serve the same purposes. Our societies have become increasingly interdependent and our patterns of living as well as our language, ideas, culture, ethics, environment, health, security, trade, and systems of values and beliefs are rapidly changing under a renewed human drive toward a global society.

But rapid change can also be socially and culturally destabilizing. Problems have become highly complex, nonlinear, crossdisciplinary, and transnational in nature, requiring the best innovative solutions on the part of our communities in order to achieve sustainable patterns of human development and avoid human suffering through deprivation and violent conflict. Yet our traditional centers of higher education and research have not been designed to address such problems. In the United States, for example, whereas individual practitioners and exceptional scholars at outstanding universities are currently utilized as consultants in tackling global questions, it is difficult to assemble multidisciplinary teams of committed faculty and students in sustained programs to address real-time, global challenges.

Departmental course requirements and the prerequisites for tenure-track preparation inhibit the efforts to build transdisciplinary and crosscultural curricula at most universities. To compound the problem, academic administrators often perceive study abroad and experiential education as expensive extras that interrupt most students' commitment to campus life, athletics, and extracurricular activities. Consequently, today's academy largely misses the opportunity to identify and encourage intercultural civic entrepreneurs, those few remarkable students in each class whose career service will make significant contributions to the peaceful and prosperous development of our world communities.

But, above all, higher education itself and the very purpose and organization of our academic institutions must now be rethought and restructured within a global reference frame. A global perspective will lead to remapping the old disciplinary divisions and will generally call for new ways of educating the elites of tomorrow. Indeed, it will ultimately require that learning become a lifelong process and extend well beyond formal education and cer-

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tain age groups to all members of our local-global communities. Under the impact of lifelong learning, these communities will ideally become genuine laboratories of cooperative, intercultural discovery and creativity.

The Intercultural Studies Program is a crosscultural and transdisciplinary academic program that employs educational and training strategies appropriate for a global reference frame. It sees itself as an experimental, pilot project that will provide a select number of outstanding students, teachers, and practitioners from various parts of the world with appropriate local-global learning environments, so that they can meet the challenges and realize the opportunities that are unique to our times. In what follows I shall outline the concrete intercultural studies program, with its mission, objectives, methodology, institutional framework(s), targeted student population, selection criteria, degree requirements, basic curriculum, research programs, and logistics. Should its implementation prove to be successful, it would undoubtedly inspire many other such global educational initiatives and would ultimately stimulate and support extensive reforms in world education.

2. Mission and Objectives of the Intercultural Studies Program

ISP will educate a highly select group of civically oriented global practitioners and entrepreneurs. It will train them to produce, as well as to recognize and manage, new forms of knowledge and competencies in a global intercultural environment. The program will heighten the awareness of students that leadership and problem-solving in this type of environment involve an integrative, transdisciplinary approach that takes into account the political, social, economic, and cultural conditions, as well as the systems of values and beliefs, of local communities from around the world. It will also develop the students' curiosity about, exposure to, and understanding of each other's cultures and will teach them how to live, communicate, and work with each other in culturally diverse environments.

The ISP program will educate local-global elites who: (1) possess a thorough understanding of and a strong sense of responsibility for the local; (2) care for the natural and human environment and respect cultural and biological diversity; (3) are deeply committed to and able to bring about negotiated solutions to conflicts, without resorting to armed violence; (4) know how to operate in a culturally diverse environment and across disciplines and professions; (5) develop more than one career track in a lifetime, pursuing lifelong learning; (6) comfortably serve in both the public and the private sectors and know how to generate new employment and ways of wealth-making, based on wise management of the planet's human and natural resources; and (7) generally engage in lifelong creative and meaningful activity that is both service-oriented and personally fulfilling.

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Some of the intercultural skills and talents that ISP students will develop amount to what the US Academic Council on Education (ACE), in a position paper entitled "Beyond September 11: A Comprehensive National Policy on International Education," calls *global competence*. Global competence, according to this white paper, is "in-depth knowledge required for interpreting information affecting national security, the skills and understanding that foster improved relations with all regions of the world; … foreign language proficiency and an ability to function effectively in other cultural environments and value systems, whether conducting business, implementing international development projects, or carrying out diplomatic missions." (1) The paper also calls for the creation of "global experts in foreign languages, cultures and political, economic and social systems throughout the world." (2)

Global competence and expertise are certainly very important talents and skills to be developed in our national citizenry and workforce. Yet, for the ACE the operative word remains "national." While it deals with global issues, the ACE adopts a national or international, rather than a global perspective on these issues. A global approach will take into consideration not only the perceived national or "local" interests of the United States or any other country or region. Of course, those local interests are extremely important, and genuine global practitioners will neglect them only at their peril. But such global practitioners will also look beyond what might turn out to be short-term and limited national interest to long-range interests, serving the entire global community. From this global perspective, the concept of national interest itself may gain a new dimension and be redefined, in a larger reference frame, as that which ultimately is in the best interest of and benefits all nations and cultures.

Therefore, in addition to global competence and global expertise, the ISP students will seek *global intelligence*, or the ability to understand, respond to, and work toward what is in the best interest of and will benefit all human beings and all other forms of life on the planet. This kind of responsive understanding and action can only emerge from continuing intercultural dialogue and cooperation, in other words, it is interactive, and no single national or supranational instance or authority can predetermine its outcome. Thus, global intelligence or intercultural responsive understanding and action are what contemporary nonlinear science calls emergent phenomena and involve lifelong learning processes.

The first and main objective of ISP is to develop in its students a sense of mission and commitment to local-global human values and ideals, as well as willingness and ability to translate them into practice throughout the world. The objective of developing global intelligence or intercultural responsive understanding and action, in addition to global competence and expertise, is what distinguishes ISP from many academic and leadership programs with an international and intercultural focus, such as can be found at some of the top international schools in various parts of the world. For the most part, the main

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objective of such international programs is to develop global competence and expertise that their students will, in turn, place in the service of individual private or public organizations, irrespective of the mission and goals of these organizations. Again, these are very important skills, and the ACE is right in pointing out the acute shortage of such global experts in the US (and, one may add, in many other parts of the world). But, for a genuine global practitioner these skills and talents cannot be separated from the mission, goals, and ethics of global intelligence, from which they derive their true meaning.

In line with its mission of cultivating global intelligence, ISP will develop intercultural skills and talents such as:

1) Superior intercultural linguistic and communication abilities

In addition to English, which, for practical reasons, will be the lingua franca of the program, students will undertake an in-depth comparative study of at least two of the other principal languages of the world, in their cultural and intercultural context. These languages include, but are not necessarily limited to: Mandarin, Hindi, Spanish, Bengali, Arabic, Portuguese, Malay-Indonesian, Russian, Japanese, German, and French. If they are native speakers of any of these languages, they will choose two of the other principal languages, preferably those that are farthest removed from their mother tongue. For example, if they are native speakers of Hindi, they should not choose Bengali, but Mandarin and Russian; if they speak Portuguese, they should not choose Spanish or another Romance language, but Hindi and German, and so forth. This will ensure that students gain full access to linguistic and cultural worlds that are completely unfamiliar to them, so that their level of intercultural and linguistic understanding and, therefore, intercultural communicative skills, will eventually become even higher.

One should stress the fact that the program does not intend to train linguists or polyglots, any more than it intends to train political scientists, economists, lawyers, physicians, humanists, or any other specialists or experts. Ideally, students who come into the program will already have genuine fluency in some of these languages (see admission requirements below). In-depth knowledge of a number of languages, however, is essential for the ISP student to feel at home in several cultures, move freely among them, and thereby gain a genuine global, crosscultural perspective. Language courses will be taught in an intercultural comparative context so that students will become aware of the deep interconnections between the native speakers' linguistic and cultural worlds, including their fundamental systems of values and beliefs; religion; social, economic, and political behavior; historical development; civil institutions; and so on. Language courses will also be taught in the context of the students' concrete research projects so that they will maximize the students' ability to carry out these projects.

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2) Increased intellectual mobility and flexibility

The transdisciplinary and crosscultural nature of the ISP research projects will require that students move between institutions in several regions of the world, as well as across departmental divides at any single institution. This kind of mobility will provide students with a global, crosscultural perspective, that is, with the ability to view a certain discipline and/or academic culture from both the inside and the outside. They will become immersed in the local research culture of a certain discipline or institution, at the same time that they will be able to reflect on it, by comparing it with other such research cultures. They will learn both how to discern similarities and differences between them and how to establish interconnections among them that remain hidden to a partial, local view. A global perspective will give them the intercultural responsive understanding and flexibility needed to bring together specialists or experts from various fields and from several cultures in order to design and execute transdisciplinary and intercultural projects that none of these experts would be able to implement on his or her own.

3) Crosscultural insight and sensitivity

ISP will create group solidarity among a culturally diverse body of students and will teach them how to cooperate in and effectively interact with shifting cultural and linguistic environments. By working together on intercultural and transdisciplinary projects, students will become aware of their different cultural assumptions in approaching a certain problem and will start negotiating among themselves to find the best solutions that go beyond their own local perspective or interest and advance the research project as a whole. Crosscultural insight and sensitivity will also emerge from the daily interaction of students who will live, work, and play together as a group for an extended period and will be asked to build and act upon a common sense of purpose and a common set of values for the rest of their lives. In other words, the students will be called upon to seek global intelligence not only in relation to their academic studies, but also in their daily interactions both inside and outside their group.

This kind of learning objective will, again, distinguish ISP from other foreign studies or study abroad programs that currently flourish all over the world. Global intelligence would be hard to aim at, say, in the context of current US study abroad programs or foreign student programs on US campuses, where each individual student has his or her own life- and career-goal. "Cultural sensitivity" training programs available through the international offices of various universities often limit themselves to advising foreign students to use body deodorants in Anglo-Saxon cultures; or, in the case of US students, not to shake hands, hug, or look their interlocutors in the eye when in East Asia; or, more generally, "to do, when in Rome, as Romans do."

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4) Ability to integrate academic and experiential knowledge

Emergent global intelligence presupposes that students begin as soon as possible to acquire and combine theoretical and practical knowledge in order to address real-time, local and global issues. This learning objective will again distinguish ISP from standard academic programs. These programs mostly convey an abstract body of knowledge, which is often disconnected from its practical, live context and which the student is supposed to apply or make use of at a later date, after graduation. By contrast, ISP students will organize their curricula and research programs around the concrete problems they are asked to solve, rather than solely on past "case studies." They will form cross-disciplinary teams and work on viable solutions to specific real-world problems, rather than through the codified practice of a particular academic discipline or culture.

Students will, moreover, build capacity to identify and address potential socioeconomic and other types of problems before they develop into crises that threaten the peaceful development of world communities or diminish the diversity of world resources. They will also be called on to design workable, realistic blueprints for the sociocultural and human development of their countries or regions, based on the best traditions of wisdom available in their cultures, as well as in those of others, and on the most cherished aspirations and ideals of their people. Last, but not least, the sustained, cooperative efforts of the ISP students, teachers, and practitioners from all over the world will decisively contribute to addressing and eventually eliminating the causes of international terrorism, one of the greatest threats to humanity in our time.

3. Methodology and Institutional Framework(s) for the Intercultural Studies Program

ISP will thus employ a model of knowledge that will be substantially different from the disciplinary one. According to disciplinary thinking, one must first constitute the discipline, i.e., an organized body of knowledge, before one can teach it, say, through an academic degree program. Such degree programs serve the purpose of both codifying the practice of the field through disciplinary standards and requirements and of transmitting this codified practice to a body of students who will in turn contribute to consolidating and expanding the disciplinary knowledge and practice that have been passed down to them.

In other words, in disciplinary models, knowledge is first acquired (learned) and then transmitted (taught). In the model of knowledge as emergence that I propose here, learning and teaching are codependent and simultaneous processes, so that the field of intercultural studies co-arises with the academic program that codifies or, rather, continuously recodifies its practice. Consequently, in a program of intercultural studies, teaching becomes learning

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and learning becomes teaching, as new knowledge continuously emerges and is continuously codified and recodified.

The model of knowledge as emergence requires institutional frameworks that are different from the ones currently in place in our universities. Of course, to begin with, one could always use existing administrative, interdisciplinary units, such as programs of cultural studies, or women's studies, or environmental studies. One would, however, have to reorient them toward global intelligence and inscribe them in a global network of similarly oriented academic units, as described in Chapter 1 above. This would constitute an arduous task in itself, because it is very difficult to break the disciplinary habits of today's academia.

But, no matter what institutional forms one will finally adopt, one should always keep in mind that the field of intercultural studies cannot be founded merely on the assumption that a cluster of disciplines organized as academic departments or programs will merge to create an interdisciplinary administrative unit, called a Center or Institute for Intercultural Studies, at this or that progressive university. Such an administrative unit will only reproduce the current disciplinary attitudes, methods, and practices. It might therefore be useful, before I actually describe the content of ISP in any detail, to briefly consider at least one institutional model that would be appropriate for the learning and research objectives of ISP.

This model involves at least two organizational components: a global academic consortium and a global institute for intercultural learning and research. The global institute will be administratively and financially independent from, but will work very closely with, the academic consortium. This dual, interactive organizational format is essential, because it ensures that ISP will operate both inside and outside the university environment, with the purpose of bringing the academic and the nonacademic worlds together within a larger reference frame, that of global learning and intercultural knowledge production. I have already described this format in some detail, in my proposal for a doctoral program in Intercultural Knowledge Management. In fact, the global institute could be charged with the mission of operating both programs, not least because some of the ISP students might, after graduation and after an appropriate period of nonacademic employment, be interested in enrolling in the doctoral program, especially if they would like to be retained as instructors in ISP.

The global academic consortium (or the Consortium, for short) will be formed by a number of prominent universities and research organizations, called "host institutions." Initially, it should bring together at least eight academic and research institutions from as many regions or countries, representing the largest cultures of the world: China, Europe, India, Latin America, Middle East, North America, Russia, and Sub-Saharan Africa. If the pilot project is successful, the Consortium could expand to include many other acad-

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emic and research institutions from all over the world. Or, even better, other academic consortia could be formed, based on the same or kindred, global learning principles and objectives, which could then symbiotically cooperate with the initial network.

The primary role of the Consortium will be to host ISP and its participants at the member academic and research institutions for appropriate periods and to assist the global institute and its local branches in organizing the ISP curriculum, research projects, and other activities. In turn, the primary role of the global institute for intercultural learning and research (the Institute, for short) will be to organize and operate the ISP and other research and educational programs for the Consortium, as well as to grant academic degrees such as the combined BA and MA degree in intercultural studies on its behalf. Of course, each of the members of the Consortium may grant its own degree to some or to all of the ISP students, if it so chooses. For example, Chinese or Russian students may receive the degree from both the Institute and one of their own national institutions, participating in the academic consortium. This dual degree strategy will address the complicated administrative problem of degree accreditation and equivalency that is endemic to all national education systems.

The Institute will have a board of trustees as well as an academic director and an executive director, appointed by the board. It will also have a diverse, crossdisciplinary and crosscultural, core faculty. This core faculty will be selected primarily from among the most prominent faculty members of the academic institutions participating in the global consortium, but may include internationally prominent scholars and practitioners from other academic and nonacademic institutions as well. The Institute will negotiate release time and other remunerated contractual arrangements with the home departments and institutions of the core faculty members. All faculty members will serve a four-year, renewable term, after which they will return to their home institutions. They will nevertheless remain permanent fellows of the Institute and will be invited to participate in its various activities for the rest of their careers.

The Institute will also have an Admissions Committee, which will help select students for the program, as well as a Curriculum and Research (C&R) Committee, which will assist in organizing the course of study of individual students and in developing new ISP courses. Each prospective student will be reviewed by at least three members of the C&R Committee, including the Academic Director. The C&R Committee will approve courses of study for individual students, as well as an appropriate advisory committee for each student, in consultation with the student's major advisor/professor.

The Institute will operate through local centers for intercultural learning and research. The local centers are cooperative endeavors between the Institute, the Consortium, and other neighboring local institutions, such as universities, colleges, research centers, private, public, and nongovernmental

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organizations, and so forth. Their role is to conduct educational, research, and public activities in line with the programs, aims, and goals of the ISP project. They help recruit local applicants for the program and organize and oversee the academic and nonacademic activities of students during their residence in a particular region. The local centers also organize worldwide, transdisciplinary and intercultural seminars, workshops, and teleconferences through advanced, interactive technology, with distinguished participants from each affiliated academic institution and invited practitioners.

The local centers will be located on the various campuses of the host universities, but would be financially and administratively independent of, while working in close cooperation with them. In turn, the relationship between the Institute and the local centers is not one of "command and control," but of symbiotic networking. For this reason, the office of the academic and executive directors of the Institute will not have a fixed and permanent location, but will move from one local center to another, for an appropriate term, on a rotational basis. The directors of the local centers may be appointed as directors of the Institute or as members of the C&R Committee. All of the directors will have not only administrative, but also teaching and research duties, and will be chosen primarily for their distinguished record as educators and researchers.

4. Selection Criteria for Admission and Profile of Successful ISP Candidate

The entire success of the program will undoubtedly depend on its ability to attract high-quality applicants from all over the world and on a careful and rigorous selection process. It is therefore very important that the program offer substantial grants that will cover students' tuition, fees, travel, and living expenses, partially or entirely, for the whole period of study. This will not only ensure an outstanding pool of candidates, but will also avoid price discrimination, so that needy but very promising young men and women from all over the world can also apply and be admitted.

Candidates for the program can be recruited through extensive publicity in the international mass media and on the Internet, as well as through a nominating committee in each of the participating countries. This nominating committee would consist of prominent thinkers, educators, business executives, artists, writers, economists, community representatives, respected public and private figures, and so on. Potential candidates can also be brought to the attention of the Admissions Committee by high schools or equivalent educational institutions, scholarship-granting foundations, professional and business associations, governmental and nongovernmental organizations, and by the students themselves, in cooperation with their institutions.

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The final selection will be made by the Admissions Committee, based on the recommendations of the C&R Committee of the ISP program.

The selection process will consist of a preliminary and a final phase. Minimum requirements for admission to the preliminary phase include:

- A high school diploma or equivalent
- High SAT or equivalent test scores (ISP, in cooperation with the host institutions, will most likely devise its own testing system)
- Fluency in at least three languages, one of which must be English and one from a language group other than the candidate's native language
- Superior communication and computer skills
- Teamwork capacity
- Proven physical and emotional ability to live and learn in a number of foreign cultures and ethnically diverse environments

The applicants who advance beyond the preliminary phase will be accepted as regular freshman students at one of the host institutions, most likely in the United States or in another English-speaking country (because, we recall, the main language of instruction for ISP will, for pragmatic reasons, be English). The final selection for the international studies program will be made after candidates complete their first year of study with their host institution.

The regular freshman year, in addition to its obvious academic and communal life benefits, will serve to acquaint prospective ISP students with each other and with the core faculty and other guest instructors. It will give an opportunity to candidates of diverse cultural and intellectual backgrounds to work cooperatively and to begin developing their study and research programs for their first year in the program. In turn, members of the ISP faculty and their associates will have an opportunity to interact with the finalists, as well as to observe and evaluate the candidates' interaction with each other and the rest of the student community.

This year-long assessment process will ensure that only the candidates who exhibit the qualities desired, above all a clear potential for global intelligence, will be finally admitted to the program. The unsuccessful candidates, who will undoubtedly be quite accomplished young men and women in their own right, will continue their regular studies at the host institution or will be directed to other host universities that might better serve their career and life goals.

The profile of successful candidates includes superior intellectual, linguistic, and communicative capabilities; proven creativity; proven ability to think and to relate to others in crossdisciplinary and intercultural contexts; and high personal integrity. Academic field of interest will be less important than the candidate's willingness and ability to work cooperatively with their peers to carry out intercultural and crossdisciplinary projects. The most important quality of this profile will be a candidate's propensity toward global intelli-

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gence, that is, his or her ability and willingness to engage in intercultural responsive understanding and action on a global level, while never losing sight of the various local reference frames.

5. Size of Intercultural Studies Program

ISP will be a pilot, experimental program that will create a small number of global practitioners and leaders and, therefore, will necessarily be very selective. We should be openly and unashamedly "elitist" in this respect, if by an "elite" we mean a corps of leaders that generously dedicate their lives and talents to the benefit of their local-global communities and human development as a whole. We should impress again and again on our students, above all by personal example, that the mission and the responsibility of an elite, all too often forgotten and only rarely practiced by our current leaders (whether in the public or the private domain) is to serve others, not ourselves.

ISP will initially serve around forty students per year. It is anticipated that, as a result of an enthusiastic worldwide response, the number of applicants will grow exponentially within a short time span. One should, however, maintain the most rigorous academic standards for the program, as well as its experimental quality, by wisely limiting the number of students enrolled. When fully developed, the program will enroll no more than fifty students per year or one hundred fifty students in a three-year cycle. It is hoped that other institutions will follow suit and will develop similar programs in close cooperation with the present one. The emergent ethics of global intelligence favors mutually beneficial cooperation over competition in all fields of human endeavor, so that an extensive network of global learners and practitioners can be developed throughout the world. No single institution or organization will have the huge human and material resources required to develop this kind of global network on its own.

6. Core Faculty

The ISP core faculty will primarily consist of outstanding teachers and researchers from the universities participating in the Consortium. Members of the core faculty will help form an ad hoc Curriculum and Research (C&R) Committee that will work closely with individual students to identify their major academic advisors at both the host and associated universities and to develop flexible curricula that are best suited to their particular research interests. They will also help develop the ISP research programs. The core faculty may consist of twenty to thirty members in the developing stages of the program and may grow up to fifty members, once the program is fully developed.

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It is crucial that the ISP core faculty members undergo the same global learning experiences that the ISP students do and that they possess high intellectual flexibility and versatility, responsive understanding, and ability and willingness to work cooperatively across disciplines and cultures. Indeed, the most important quality that a faculty member should display is the same propensity toward global intelligence that is required of the ISP student. Therefore, the selection of the core faculty must be as careful as that of the student participants in the program. An appropriate selection process must be put in place, so that the best available faculty from the host and other academic institutions will be chosen. Once the program is well established, it will become a great honor and privilege for any faculty member to be associated with it, so it will be somewhat easier to identify and attract suitable teachers. In turn, the most outstanding and promising graduates of the IKM doctoral program will also be invited to teach in the ISP.

ISP faculty members will be appointed for a four-year renewable term, so that the core faculty can be periodically updated and refreshed. After the completion of their tenure, faculty members will return to their home departments, but will continue to be active in the Institute.

In addition to student advising, members of the core faculty will cooperate with distinguished resource persons from various countries and academic and nonacademic fields in designing and teaching new crossdisciplinary and crosscultural courses, as well as in developing and carrying out research programs. They will be responsible for assuring the highest academic and research quality of the ISP program at all times.

7. Guest Faculty, Researchers, Resource Persons

In addition to the core faculty, there will be a constantly updated pool of distinguished faculty and researchers, selected primarily from the international universities and research institutions associated with the global institute. They will be called upon to team-teach some of the courses or co-lead some of the ISP research projects. The Institute will also rely on a large, constantly updated, pool of distinguished practitioners, drawn from as wide a global setting as possible. The two pools (academic and nonacademic) will ensure that, during the course of their studies, students will come into contact with prominent scholars, teachers, artists, writers, scientists, politicians, business people, public servants, community representatives, and personalities of diverse religions and spiritual traditions from the Middle East, Western, Central and Eastern Europe, the Indian subcontinent, Africa, Central, East and South Asia, the Americas, and so forth.

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8. Degree Requirements for the Intercultural Studies Program

ISP is a very complex and rigorous academic program that, moreover, involves a different concept of education, based on intellectual mobility, flexibility, transdisciplinarity, extensive intercultural exposure, as well as the emergent ethics of global intelligence. Consequently, the degree requirements are also different from the ones that currently prevail in disciplinary academia. We recognize, however, that ISP students must also become thoroughly acquainted with the prevailing academic and research cultures, if they are to work effectively toward reforming them according to the emergent principles and practices of global intelligence. It is for this reason that during their freshman year they will generally follow the standard academic programs offered by major US or other universities, at the same time that they will attend additional ISP workshops and other activities designed to build group solidarity among them.

Beginning with their second year in college, however, ISP students will follow a flexible, if demanding, program of studies and extracurricular activities, especially designed for and in consultation with them. Therefore, the degree requirements will correspond to this academic program and will include successful completion of: 1) a number of real-world research projects; 2) a number of courses specifically designed for ISP; 3) three internships with nonacademic organizations, including an NGO, an international public or governmental organization, and a private business organization, such as a multinational corporation; 4) extended residence in at least three different local centers of global learning and research, affiliated with ISP; 5) extensive knowledge of the language and society of at least three world cultures; 6) an MA oral examination and written thesis on an appropriate ISP research topic.

9. The ISP Research Programs, Curriculum, and Internships

Recognizing that disciplinary, departmental structures lead to fragmentation of knowledge and to increasingly narrow fields of specialization, universities in the US and other countries currently offer many interdisciplinary programs designed to address these and other unwanted consequences of a veritable explosion of knowledge, especially in contemporary science. But most of these interdisciplinary programs bring together only neighboring or closely related disciplines and do not cut across the whole range of knowledge; in other words, they do not employ a transdisciplinary perspective, let alone an intercultural, global one. Research in most disciplines is oftentimes carried out in a piecemeal, isolated, monodisciplinary and monocultural fashion, without an attempt to integrate the various fields of knowledge, such as history, religion, cultural anthropology, political science, economics, sociology, cognitive psychology and artificial intelligence, computing, environmental sciences,

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humanities, history and philosophy of science, and so forth into a coherent theoretical framework and research programs that can adequately deal with complex human problems in a global reference frame. Comprehensive and lasting solutions to such problems can come only from a sustained, transdisciplinary and crosscultural effort inspired by global intelligence or intercultural responsive understanding and action.

In order to achieve its learning objectives, ISP will adopt creative ways of building curricula, flexible enough to allow students, in consultation with their academic advisors, to design their own course of study that will cut across various disciplines. The research program of each individual student will in part determine the content of his or her curriculum and practicum. In addition to a number of required courses, designed to break down barriers between disciplines and to approach knowledge from a global perspective, students will do coursework relevant to their individual and collective research programs and will engage in concrete, real-time individual and group research projects on and off campus, working with appropriate advisors in various parts of the world, either in person or long-distance. Finally, students will complete a number of internships with international public and private organizations. These internships, no less than the curricula, will be fully integrated with the individual student's research program. Indeed, they will become important components of this research program.

Intercultural Studies Research Program

ISP will develop, on a yearly basis, concrete, real-time research projects in six interrelated, general areas that are and will remain crucial for sustainable human development in the foreseeable future:

A) Globalization and Strategies for Human Development
B) Food, Nutrition and Healthcare in a Global Environment
C) Energy World Watch and Environmental Studies for Sustainable Development
D) World Population Movement and Growth
E) Information Technology, New Media, and Intercultural Communication
F) World Traditions of Wisdom and their Relevance to Further Human Development

The C&R Committee will consider and decide, in the wake of extensive intercultural dialogue and negotiations with other adjunct faculty and researchers as well as with ISP student representatives at partner institutions from around the world, which general area or areas and what kind of research

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projects within these areas might be accorded priority in a given year, based on their topicality, urgency, and global importance.

During their first year with ISP and their sophomore year with one of the host institutions, students join small intercultural and crossdisciplinary research teams and work under a project leader or coleaders. The leaders are normally chosen from the ISP faculty. During their junior year, however, students can also become leaders or coleaders of their research teams.

Some research projects can be completed during relatively short periods, from several months to a year, and others may necessitate the sustained, collective effort of several years on the part of multiple, crossdisciplinary and intercultural teams. Each student will work on at least one of these larger research projects, out of which his or her master's thesis will emerge. Each student will work on concrete projects in all six general areas, so that s/he can develop an understanding of the basic issues and methodologies specific to those areas and learn how to establish new connections among them.

Below are listed a few samples of research projects that are of real-time global relevance and would contribute to solving important local and world problems. Obviously, this list is only a model of the kind of projects that ISP students could work on. The actual, short-term and long-term, collective research projects will be negotiated and decided upon by the ISP institutional partners.

1. Create local blueprints for sociocultural and human development.This series of projects will research and propose middle- and long-range strategies for the sociocultural and human development of a certain country or region, based on a global and comprehensive analysis of its history, cultural traditions, political institutions, past and present social and economic performance, systems of values and beliefs, education, religion, relations with neighboring countries and regions, etc. For example, one may choose China and East Asia as an object of ISP research, in which case one may develop real-time, crosscultural and crossdisciplinary projects such as: The Global Financing Network and Strategies for the Development of China's Financial System; Geopolitics of Energy Supply and Demand in Eurasia in the Next Decade; Global Information Security and China's National Strategy for ICT Development; Strategies of Organizational Learning and Endogeneous Knowledge Creation in China and Other East Asian Countries; Development of Sustainable Cultural Policies Toward Minority Populations in China and East Asian Countries; Population Growth and Movement in China and East Asia, and so on.

Other research projects may focus on Eastern Europe and its relationship to the European Union. One such project may explore the challenges and opportunities of the European integration and the concrete lessons to be drawn in this respect from the German reunification. It may also consider and propose some possible alternatives to this integration, which might best suit the interests of the countries in the region, as well as those of the European Union.

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Another project may examine the past and current socioeconomic performance of Bulgaria, or Poland, or Romania in the nineteenth and twentieth century and propose comprehensive blueprints and strategies for their socioeconomic and human development in the next few decades, based on their specific histories and cultural traditions.

2. Create the blueprint for a new political party, or redesign the political platform and programs of a traditional one, in the United States or in any other country, so as to take into account both the cultural history of that country and the current needs and aspirations of its population. Submit a plan for organizing an election campaign for a political leader who would run on this platform. Or create a blueprint for a global NGO network (e.g., educational, or environmental, or any other kind) and begin launching it on the Internet. Or create a comprehensive program for peace in the Middle East, or any other troubled region of the world, based on the principles of global intelligence, grounded in an irenic mentality.

3. Design and begin to implement a global learning technology platform and intercultural software, oriented toward global intelligence. Design and begin to implement a comprehensive, integrated, global network system, based on the latest AI and other advanced information technology, to monitor environmental damage (hazardous gas emissions, dumping of nuclear waste and other hazardous materials, pollution of waterways, agricultural soil, drinking water sources, and so on) in a certain country or region. Propose innovative methods of correcting the problem.

4. Research the penal system of a certain country and propose reforms based on current world conditions and on the cultural traditions of that country. Research ethnic relations within a country or region and propose sustainable solutions to specific ethnic conflicts. Research the causes of social and intercultural violence, including political and religious terrorism, and propose sustainable solutions, based on an emergent ethics of global intelligence. Research the current immigration problems of a specific country and propose a comprehensive plan of dealing with such problems in equitable and mutually beneficial ways.

5. Research a certain tradition of wisdom, or a certain system of religious beliefs, and propose ways in which it could become relevant to future human development, oriented toward global intelligence.

ISP Curriculum

The specific nature and content of the basic courses required for all students will be discussed and decided upon, on a yearly basis, by the ad hoc C&R Committee. Once the program becomes fully operative, student representatives, elected by their peers, will also join the C&R Committee. Just as in the

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case of the ISP research projects, the basic required courses proposed for each year will be a result of intercultural and crossdisciplinary negotiations. The object of these negotiations will be to establish research priorities that will in turn determine what kind of course offerings might be appropriate for that year at different participating institutions from around the world. This input will also guide the student selection process. Some courses, however, may be continued for a number of years, such as the courses in language, literature, and intercultural communication and understanding, as well as the introductory courses in intercultural studies. The latter courses will deal mainly with the basic theoretical questions and methodologies that are proper to IS.

The C&R Committee may also publish on the Internet an annual list of available courses related to IS and its research programs and offered during that particular year in various departments and schools of participating institutions and their partners from around the world. This list may be an important resource for incoming ISP students and their advisors and may assist them in designing their individual curricula. The final decision of what an individual curriculum might look like, however, rests with the individual student and his or her major advisor(s).

All courses are meant to provide methodological support for the students' research programs and may, in turn, provide ideas for such research programs. Many of the required courses will preferably be team-taught by an intercultural team of instructors from various partner institutions. Another appropriate model would be to have course directors put together teams of guest lecturers from various outstanding academic and nonacademic institutions from around the world.

Some courses could also have an electronic component, with guest lecturers appearing and interacting with their student audience on live teleconferences. Additionally, a series of World Seminars can become a hothouse of crossdisciplinary and intercultural discussions, with each university affiliate following the same issue agenda at the same time. In this manner, discussants worldwide can access the seminar electronically according to their research interest. Smart card technology could assemble concentric circles of discussants with ISP students at the core, surrounded by ISP faculty and invited distinguished guests from the academic and the nonacademic worlds. ISP would set the calendar of issues and debate in a matrix offering that would easily translate to the host university course offerings. This matrix would enable ISP students to design their studies to parallel or anticipate World Seminar discussions and specific collective research projects.

One can think of a number of course topics that will support research and that cut across a large number of academic disciplines, as well as across the six general areas identified in the preceding subsection on ISP research programs (globalization and strategies for human development; food, nutrition and healthcare; energy and sustainable development; world population movement

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and growth; information and communication technology; world traditions of wisdom). I have placed these topics under nine headings simply for the sake of convenience. Other headings can be added, or a different classification of relevant topics can be used. It is essential to keep in mind, however, that under any classification system, all courses should be treated as crossdisciplinary and should, therefore, be crosslisted in an actual ISP curriculum.

I. Theory and Practice of Intercultural Studies

1. Intercultural Studies: Theory and Practice (introductory course)
2. Intercultural Research and Learning Technology Platforms: Principles, Methods, Practice
3. Series of Workshops in Intercultural Project Management
4. Globalization and Local Cultural Heritage

II. The Nation-State and Local, Regional and Global Communities

1. National Identity and Sovereignty: Historical and Theoretical Approaches. The Role of the Nation-State in Global Societies
2. Series of Workshops and Seminars on Various Regions and Cultures of the World
3. Border Cities and Regions as Intercultural Focal Points
4. Modernity and Postmodernity in Local and Global Contemporary Discourse and Practice

III. Global Markets, Finance, and the World Economies

1. History of Trade Practices from around the World
2. History and Future of Money and Financial Practices
3. Global Policy Decision-Making: Trade, Global Markets, and International Organizations and Agreements
4. Toward an Ecology of World Commerce

IV. Sustainable Development and the Future of Humanity

1. World Disarmament and Conventional Weapons
2. World Population, Immigration, and Sociocultural Displacement
3. Climate Changes, Natural Environment, and the World Economies
4. Mobility, Urban Planning, and Clean Technologies
5. Public Health and Global Water and Land Management
6. Natural Capitalism: Theory and Practice

V. World Systems of Values and Beliefs

1. Seminar Series in Comparative World Ethics
2. Seminar Series in Comparative World Religions

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3. The Human and the Nonhuman: Concepts of Humanity in Various Cultures and Disciplines
4. Traditions of Wisdom and their Contemporary Relevance

VI. Violence and Human Societies: Origins, Causes, and Remedies

1. Violence, Religion, and Culture
2. Environment, Natural Resources, and Violence
3. Violent Conflict and Conflict Resolution in the Twenty-First Century
4. Crime and Punishment: Ideas of Justice and Law Enforcement in Various Cultures from Antiquity to the Present
5. International Terrorism: History, Causes, and Prevention

VII. Science, Technology, and Culture

1. Sociocultural and Ethical Implications of Science and Technology
2. Scientific Fashions and Revolutions: A Historical Overview
3. World History of Technology and Technological Development
4. Annual Colloquium on the State of Knowledge in the Natural and Human Sciences

VIII. Information Technology and the New Media

1. Social and Ethical Implications of Information Technology and New Media
2. Information and Communication Technology and Strategies for Human Development
3. The New Media in an Intercultural Environment: Global Mission and Responsibilities
4. Information Technology, Intellectual Property, and Intercultural Exchange

IX. Language, Cognition, Interpretation, and Communication

1. Series of Intercultural Workshops on Linguistic Communication and Understanding
2. English as a Global Language: The Tower of Babel Reconstructed?
3. Interpretation, Communication, and Cultural Translatability
4. Language, Gender, and Culture
5. Transcultural Laboratory
6. World Literary Traditions and their Relevance to Future Human Development

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Each of these courses will require crossdisciplinary readings in several languages and from several cultures. Readings may include, but not be limited to historical, sociological, anthropological, economic, scientific, philosophical, psychological, religious, and literary and other artistic works. Some courses may also require electronic video and motion picture presentations, as well as audition of, or even participation in, live art performances.

Below are listed, in no particular order, a few descriptions of transdisciplinary and crosscultural courses taken from the nine different categories just mentioned. Their main purpose, again, is to help ISP students develop a global approach in their studies, research, and practice.

1. Intercultural Studies: Theory and Practice (introductory course)

This course will describe the general field of intercultural studies, outlining its main theoretical assumptions, objectives, and methodologies. We shall consider various definitions of culture as they have traditionally been employed in various societies and academic disciplines; and the history and meaning of key terms such as cultural identity and difference, intercultural and crosscultural knowledge, global competence, and global intelligence. We shall then examine various theories and practices of globalization in their historical and local contexts, as well as the claims and agendas of the antiglobalization movements, and determine what their relevance to IS might be. Finally, we shall address the essential question: What are some of the basic principles and practices that should guide ISP students throughout their research, career, and life choices?

2. Globalization and Local Cultural Heritage

Students will explore the various cultural approaches to globalization that are current in such fields as political science, international relations, sociology, cultural anthropology, history, geography, environmental studies, natural sciences, women's studies, and the humanities. Special attention will be devoted to such global phenomena as popular culture, international sports competitions, artistic festivals and prizes, fashion, cuisine, cinema, new media, tourism, etc. How can global practitioners design sociocultural strategies that promote local cultural heritage in the context of larger, intercultural reference frames?

3. Global Mappings and Symbolic Geographies

Students will explore geography as physical and symbolic, natural and constructed, with all its historical and cultural implications. They will examine the scientific, technological, economic, and geopolitical implications of map drawing in various cultures from Antiquity to the present. They will also examine place and environment as definers of human experience; travel, displacement, and homeland; borders and liminal spaces; the relationship between

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space and time as cultural constructs; and the relationship between ethnicity and geographical locus in such ideological and political notions as "vital space" or *Lebensraum*. Finally, they will look at the long history of the global or geospheric representation of planet Earth in various cultures and will consider questions such as: What is the relationship between the global and the local? Can one construct a global or geospheric sense of place? How did the images of the planet Earth sent back to us by the first cosmonauts contribute to this sense? What is the relationship between outer space and inner space? Could one construct a symbolic (and natural) geography for the uses of a global society and what would this geography look like?

4. The Human and the Nonhuman: Concepts of Humanity in Various Cultures and Disciplines

All cultures have developed their ideas of the origin of human beings, their nature and place in the larger scheme of things, their potentialities and limitations, etc. This course will examine some of the definitions of humans and humanity in their cultural, disciplinary, and historical contexts, from natural science and religion to social science and political economy to philosophy and literature. We shall also look at definitions of the nonhuman (nature, physical objects, plants, animals, gods, angels, spirits, robots, and the like), and of the inhuman, with their respective ethical, social, and political implications. We shall then consider the claims of the new technologies, especially cybernetics, robotics, bioinformatics, and nanotechnology, to radically redefine the concepts of human and nonhuman. Should computers take charge of human affairs? Should one anticipate this possibility and develop a new field of study and practice called cyberethics? We shall also examine the history and semantics of the notion of human rights (and responsibilities) as it has functioned in the international political and legal discourse of the twentieth century. Is it desirable or even possible to develop crosscultural and crossdisciplinary definitions of what is human and nonhuman? Finally, would it be possible to give up altogether such binary oppositions as human and nonhuman? What would this kind of thinking entail? And how could it be used in an intercultural and global context?

5. Workshops in Intercultural Project Management

In these workshops, students will explore the complex problems that arise in starting up and managing small and large projects in an intercultural (friendly or hostile) environment and will seek viable and lasting solutions to such problems. They will work on concrete intercultural management projects, such as: designing an intercultural journal on global issues; designing a new political party (or redesigning an old one), based on a platform of topical global and local issues; designing an intercultural NGO, based on a similar platform; an intercultural business company; an irrigation or reforestation

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project that involves various border towns/villages from several countries; an intercultural project of creating and using clean energy in several neighboring countries; a common education or health system for neighboring countries or regions; a worldwide financing system for education, for the introduction of new technologies and other projects of global importance; intercultural projects for resolving specific border disputes, as well as other military and security issues; intercultural projects for preventing terrorism and terrorist attacks, etc. This course will complement and support a large number of real-time research projects.

6. National Identity and Global Citizenship: Historical and Theoretical Approaches

Students will explore the historical development of the notions of the individual and the self, of cultural, ethnic, and national identity, as well as the idea of the nation-state and national sovereignty, in various parts of the world. They will also examine the idea of ownership, the right of self-determination, and self-governance. Finally, they will look at the issue of global citizenship as it appears in the political, social, legal, ethical, religious, and literary discourse from antiquity to the twentieth century in various societies from around the world. What is the relation between nationalism, cosmopolitanism, and global citizenship? What is a global citizen? Is global citizenship possible, or even desirable from a political and legal viewpoint, given the current problems with mass migration and population movement? If so, what are the specific political, economic, and cultural conditions that need to obtain in order to turn this concept into more than a metaphorical reality?

7. Creative Thinking: Culturally Productive Metaphors in their Local and Global Contexts

This course will look at some conceptual models and metaphors that have functioned as creative matrixes in various cultures. We shall examine, for example, the notion of power and its huge semantic field as it has traditionally been developed and deployed in several cultures and domains of human endeavor, from science and religion to politics and economics to philosophy to literature and poetry to the visual and the performing arts. Other culturally productive notions that can be studied in various intercultural, disciplinary, and historical contexts include: property, freedom, peace, democracy, war, love, death, (re)birth, immortality, divinity, family, nature, nation, home and homeland, male and female, liminality, play, work, mimesis or imitation, tradition, originality, truth, fiction, utopia, etc. What new culturally productive metaphors can be developed in various communities around the world, based on their traditional systems of values and beliefs, which will stimulate their sociocultural and human development? How would these cultural blueprints differ from the so-called "human engineering" projects (notably communism

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and fascism) that have failed so resoundingly in the past? This course could also complement a number of research projects.

8. Comparative World Ethics

Students will explore the way in which multiple ethical systems function simultaneously within the fabric of various societies, with their strategies of accommodation, appropriation, and opposition in order to situate or consolidate their own identities. They will discuss the merits and flaws of cultural relativism and will imagine other ways of dealing with ethical and etiological differences among various cultures.

9. Comparative World Religions

Students will explore the history, philosophical assumptions, precepts, and practices of the principal religions of the world (Christianity, Hinduism, Islam, and so on). They will examine the relationships between religious and political institutions; between religious organizations and communities at large; between religion and science; between religion and culture. What do literary masterpieces of the world teach us about religion and religious beliefs? How can one define religious fundamentalism, or fundamentalism in general? What are the merits/drawbacks of religious syncretism? What are the merits/drawbacks of a unified world religion? Are there alternative ways of accommodating worldwide, conflicting religious beliefs?

10. New Foundational Discourses: Theories of Everything

This course will discuss the temptations and dangers of interdisciplinarity and, by extension, interculturalism. The more a certain scientific or interpretative method claims to be transdisciplinary and/or transcultural, the more it usurps the right to speak on behalf of all disciplines and cultures and to produce a unified picture of the world that will apply in all places and at all times. Such claims might result in a new methodological and cultural expansionism, if not imperialism. Though Western postmodern critique of traditional rational and scientific discourse has done much to undermine the so-called "metanarratives" and grand ideological schemes (religious, Marxist, neoliberal, and liberal ones), it has created its own neo-foundational discourses that claim to unite knowledge on a certain methodological foundation. We shall discuss some of these new foundational theories, including the theory of everything in physics, chaoplexity (chaos theory and complexity theory that have now merged), neuroscience, cognitive science, semiotics, memetics, sociobiology (consilience), artificial intelligence, cyberspace, and global communication. How shall we treat these new cognitive ambitions? What is their connection to older, rationalist claims in science and philosophy? Are genuine transdisciplinary and crosscultural approaches possible and/or legitimate at all? If so, what would their conditions of possibility be?

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11. Theories of Reality and their Disciplinary and Cultural Contexts

This course will examine and compare various theories about the nature of reality and the cosmos in science, myth, religion, philosophy, and literature in several cultures from a historical and intercultural perspective. What is the relationship between these physical theories and social theories about the nature of reality? Could or should one develop a new set of crosscultural theories about reality (physical and social) that will reflect and promote global values and prepare the way to the creation of global communities? What would this set of global theories and values look like? What kinds of social realities (communal and institutional arrangements) would best reflect such global values and how could they be implemented?

12. Series of Workshops and Seminars on Various Regions of the World

These seminars will introduce students to the cultural and sociopolitical history of the various regions of the world to which they will travel in order to complete their studies. They will explore such topics as the idea of Europe; the Americas; the Mediterranean world; the Arab world; Sub-Saharan Africa; Central Asia; the Indian subcontinent, the Middle Kingdom, and modern China; ancient and modern India; medieval and modern Russia; medieval and modern Japan, etc. They will also become acquainted with the local sociocultural and linguistic history of their various places of study.

13. Violence, Religion, and Culture

Students will look at violence as a form of individual and social behavior. What are the origins of violence in human communities? What is the place of violence in religious teachings and rituals? What do the great masterpieces of world literature and art teach us about violence? What is the relationship between human identity, difference, and violence? Is violence a universal constant of human behavior? If so, what are the most effective ways of dealing with it? If not, what are the conditions of the possibility of a violence-free world? Could such a world be created on our planet?

14. Environment, Natural Resources, and Violence

The world population is expected, by some accounts, to exceed eight billion by 2005, and the rapid growth in the global economy will greatly increase demands in natural resources. Consequently, there will be an increasing scarcity of life resources such as cropland, fresh water, and forests. Some scholars argue that such impoverishment of vital resources may lead to unbearable social, political, and economic stress, contributing to insurrections, ethnic clashes, urban unrest, and other forms of civil violence all over the world. Is there a causal relationship between violence and material scarcity? What are the cultural assumptions behind such a view? What concrete measures can the

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international community take in order to avoid this kind of potential environmental disaster? Readings in environmental studies, psychology, economics, political science, cultural anthropology, and so on.

15. Violent Conflict and Conflict Resolution in the Twenty-First Century

According to political scientists and sociologists, large-scale violent conflict will continue to be a major concern in the twenty-first century. Weapons of mass destruction will for the foreseeable future constitute a serious danger. Even if organized inter- and intrastate conflict can be contained, small groups of terrorists may increasingly cause large-scale violence. What are the most effective means of dealing with violent political conflict in general? Violent conflict resolution: theoretical assumptions, principles, and methodology. Concrete case histories. Readings in political science, history, law, philosophy, and literature.

16. International Terrorism: History, Causes, Prevention

This course will explore the historical and ideological roots of terrorism. We shall study various terrorist movements from around the world, especially in the nineteenth and the twentieth centuries, their strategies and methods, their connection to extreme religious and political movements, and their attempts at ethical and political legitimation. We shall also ask questions such as: Is violence a legitimate or effective instrument of political action? What are the political, legal, and ethical criteria of distinguishing between a violent terrorist act and other violent acts that are perpetrated, for example, by a state or an international coalition of states? Are there irreconcilable tensions between these various criteria? Can terrorism be eradicated by force? Are current conflict resolution methods effective? What are the lessons we can learn from the past in dealing with terrorism? Can we generate new strategies and methods for preventing terrorism? What are the global conditions that need to be created in order to render terrorism ineffective and obsolete? Students will meet, either electronically or physically, with a current or former member of a known international terrorist organization in order to hear his or her point of view. This course can complement a number of intercultural and transdisciplinary research projects.

17. Modernity and Postmodernity in Global Contemporary Discourse and Practice

This course will explore the various meanings and uses of the concepts of modernism and postmodernism as they have been deployed in social, economic, political, philosophical, cultural, and artistic discourse and practice in a global context. What are the distinguishing features of modernity and postmodernity? What has their socioeconomic and cultural impact been in various parts of the world? What have their relationships with traditional or oral (non-

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literate) societies been? Are these concepts Western exportations to other cultures through colonialist and imperialist practices or do they represent a general human tendency that sooner or later manifests itself throughout the planet? How can these concepts be rethought and redeployed so that they do not clash with the notions of traditional cultures and societies, but complement and enrich them?

18. Annual Colloquium on the State of Knowledge in Natural Sciences, Social Sciences, and the Humanities

This five-day colloquium will examine the basic methodological issues proper to these three major disciplinary cultures, will feature their major recent advances, and will explore cultural and intercultural differences and similarities, as well as establish new transdisciplinary and crosscultural connections among them. The colloquium will have at least twelve ISP student panelists evenly distributed among different disciplines and cultures, three coleaders chosen from the ISP faculty, and three distinguished guest speakers, each from a different culture and representing one of the three major branches of knowledge. The colloquium will be divided into three rounds of three sessions, plus an introductory and a concluding session.

Introductory Session. Each participant introduces his or her field and major research interests. The coleaders explain the format and objectives of the colloquium, designate the three groups representing the three branches of knowledge, and assign them their specific collaborative projects.

1st round:

Session 1: Natural Sciences (3 hours). Each of the four student scientists makes a fifteen-minute presentation about his/her particular field of research as it is being practiced in his/her country with the theoretical and methodological questions that are currently perceived as central to this field. Each speaker may be asked to prepare a short paper that will be distributed at the beginning of the session. An outstanding natural scientist will also be invited to join the session as a guest speaker and to participate in the discussions that follow the presentations.

Session 2: Social Sciences (3 hours). Five individual presentations, including that of a distinguished guest practitioner in the social sciences. Presentations will be followed by discussions with the whole group.

Session 3: Humanities (3 hours). Five individual presentations, followed by discussions with the whole group.

2nd round:

Each of the three teams will meet in separate, one-day long, sessions to prepare a collaborative report on the state of knowledge in their respective

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broader fields: natural sciences, social sciences, and the humanities. Reports should be built around an identical set of issues such as:

1. Major developments in the general field in the past decade: paradigmatic shifts, methodological innovations, general mood of practitioners, their present role in society and academia (as compared to previous decades and with other spheres of knowledge), field leaders and field outsiders, etc.
2. Major problems and challenges to the field, methodological controversies, dynamic tensions, internal conflicts. What specific disciplines in the field are perceived as being on the rise or in decline? What is perceived as limiting the development of the field either internally (methodological obstacles) or externally (social pressures)?
3. The immediate and long-term prospects of the field. How will it be impacted by the anticipated explosion of information technology in the 21st century? How can it reposition itself to become relevant to, or indeed, become a leader in the sociocultural and human developments of this century?

3rd round:

Session 4. (3 hours). Presentation and discussion of the collaborative report on natural sciences.

Session 5. (3 hours). Presentation and discussion of the collaborative report on social sciences.

Session 6. (3 hours). Presentation and discussion of the collaborative report on the humanities.

Concluding Session. (3 hours). How can one generate a comprehensive report on the state of disciplinary knowledge in all these fields with concrete proposals designed to crossfertilize and enrich them? The ISP student panelists will be charged with this task, and their final collaborative report will count as credit for one required ISP course.

In addition to the student panelists, the colloquium will be open to all ISP students and faculty on campus and can be enriched through electronic participation of partner institutions from around the world. The last part of the colloquium may also be open to the general public. Other annual colloquia on related transdisciplinary and intercultural topics can be organized, following a similar format.

19. Open Societies, Democracy, and Global Governance

This course will explore, from a historical and global perspective, the advantages and disadvantages of open and closed societies, as debated in political, sociological, economic, cultural-historical, anthropological, philosophical, and literary discourse in various parts of the world. Special attention will be paid

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to democratic and other open systems of government from antiquity to the present. Is democracy the best governing system known on this planet? Are Western-style democracies the model of choice, to be followed by all other countries in the world? Can one imagine other forms of open societies that might work even better? What are the current uses and meanings of the term "global governance"? Should global practitioners work toward the implementation of such governance, and if so, what would its guiding principles be? And what would be the best strategies and methods of bringing it about?

20. Transcultural Laboratory

The TC Lab will be in a seminar format. It will work on a concrete project involving several intersecting cultural dimensions and will require the collaboration of several students representing their native cultural perspectives. The topics will vary from semester to semester, depending on the interests of the discussion leaders and the cultural setting of the course. Topics may include: the concept of authority in various cultures, gender roles and sexual difference, attitudes toward nature and the physical environment, violence, systems of values and beliefs, etc. This course could complement a number of research projects.

21. Traditions of Wisdom and their Contemporary Relevance

This course will examine, from a historical, comparative, and crossdisciplinary perspective, some of the major traditions of wisdom from around the world, including the Arabic, Hebraic, Hellenic, Indic, Chinese, Japanese, and so forth, as well as other traditions deriving from small-scale communities, such as aboriginal tribes, religious and other types of communes, esoteric brotherhoods, etc. We shall explore their basic values and beliefs, moral precepts, modes of operation, distinctive and common features, etc. We shall also discuss ways in which a global practitioner can draw upon these various traditions in designing new strategies for sociocultural and human development in various parts of the world. This course could complement a number of research projects.

Internships

During the course of their studies, ISP students will complete at least three internships, for a two-month period each: the first internship will be with an international nongovernmental organization, the second one with a governmental institution, and the third one with a multinational corporation. The purpose of these internships is for students to learn and understand from firsthand experience how these organizations operate, to what purpose, and with what success. Internships will, moreover, be directly related to the individual student's research programs and are designed to advance these programs. For

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example, if the student researches urban sprawl, she or he might take an internship with the city planning office of Los Angeles or Shanghai or Mumbai; if the student studies global health issues, he or she may take an internship with a global health governmental or nongovernmental organization, environmental agency, and so on.

Upon completion of the internship, students will submit a position paper on their learning experience, including a set of proposals designed to improve the performance of that particular international organization (from the perspective of global intelligence). All internships will carry academic credit.

10. Advanced Learning and Research Technology Platform and the Global Institute for Learning and Research Online

The Global Institute for Learning and Research, which will organize the academic programs in Intercultural Studies (and in Intercultural Knowledge Management), will obviously not be a distance-learning organization, even though it will certainly benefit from the experience and services of such organizations. Distance-learning companies have the important role of redistributing old and new knowledge throughout the world, yet their mission and objectives are not primarily educational, but professional: they train their clients in certain skills and competencies that, at least in principle, can be acquired without the physical contact and experiential dimension that are integral to the educational process. As such, distance-learning organizations could become important disseminators of global competencies and expertise.

The Institute and its programs, on the other hand, are based on the belief that, in addition to global expertise, students should strive for global intelligence. Such global intelligence cannot be acquired through electronic means or virtual reality, but only through the students' real-time intercultural experience and practice of living, working, and playing together over extended periods in various cultures and learning environments. The project also starts from the premise that information and communication technology, as well as technology in general, is only as good (or as bad) as the intentions and objectives of the people who use it.

The Institute will, therefore, lever information technology (1) to achieve a closely knit, global community of students, teachers, scholars, and practitioners who support each other's research and learning efforts toward acquiring global intelligence; and (2) to disseminate the results of these learning efforts to the world community at large.

In order to attain these objectives, the Institute will form partnerships with appropriate ICT and distance-learning companies in order to develop innovative technology platforms. Such technological platforms are needed to offer effective global research tools to the Institute's students, mentors, and associ-

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ates from all over the world. Its data management system, based on AI methods, must be capable of analyzing vast and complex amounts of data, of recognizing cohesions and suggesting intelligent, optimized decisions. The system will provide real-time, forecasting strategies and will be used to help model and solve comprehensive scientific, social, economic, and cultural problems. It will, therefore, be an important tool in carrying out the IS research programs.

ISP, in cooperation with other research and learning programs of the Institute, such as the IKM doctoral program, could also provide an innovative, online, learning process that will potentially benefit not only its own students, but also a large number of learners from all over the world. Of course, these programs will largely address the goals of global competence and expertise, and only partially those of global intelligence, which, as I have already pointed out, can be fully attained only through experiential education.

The first objective of the technology platform is to research and develop new forms of communication for the participants in the Institute's programs, offering continuing support to their learning and research activities. Through this technology platform, students and associated faculty will continuously be linked by telecommunications from all the Institute's sites, servers, and systems. Technology packs (laptop, pda, cell phone, Internet account) and passwords will aid education and research in such formats as teleconferences, seminars, colloquia, workshops, tutorials, reports on field research, and publications of collective and independent work in electronic books, CD-Rom, DVD, and Internet Sites.

This electronic platform will also list and continuously update ISP (and IKM) courses taught in the program and at other colleges and universities from around the world, as well as extensive bibliographies in intercultural and global studies, intercultural knowledge management, and other worldwide educational resources, which will help students, in consultation with their advisors, design their individual curricula.

The Institute will also develop a Teleconference and Video Production Lab (TVPL), which will serve as the electronic, Web-based link among the various local centers around the world. Through the TVPL, the program will offer further opportunities for distance learning and will introduce multimedia technologies in classrooms all over the globe. The TVPL will be designed to provide instructors with a broad variety of multimedia options to improve and facilitate the delivery of instructional materials to students.

- Video-teleconferencing with real-time feedback
- Event net-casting for international events of particular importance to the field of instruction

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- Graphically enhanced, interactive course materials on CD-ROM format. This will eliminate the need to circulate extensive paper materials to classrooms all over the world
- Online discussion with world leaders, professionals and practitioners

Some of the Institute's online services, especially those connected with innovative distance learning methods of developing global competencies and expertise, will be made available to the global community at large.

11. Academic Calendar and Logistics for the Intercultural Studies Program

ISP will be a three-year, full-time, study program, leading to a combined BA/MA degree in intercultural studies. In order to attain its learning objectives, ISP requires that students divide their time between several locations in various parts of the world, carrying out research, taking courses, and completing internships related to this research. Prospective ISP students will spend their freshman year fully integrated into a regular academic program offered by a major university in the US or another English-speaking country. Once admitted to ISP, students will typically spend their first two terms with the program on the main campus of a host university, for example, in East Asia. If required by their individual or group research, however, they could also undertake up to three-week study trips within the geographical region where their local center is based. If the center is in China, they could travel, for example, to India, Korea, Vietnam, Japan, or Asian Russia.

During their third term with ISP, students could be stationed in Europe, for example in the South of France or Northern Spain, with up to three-week study trips, if required by their research, within Europe, Middle East, and North Africa. During their fourth term, students may go to a local center in Russia or India, or South America, as required by the specific objectives of their group research and/or internship. Depending on their research programs, however, students may, in consultation with their advisors and subject to approval by the C&R Committee, propose different overseas research schedules during their fourth and fifth terms with ISP.

Students will normally complete their internships during the summer recess of their first, second, and third year of college.

During the sixth and last term of their studies, students will return to and work at the local center that will be most appropriate for their main collective research project and master's thesis. They will take their oral MA exam at the beginning of the last term of their studies and will defend their MA thesis at the end of that term. They will be awarded a combined BA/MA degree in Intercultural Studies at the end of their third year with ISP (and fourth regular academic year).

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12. ISP Graduate Employment Opportunities and Global Network

There is no doubt that every national and transnational public and private entity throughout the world will seek to hire ISP graduates. Such graduates will secure high-level jobs with transnational corporations, national and international governmental and nongovernmental institutions, media organizations, universities, foundations and think tanks, or will set up their own consulting companies and transnational firms. Some of the most promising graduates may elect to apply for admission to the IKM doctoral program, after they acquire at least two years of working experience outside the Institute.

Once they receive their degrees, the ISP graduates will disperse to many regions of the world. They will continue, however, to maintain close contact and to work together toward the same goals and ideals for the rest of their lives. In order to ensure this group solidarity, the Institute will accord ISP graduates the status of permanent fellows.

The Institute will maintain updated listings of names, physical addresses, and phone numbers of all graduates, along with brief information on each fellow's global competencies and current activities. It will invite fellows to serve on its various boards and committees and for visits to its various local centers. It will also invite them to participate in the Institute's meetings, conferences, new publications, and other activities.

The local centers will organize annual gatherings for new and old ISP fellows from various parts of the world. Many of them will be invited back to teach, lecture, conduct workshops, or lead or colead new research groups and projects. They will also become involved in recruiting new students for the Institute's programs.

Over time, the Institute's global network can provide governmental and nongovernmental agencies, the international media, and other organizations with a roster of global practitioners in numerous fields. Institute fellows may well serve as point men and women in interagency and international negotiations and conflict resolution. Indeed, many of them will eventually be in a position to negotiate national and regional policy, global and local interests, global and local economic and financial investments, and common strategies of cultural and human development on behalf of governments and institutions they may head or represent in various parts of the world.

13. What is the Added Value of ISP?

There are two questions that will commonly be asked by academic administrators and by potential financial backers for the project: What distinguishes ISP from other international programs? What are the sources of added value of

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ISP to individual students and society as a whole? Of course, these are utilitarian questions, often assuming cost-benefit analyses that should be alien to the spirit and objectives of the program. The emergent ethics of global intelligence imply that human (self-) development is an intrinsic "good" or a goal worth pursuing for its own sake, independent of practical or utilitarian considerations. Nevertheless, the implementation of the intercultural studies program will, at least initially, depend on financial and other support from the very same institutions (private and public) whose utilitarian mentality it seeks to reform. Therefore, the program organizers ought to be able to address such utilitarian questions as well.

The answer to the first question is that ISP differs from other degree programs in two main respects: it defines the intercultural process of learning in terms of the emergent ethics of global intelligence; and it employs a triple strategy that underpins this learning process: experimentalism, learning-by-doing, and means-as-ends.

The first distinguishing feature of the program is the way in which it defines the intercultural perspective as global intelligence. Most current efforts to introduce intercultural dimensions to an academic course of study do so in largely passive, implicit, and add-on ways. ISP makes the intercultural dimensions of today's world an active, explicit, and integral part of the program. Global intelligence is both a core value and a core research objective and practice of the program. Taking this holistic approach is facilitated by the fact that the program does not have an institutional legacy that is monocultural and monodisciplinary. We will need, however, to exercise careful attention and submit the program to continuous inside and outside evaluation so as to avoid falling into singular and absolutist traps. The success of the program will reside in its ability to perpetually renew itself, while never losing sight of its primary goal of seeking and practicing global intelligence.

The second distinguishing feature is the triple learning strategy employed by the ISP project:

1. *Experimentalism*. This implies that the objects, structure, and specific methods for learning are not fixed, but open to continuous change. All of the elements of the learning platform are open for experimental risk-taking and reflection. Certainly, one dimension of experimentalism is the "scientific" method of recording and analyzing experimental results. But an equally crucial aspect is the willingness to imagine new objects of analysis and methods of learning. This type of experimentation demands a new attitude towards failure and a capacity to develop imaginative projects. It is continuous learning about learning.
2. *Learning-by-doing*. For ISP this means actually undertaking real-time projects, not just reviewing "case studies." Team or individual projects that take place in the field, at the front lines of problem solving, are one of the main

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ingredients of learning how to construct creative solutions and extract insights about what such terms as "intercultural communication and understanding" and "global intelligence" mean in a concrete local-global environment.

3. Means-as-ends. This principle is the key to ensuring that the values connected with global intelligence are integral to all projects. Following the principle that means are ends, and vice versa, also provides the matrix needed to ensure creativity, as well as clear judgments regarding success and failure.

Finally, to answer the other question posed at the beginning of this section, there are at least four attributes of ISP that provide significant "added value" for individual students and society as a whole:

1) As an experiment in learning, ISP will add to the human stock of knowledge by exploring the basic principles of intercultural dialogue and cooperation, oriented toward global intelligence and by seeking ways of translating these principles into practice.

2) Through its experimentalist methods, ISP will provide specific practical examples of what does and does not work. As such, it is a pilot program, or a learning laboratory.

3) ISP will make a difference on the ground insofar as its practical projects will help private and public organizations, governments, civic networks, and so on to solve local and global problems.

4) ISP, together with the other programs of the Institute, will contribute to creating an extensive network of civic entrepreneurs and practitioners dedicated to understanding and practicing global intelligence, and thereby preparing local-global learning environments for the benefit of all, not only of some, members of our world communities.

14. Financial Considerations

Potential financial backers for the project will finally wonder about the cost of a global educational program such as ISP. These potential backers may include the members of the global academic consortium itself, various private national and international foundations and other charitable organizations, governmental and intergovernmental development grant agencies, individual donors, and so forth. The initial financial investment in this global learning experiment would undoubtedly be substantial: one would have to build and continuously update the complex infrastructure and the ICT needed for this and other programs of the Institute, as well as to provide the fellowships that would cover the educational and living expenses of all ISP students (up to fifty enrollments per year). The costs, however, will not exceed those needed to train a regular undergraduate student and a Master's student at an Ivy League school in the

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United States, while the benefits to the global society at large would obviously be much greater. In fact, the costs will be offset by the fact that an ISP student will take one year to obtain an advanced, MA degree, whereas it would take a regular US student a minimum of two years (in practice, three or longer) to obtain the same academic degree.

More generally, only a very small fraction of what is currently spent in the United States and other countries on the so-called "war on terror" would suffice to create a large number of ISP, IKM, and other innovative, globally oriented academic programs throughout the world. Such programs would, moreover, yield much better and much more secure returns for both the United States and the rest of the world. So, even in terms of utilitarian benefits or "returns," such academic projects would be a good investment. Indeed, they would largely become self-supporting after the first three-year cycle, because of their real-time research programs that many multinational corporations and other transnational, private, and public organizations would regard as very "hot" intellectual property.

In any case, the intrinsic value of such programs to the global community at large will greatly exceed any financial investment needed to establish and operate them. Whereas not ignoring cost/benefit considerations, one would, again, have to redefine the notions of "value" and "benefit," not in the utilitarian, instrumental terms of material (self-) interest, but in terms of the emergent goals and objectives of global intelligence. In the end, it is a matter of choice on the part of a certain society, or community, or nation as to what its investment priorities should be. Will it continue to indulge in mindless waste of human, natural, and financial resources with disastrous, worldwide repercussions? Or will it finally start building a sustainable future for itself and for all other life on earth?

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Appendix

Quantum Relations Theory: A Brief Overview

By Hardy F. Schloer and Philip Gagner

How will we analyze data two hundred years from now? This question is not idle—it is of vital interest to those of us who are currently using computers to represent, manipulate, or acquire information as effectively as possible. To the extent that we can envision future technology, we can recognize our present technological limitations and take the right steps to overcome them.

Clearly, present computational methods of modeling reality are very limited. Much social science research, for example, relies on primitive, correlational, statistical methods. Merely calculating the Pearson correlation between two variables might test an important hypothesis, but does not say a whole lot about the reality that underlies it. A more complex study might examine a network of linear associations via a linear structural relations (LISREL) model, but even this model relies on simplistic assumptions: there is no reason to expect linear relationships between variables in the real world. A variable X does not necessarily have the same effect on variable Y at all levels of X. Nor is it reasonable to believe that X has the same effect on Y at all levels of a third variable Z. Such statistical methods are used not so much because of their intrinsic plausibility as because of paucity of alternatives. The rudimentary nature of the available analytic models in general considerably impairs the quality of social science that one can generate with their aid.

Although we cannot say for certain what the computing methods of the future will look like, we can at least make some educated guesses, as follows:

1. Computers will be much faster.
2. Computers will have vastly greater memories and stores of data.
3. Computer architectures will be different.
4. The current methodological sectarianism that compartmentalizes data analysis and data analysts into separate fields and approaches, such as "statistical," "artificial intelligence," or "neural network" ones, will

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be replaced by modeling methods that will integrate many different approaches.

5. Data analysis models will be "hierarchical," that is, they will be able to consider a problem at multiple levels simultaneously. It is reasonable to expect this type of development, because the world itself appears to have a "hierarchical" or multilevel structure, and, therefore, an adequate modeling of the world must correspond to such a structure.

It is not too early to begin thinking about how to move in these directions. Indeed, we are motivated to do so both because of the limitations of existing methods and because to do otherwise would be self-defeating. At a very practical level, the only way to know what is technically feasible with current technology is to aim high and "push the envelope."

This appendix presents a broad and radically innovative approach to data analysis and modeling, particularly in the areas of social research and human psychology. We propose a general theory that can adequately describe and reasonably predict relationships and interactions among people, countries, and economic, social and cultural variables, as well as the basic emotional and intellectual dynamics of an individual mind. By its very nature, this theory is crossdisciplinary. We borrow ideas from many fields, including statistics, bioinformatics, the social sciences, psychology, neuroscience, artificial intelligence, physics, mathematics, and philosophy. However, we do not do so haphazardly. We aim for a unified theory of data modeling. While this enterprise is admittedly ambitious, we believe that it is appropriate and timely, for the reasons we have already stated. We do request a degree of patience from the reader—some ideas may seem complex at first. Some specific details might not "fall into place" until the entire appendix is read.

We have, for example, adapted some of our concepts from the New Physics, especially from the fields of relativity and quantum theory. These physical concepts apply to our theoretical model partly in a literal and partly in a metaphorical sense. No particular formulation of this model is indispensable for its further development and can easily be modified or readjusted. What we are proposing is a methodological vision, rather than a finalized method. Practical applications based on our model are currently in various stages of implementation. We will describe them in forthcoming papers, providing further details about the practical ramifications of our methodological vision.

We call our general theory *Quantum Relations* (QR). QR was first conceived by Hardy F. Schloer and later collaborated by Philip Gagner.[1] In this appendix we shall present the basic assumptions and features of this theory. We first introduce specific components of the model, such as frames of reference, QR objects, QR structure, and so on. We then discuss how the QR approach can be used as a tool for data analysis and knowledge representation/

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acquisition in real-world applications. We also provide examples of the QR approach to real-world problems. Next we briefly consider the computational requirements for applying the method. Finally, we speculate on potential practical applications of QR theory in various domains of human activity.

1. QR Frames of Reference (FORs)

QR borrows the concept of *frames of reference* from the New Physics. In Newtonian physics, all movement occurs in absolute space. Once an origin is chosen (e.g., in Cartesian two-space, the point [0,0]), all distances can be measured from that point, and all motion occurs against the fixed background of that immutable space. Descartes, following Newton, believed that there was only one true, absolute, and fixed viewpoint ("the viewpoint of God"), and it is against this background that everything else moves, and all measurement occurs.

> *But, even in Newtonian physics this is not absolutely true. If I am driving my car next to the railroad tracks while a train is moving in the same direction at the same speed, then the train appears to me to be motionless. That is, in my frame of reference the train is not moving at all. However, most philosophers and scientists of the earlier paradigm were convinced that there was one metaphysical reality, an ultimate stillness, against which both my car and the train would be seen to be truly moving.*

A consequence of the Newtonian model is that objects have, for example, one "true" velocity. They also have a "true" weight, a "true" size, a "true" color, and so forth. Newton himself was aware that there was no physical evidence that this idea was correct. He adopted it by a method of reasoning which he called the "first rule of reasoning," or the principle of parsimony, and which we now call Ockham's razor. That rule states that given a number of possible explanations, one should select, in the absence of any other evidence, the simplest among them. To Newton, the simplest explanation of motion was that there was an absolute space in which things moved.

Modern science now believes Newton was wrong. The Newtonian model is not simple, because it cannot account for a significant number of behaviors of matter and energy that were, of course, unknown to science in Newton's time. A genuinely simpler explanation of the universe, one adopted by Einstein, is that there is no absolute space. Every movement occurs only with respect to some other objects, and the objects themselves generate the space in which they move. Einstein simplified Newton's equations of motion by eliminating any references to absolute position, absolute velocities, and indeed absolute space itself. To achieve this, Einstein discovered that he had to make another simplification—to eliminate absolute time as well. The only way to remove all references to a background space, and still to permit motion, is to

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make time, as well as space, relative to some observer. This breakthrough in physics is called the Special Theory of Relativity.

Einstein completely reinvented and made mathematically precise the concept of frame of reference with regard to motion of objects. He used the concept of transformations of a frame of reference. No longer were reference frames some fixed sets of axis coordinates (Cartesian axes). Rather, they became something flexible, something that changed over time. The frame of reference became a set of rules by which the objects within it interacted, and the rules themselves could change. They changed, however, in very precise and well-defined ways. In the Special Theory of Relativity, the rules change depending on the relative velocities of the objects within the frame of reference.

Indeed, for Einstein, every object and every observer has its, his, or her own frame of reference. Time proceeds at different rates for different observers. So, two observers who measure the same objects and then compare their measurements might find out that they have measured different lengths. It is not the case that one observer or the other is right or wrong. Rather, both will have measured the lengths in different frames of reference (moving with respect to each other, for example), and each is perfectly correct within his frame. Einstein's great achievement in the Special Theory of Relativity was to present a method that would predict precisely when this would happen and precisely by how much the measurements would differ.

> *The two observers will measure different lengths if they move relative to each other. The difference will be roughly proportional to* $1/\sqrt{1-v^2/c^2}$*, where v is their relative velocity and c is the speed of light. For everyday velocities, such as the 3,000 mph speed of the space shuttles, the difference in the length of the shuttle to its passengers and to a NASA observer on earth, for example, is less than a thousandth of an inch.*

In QR, however, the important concept is not the mathematics of relativity. Rather, it is that objects carry their own frame of reference with them, and that their interactions (making a measurement, for example) are determined by the rules that govern their frames of reference (FORs).

The concept of frame of reference was quickly adopted in science, mathematics, and philosophy, and with it the notion that an important characteristic of interactions is the way in which their reference frames relate to each other. Indeed, in the 1950s mathematicians developed a set of tools that deals with objects on very abstract levels, portraying their interactions as a set of relationships. This set of tools has been adopted by modern physics and termed *category theory*. A major branch of modern physics involves the attempt to apply category theory to physical frames of reference.

In turn, QR theory is an application and extension of the principles of frames of reference or FORs to objects. QR provides a description of the elements, structures, and interactions between objects. Most importantly, how-

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ever, in QR objects need not be physical. They can also be concepts, relationships, or sets of objects, concepts, or relationships. QR attempts to derive, for each such set, the rules that govern the interactions of the objects in the set, as well as the interactions of different sets.

2. QR and Observation

In relativity theory, the observer's role is, in a certain sense, unimportant. For an observer, objects and their motions are described in relation to the observer's frame of reference, but they could just as easily be described with respect to any other observer's reference frame. By contrast, in QR theory, the individual observer plays a more important role. This philosophical idea is again borrowed from modern physics. To explain it, we need to dip briefly into the world of quantum mechanics.

In the early twentieth century, Heisenberg (among others) observed that there is a fundamental problem with measurement. Every measurement requires an instrument to make it with, and using this instrument changes whatever is being observed. That is, a measurement always requires that the observer interact with the object measured, and the interaction changes both the observer and the object.

Many attempts were made to overcome this difficulty, including calculating the exact effect that an observation would have on the object and the observer (and then calculating the effect of calculating the effect, and so on). The idea was to quantify and subtract, or calculate exactly, the amount of disturbance and thus to recover the exact state of the object before it was measured. This approach failed, however, to produce "corrected" observations that could be explained by physical theories. Paul Dirac eventually resolved the difficulty by declaring that the observer is part of the system being measured, and that there are concrete, physical limits to the degree to which one can treat an observer (including oneself) as an object separate from what is being observed. Both are simply part of one system, so the best one can do is to describe the behavior of the entire system, including the observer. Whenever one tries to extract information exclusively about the object, one introduces uncertainties that render the measurement imprecise. This phenomenon has come to be known as the Heisenberg uncertainty principle.

> *The uncertainty principle is not a failure of measurement, or of the measuring instruments. It is a fundamental principle of the universe, or at least of modern quantum mechanical theories about the universe. The principle states that one simply cannot separate the observer from a system and still obtain precise measurements about the objects being observed. The act of separating the observer's frame of reference from the object's frame of reference introduces these uncertainties.*

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If we apply the uncertainty principle at all levels of reality, it should be obvious that with regard to any single object (or set of objects), there are as many "realities" as there are observers.[2] Because each observer carries his or her own frame of reference, the results of observations between observers may differ. In addition, each observer, when making observations, cannot be too sure of what he or she has observed.

These physical concepts are most fully developed in the specialized cases of particle physics (the interaction of subatomic particles) and of objects moving in relativistic frames of reference. However, it is widely assumed that they apply more broadly in science. It is our belief that there is demonstrable utility in applying them, for example, in the area of social sciences.

Therefore, QR goes beyond the field of physics. The theory asserts that physical concepts such as frames of reference and processes of measurement can be used in much wider fashion to gain insights into complex processes in general. The assumption that the universe, at a fundamental level, does not behave like Newtonian, mechanical clockwork can bring forth new insights into human cognitive processes, behavior, and personality.

QR theory also involves a system of computation. That is, the QR model can be used in designing computing processes that model complex systems. Again, the model is derived from modern physics, but this time it employs other, more sophisticated tools. In later sections of this paper, we shall describe the methods of computation and the specific computational tools derived from QR theory.

In QR models of human behavior, one fundamental action is that of observation. An observation can be a measurement of a physical quantity (such as temperature). It can also be the result of different kinds of experiments, such as object recognition, or even the formulation of a hypothesis. The process of object *recognition* is perhaps the simplest example. Assume that we have a machine, called X, which uses a camera to "recognize" a certain face in a crowd. X starts by returning a value of 0, and it continues to do so until it detects a face that matches its template. From that point on, X returns a value of 1. If no face has been recognized, then X continues to return a value of 0. But assume that X is not a perfect machine—sometimes X gives false-positives (returning a 1 when the face is not in the crowd), and sometimes X gives false-negatives (returning a 0 when the face is actually in the crowd). In a certain sense, one can say that X "observes" the crowd and returns a value with a degree of uncertainty.

Moreover, we are in turn observing the machine X. We are hoping, perhaps, that a certain person will appear at the airport, and we've placed X at the gate, checking faces. We check the output of X from time to time. Obviously we may be mistaken about our observation of the value returned by X, perhaps because we are too hopeful. Our observations are subjective. Our conclusions are the result of our subjective interpretations of our observations.

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The model of which the above is an instance is quite general. It involves a measurement instrument that potentially measures with less than perfect accuracy and an observer of the measurement who (a) perceives the output of the measuring device with less than perfect accuracy and (b) is subject to misinterpretation (cognitive distortion) of the results, once perceived.

QR provides conceptual and computational models for such situations. In fact, QR predicts that because X may return an erroneous value and because we may misinterpret the output of X, we may head to the airport to pick up our passenger at the wrong time. It also makes the stronger claim that it can predict with reasonable accuracy how often we will make this kind of incorrect decision. Of course, other statistical models can do the same thing. What is unique about the QR framework, however, is its ability to take into account the observer's cognitive distortions, subjective prejudices, intentions, and desires. It does this by making a model of human motivation and decision making, and then using that model to interact with the known or predicted behavior of X, the sensory device. Our QR model uses some of the tools of physics to compute these interactions. Moreover, it uses some of these same tools to predict the processes going on within the brain of the observer. It thus provides a rough model that approximates the computing operations of the human brain.[3]

3. Interactors, Observers, and QR Objects

We shall call *interactors* objects that interact with each other. Observers are a special case of interactors. Objects can interact with other objects in many ways. On a physical level, two marbles can, for example, interact through gravitational attraction, or through an exchange of particles, or through electromagnetic and other physical forces.[4] These interactions are modeled through sets of physical laws, such as the laws of gravitation or of electrodynamics.

Large collections of physical objects can be modeled with the laws of thermodynamics that describe the behavior of hundreds, thousands, or billions of individual interactions through statistical methods. In thermodynamics, or in statistical quantum mechanics, one disregards individual interactors and takes into account only the gross properties of their interactions. One trusts that any uncertainty about individual interactions will be negligible in comparison to the prediction derived from the knowledge of the physical laws that govern their collective behavior.

When it comes to human behavior, including the behavior of entire societies, we may no longer deal with physical objects and physical laws, but we are still dealing with interactors at multiple levels. One level of interactors may include social entities (people, organizations, countries, and so on). Another level (such as the psychology of an individual person or organization) may include concepts, emotions, memories, habits, preferences, and other mental

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objects. When dealing with human behavior, QR is concerned with understanding the dynamics that govern the interaction of these social or psychological entities or objects. It employs a set of tools for studying and predicting the complex relations of such conceptual, behavioral, and personality entities or objects.

Most importantly, we should recall that QR objects could indifferently be physical, natural, artificial, mental, ideal, and so on. A memory or a recording of past events by the brain is an example of a QR object. However, a memory is not a static object.[5] Memory changes over time. It may fade, becoming less accessible to the conscious mind, or it may intensify, becoming more vivid. It may be modified by later experience or change into another memory altogether. Memories interact with other memories, emotions, habits, beliefs, and observations. QR postulates that these changes can be modeled in a well-defined way, using the tools of QR.

Furthermore, the observation of memory is different from a memory itself. The observation of a memory is the recalling of the memory to the conscious mind. More precisely, it is the way that memory fits into the scheme of interactors associated with conscious self-awareness and behavior. The observation of memory may also change over time, even if the memory itself does not change, because of other factors in the scheme. We call this phenomenon the interpretation of memory objects. The interpretation of memory objects constitutes a significant part of one's individual reality. Therefore, interpretation represents objects of individual reality.

4. QR Superstructures and Data Fusion Objects (DFOs)

QR as applied to human behavior posits the existence of certain structures. It does not assert that these structures necessarily have physical existence—merely that they are constructs that permit predictions of behavior.

A basic QR concept is that of "superstructure." This simply means that zero, one, or more QR objects can be embedded into a higher-level QR object. In turn, the behavior of the higher-level QR object is determined by its own relational rules, plus the behaviors of the QR objects embedded within it.

A QR superstructure can be viewed as a "space" in which the lower-level objects are embedded. The space has rules that govern the interactions of the objects within it. In turn, the objects have properties that determine how they interact with other objects within the space and with the space itself. We call such objects *Data Fusion Objects*, or DFOs. We have chosen this name because the objects "fuse" two different characteristics: properties and methods.

This QR concept recalls object-oriented programming languages in design theory, where objects contain their own properties and methods. A property is some value

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that gets returned to the caller of the object, or is stored internally for later use. In turn, a method is some way of accessing or modifying the information within the object.

A simple example of a DFO with properties and methods is a house. A house has various properties, such as its paint color, the number of windows or floors, location, street address, inhabited or uninhabited, and so forth. A house may have methods as well, such as how to lock or unlock its doors, how to heat or cool it, or generally how to use it as a dwelling.

In QR, DFOs are generally interpreted through a frame of reference (FOR). The way this is done is to embed the DFO into a particular FOR, together with the model of the observer. In this case, the frame of reference is also the observer. In most realistic cases, the FOR "model" itself will be trivial (and it will usually be built into the FOR relational rules). Nevertheless, the fact that the DFO interacts with the observer cannot be disregarded.

More than one DFO may be inserted into a frame of reference. In fact, there may be millions of DFOs embedded within a particular FOR. In turn, the frame of reference itself has both properties and methods, and therefore can equally be regarded as a higher-level DFO. Furthermore, a DFO may be composed of lower-level DFOs (or may be decomposed into them when the need arises), or it may in turn be embedded within higher-level DFOs. In this way, one can build a modeling hierarchy of DFO structures to model any type of problems.

The concept of DFO is overarching, applying to objects, sets of objects, and frames of reference, as well as to various levels of aggregation among them. This flexible hierarchical structure is a fundamental strength of the QR approach. Applying a common concept across all levels and types of "entities" has two important advantages:

(1) It allows a common set of analytic and computational tools to be applied universally throughout the model. At a simple technical level, this means that, in the computer software used to apply the QR model to a particular problem, there are functions and subroutines that can be applied consistently across objects and frames of reference at various levels.

(2) It facilitates the development of analytic models that operate on several levels of aggregation (and logical category) simultaneously.

A ditty by Jonathan Swift:
Big fleas have little fleas upon their backs to bite them,
And littler fleas have littler still,
And so on ad infinitum.

A DFO may be an element in more than one FOR. Each frame of reference can be thought of as a "view" of that DFO. As noted above, each frame of reference is itself a DFO, so that one can have the following situation:

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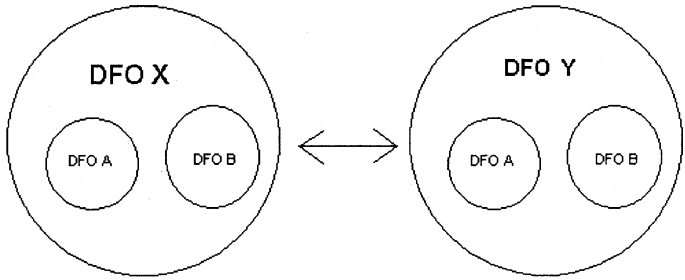

In this example, the DFO-A on the right and the DFO-A on the left are identical objects, embedded within two different reference-frame DFOs, labeled X and Y. However, X and Y interact with each other, presumably in some higher-level reference frame. X and Y can be thought of as two different "views" of A and B. Their type of interaction may represent, for example, the state of mind of a man who has two different views of the same car—one positive and one less so—and is, therefore, conflicted about buying it or not.

A particular set of "views," each of them being DFOs, may in turn be part of one or more higher-level DFOs. This hierarchical model, with the addition of some more detail, including the nature and restrictions of rules that may be applied between DFOs, is the fundamental concept of QR. One of the basic rules is that a DFO may communicate only through its higher-level DFO, which imposes an important formal constraint on DFO systems and prevents the DFO model from becoming impossibly complex.

5. What Makes Quantum Relations Quantum?

The term "quantum" as used in physics is derived from the Latin word *quantus*, meaning "how many?" It was first used to describe the behavior of systems in which only certain levels were permitted. In classical physics, a particle of light can have any amount of energy, but in quantum physics, only certain levels are permitted. In turn, these levels are highly constrained by the laws governing the atom that emitted the photon. The basic unit of which all other values must be a multiple is called a "quantum."

The term "quantized" means that a system can take on only certain values, and those are chosen according to particular rules. As an example, U.S. currency is quantized, and the quantum is the penny. In everyday life, nothing costs a fraction of a penny.

In QR, a DFO viewed through a frame of reference (and it can be viewed in no other way) can return only particular values according to particular rules. The rules that govern DFO interactions are highly constrained and obey definite patterns. In this sense, QR is a "quantized" version of everyday human

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reality. The fact that it is quantized means that one can model it on a computer and that one can also perform calculations with it.

In modern physics, a major concern is to create from a physical theory what is called an "algebra" over that theory. An algebra is a set of rules that govern the interaction of elements. For example, ordinary arithmetic has an algebra. The algebra of arithmetic is a set consisting of all the numbers[6] plus two operations, addition and multiplication, plus a few rules of interaction that explain how addition and multiplication work. Thus, the algebra of arithmetic is:

$$\{¥ , = , *\} \text{ with } ¥ = \{0, 1, 2, 3 \ldots\} \text{ onto } \Re$$

The symbol is simply all rational numbers, i.e., all the numbers one can get with arithmetic, like ½, or ¼, or 105, etc.; or all the numbers one can get by applying the stipulated arithmetic rules to the set of integers. Using the rules of multiplication, one can derive division, and using the rules of addition, one can derive subtraction.

Just as there is an algebra of arithmetic, there is an algebra of DFOs. One starts with defined objects and with operators one wishes to apply to the DFOs. One can then obtain an algebra over the DFOs. Whereas the algebra of arithmetic produces the "field" of rational numbers, the algebra of DFOs produces a different kind of field. We sometimes refer to that field as "RavenSpace." It obeys certain rules that are reminiscent of the fields of quantum physics.[7]

QR is therefore "quantum" because it attempts to quantize all types of objects, including concepts, perceptions, memories, behaviors, and so forth. Its objects are not numbers but processes, or functions, or "quantitative relations."

QR often places objects in a theoretical structure called a "space." If certain conditions are met, this space is a "metric space." A metric space is a space in which objects obey certain rules (for example, the concept of "distance" between objects is one such well-defined rule). One of the goals of QR is to represent many different kinds of objects—including ideas, emotions, behaviors, and the like—in metric spaces. In some cases, QR uses terms like "mass" or "energy" or "gravity" to model these systems. This does not mean, of course, that a system of, say, psychological or personality concepts has actual mass, energy, or gravitational fields. It means only that QR assumes that concepts within this kind of system behave and interact according to rules similar to the dynamics of physical objects. Because the rules of DFO interactions are part of the frame of reference of the DFO, such rules can be easily written, combined, and tested.

One simple operation is to compute the "center of gravity" of various DFO objects. For instance, consider the dynamics involving four hypothetical stock traders. We know, or at least speculate, that stock traders are largely motivated by "fear" and "greed," and that these factors influence their preference for a given stock. We also know that the relative influence of each factor and the degree to which a trader is either attracted or repelled by a given stock change over time. In

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the picture below, various DFO objects are modeled as a function of the "greed" and "fear" of four hypothetical stock traders at specific times when they committed to a buy or a sell trade, each being modeled by one DFO. Thus, let there be:

x = the degree to which a trader prefers the specific stock in the example on the basis of Fear

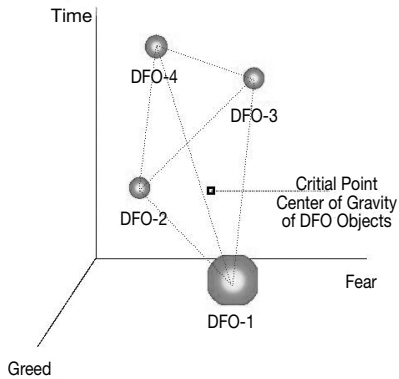
y = the degree to which a trader prefers the specific stock on the basis of Greed.

QR posits that for any stock, trader, and time, the trader evaluates his options based on a joint function of a greed motive and a fear motive. Generally, this means that:

$$P_i\,(t) = f_{i,t}[x(i,t),\, y(i,\, t)]$$

where:

Pi (t)	=	the preference for or against the stock for Trader i at time t
x(i,t)	=	the degree to which fear motivates Trader i to buy/sell the stock at time t
y(i,t)	=	the degree to which greed motivates Trader i to buy/sell the stock at time t
fi,t[ ]	=	a function that maps the combination of x(i,t) and y(i,t) into a total preference of Trader i to buy/sell the stock at Time t. For example, a simple form of the function might be a weighted composite, fi,t[x(i,t), y(i, t)] = wi,xx(i,t)+wi,yy(i,t), where wx and wy are the relative weights of fear and greed in determining Trader i's preferences.



DFO Model of Stock Trader Drives over Time

Our time axis in this example represents the trading day and is repetitive over time. That is, the time axis begins (t=0) at the opening and ends (t=4 p.m.) at the closing of the market every day, while the behavior is averaged over many days. In addition, the size of the DFO indicates its "mass," which might be the total trading dollars available to that trader on average. The position on the time axis indicates the time at which the particular trader is likely to buy or sell a particular stock. The trading behavior of one trader greatly influences the behaviors of the others, so that the actual model is dynamic, not static as shown here.

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In this graph, there is a "critical point," which is the computed center of gravity of this particular situation. At this point we can expect certain behaviors in the market to start changing.

Another element is worth mentioning. The value of a trader along the axis "Fear" is actually shorthand for the trader's observed behavior over many days. For example, our trader may pass up opportunities that involve "objectively" perceived risk, even as other traders take advantage of them. Here the model postulates that the trader's behavior is driven by fear, but if one introduces any other factor, such as laziness or inability to marshal resources, the model will still work. If necessary, the property "fear" can be decomposed further, in order to create a more complex model. But that does not substantially affect the model's viewpoint, except that the paths of the DFOs will change over time.[8] The decomposition of "fear" that is applied to the stock trader scenario might be applied to other scenarios as well, and may give better results in those systems, or vice versa. Finally, the entire DFO model may be viewed through one or more frames of reference, and these may be combined to build a model of the market as a whole.

6. Time and QR Systems

QR systems evolve over time. That means that the functions governing the interaction of subobjects (i.e., some FOR rule) depend upon a parameter "t." For example, one can imagine a frame of reference or FOR containing two DFOs, called CLOCK1 and CLOCK2. These two DFOs and, indeed, the FOR itself have a method, called "tell-time." When the FOR invokes the tell-time method for itself, it gets answer 23. When it invokes it for CLOCK1, it still gets answer 23. But, when it invokes it for CLOCK2, it may get answer 27. In this example, CLOCK1 and CLOCK2 are experiencing time at a different rate.

QR has developed some basic (i.e., default) principles of time in QR systems, as stated below:

- Time is unique to systems and observers (i.e., the rate at which things happen is dependent on the frame of reference).
- Time is measured through increments of change within systems. That is, time is discreet, not continuous, although in some cases it can be modeled through differential equations, which assume continuity.
- Time advance can decline to *zero* in a system without ending the system's existence.
- A DFO concerned with time can always be asked what its (local) time is, but the answer may be different for different FORs.

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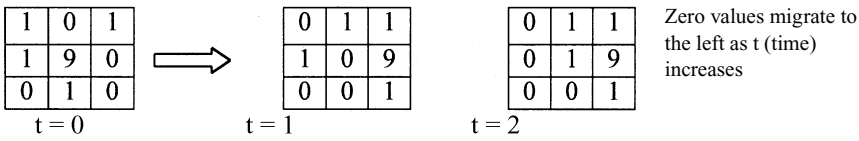
Because all DFO time is local, two DFOs that interact through an FOR will never need to worry that their times do not match. They will perceive the passage of intervals according to their interaction with their FOR, and for each of the DFOs the time will always be "the present."

7. DFOs and Self-Organizing Structures

A self-organizing structure is a structure in which (a) the elements obey certain rules and (b) the rules modify the structure over time in such a way that certain features are emphasized. A simple example of a self-organizing structure is a two-dimensional array of numbers, with the organizing rule for each element being: "If I am equal to zero, and not already on the left margin, then switch me with the element on my immediate left."



This rule moves all the zero values of the array to the left. This may be a useful rule if, for example, the array is very large and one wants to know how many zeroes there are in it. Many more useful examples can be found in the literature on self-organizing maps. (Kohonen 1997)

It is often useful in QR systems to make the FOR rules self-organizing with respect to their DFO elements. In this case, the passage of time will itself drive the DFO into organized behavior, and this can be used, in some cases, to find patterns within the DFO structure that were previously not recognized. In such cases, the FOR must have appropriate pattern recognition algorithms built into it, exactly as with any other self-organizing, map-based system. One difference is that in QR the pattern-recognition systems themselves can be DFO- based. This gives rise to a natural parallelism, because the sub-DFO objects can be shared by multiple FORs that can run on parallel computing hardware.

8. Adaptive Processing in the DFO Model

As described earlier, the manner in which DFOs communicate with each other within an FOR is determined by the rules built into the FOR. These rules need not be static. Indeed, a DFO can pass on to the FOR a suggested new rule for further processing.

A FOR can, moreover, create new DFO objects within itself. It can create, for example, copies of any of its member DFOs, and it can also modify the

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new copies in any way permitted by the DFO rule sets. One of the methods of a DFO can be a request for a new "strategy" to be used by the FOR in which the DFO is embedded. The FOR can request from its own higher-level FOR that a copy of itself be made, with the new strategy replacing one of its own rules. The requesting FOR can then be either preserved or destroyed. Since the newly created FOR is an exact copy of the requesting FOR, except for the requested changes, the general rule is to destroy the old FOR.

This QR feature gives rise to a flexible and adaptive processing model in which DFOs can interact, as well as be created or destroyed. Their interaction may in turn produce new DFOs. Here the QR model is similar again to subatomic physics, where particles can also interact and produce other particles, or be annihilated.

A DFO can request its own annihilation by its FOR. It would do this when its processing tasks are complete (or determined to be futile). For example, a DFO that is used for object recognition would request its own annihilation when it has passed its best guess up to its FOR, and there is no further need for it.

On a conceptual level, a DFO may be seen as attempting to resolve a particular query, such as whether a given set of inputs matches some template for object recognition. Competing DFOs within the same FOR may be attempting the same task, and the FOR may determine that it is satisfied, simply extinguishing the sub-DFOs. DFO results may be passed on as probabilities, and when a probability passed upward during an ongoing computation reaches a given threshold (such as 90%), the FOR may be sufficiently satisfied to stop the other sub-DFO objects, releasing resources for other computations.

9. DFOs and Locality

DFOs are, from their own perspective, local. That is, they are self-contained objects that communicate with a higher-level process only through very structured mechanisms. However, the ability to have the same DFO in more than one FOR makes the model globally nonlocal. Information may be passed through a DFO in both directions, so that two different FOR objects can potentially communicate.

It is entirely possible for a DFO to be operating on one piece of computing hardware (including the "wetware" of some portion of the brain) and to be passing messages to its FOR, which is operating on an entirely different piece of computing hardware. The DFO model accommodates parallel computing technologies.

For DFO structures that have been metricized, as described above, the objects are distributed in some space. These spaces represent, in fact, a sophisticated model of conventional space-time, in which case the DFOs represent objects in space-time. As such, they are subject to and obey well-defined rules,

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which preserve both the metric nature of the space and the desired space properties, based on a particular DFO space.[9]

The general principles that follow from the previous discussion include:

- QR systems are conceptual objects constructed by making models of observation.
- QR objects and systems are structured and may, in appropriate cases, be viewed as distributed in some space-time.
- Although DFOs are local from their own viewpoint, QR systems are nonlocal in time or in their position in space-time. Nevertheless, they are subject to stringent transformational rules imposed by their frame of reference.
- QR systems can be distributed and can take advantage of parallelism.
- QR objects (DFOs) are building blocks or models of reality.

10. Cognitive and Practical Consequences

We have described the first steps toward building a model of human cognition, personality, and social behavior, based on DFO structures. It is important to realize that such a model is currently in its developing stage—we have merely described some of its conditions of possibility. When fully developed, the QR model would be useful, for example, in analyzing the most complex aspects of human behavior and in bringing sociological predictions to an acceptable level of accuracy.

Applications may include QR systems concerned with early detection and possible prevention of ecological disasters, global health hazards and epidemics, wars and political terrorism, stock market crashes, or severe socioeconomic crises and conflicts. They may also include diagnosing irresponsible and dangerous human behavior, such as unsound or irresponsible governing on all levels. Finally, QR may become an effective tool in elaborating and testing new scientific hypotheses and new technologies in a wide variety of fields, as well as in creating new global research and learning systems. Some of these applications are already in various stages of development and will be presented in future papers.

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Notes

1. We would also like to thank Mihai I. Spariosu, who has been working with us both on the philosophical context of QR and on some of its practical applications in global learning and research.
2. More precisely, there are as many "realities" as there are observers whose frames of reference have different transformational rules. The differences in observation by each observer will differ by the amount determined by the different transformational rules. In relativistic motion, for example, there are as many different 'realities' regarding the length of an object as there are observers whose motion relative to that object differs. Of course, these different realities are all related to each other by the equation given above.
3. This is not a claim that the human brain is (only) a computing device. It is merely the recognition that the human brain is a device capable of some sophisticated computations.
4. The game of marbles is a set of electromagnetic interactions since only the electrons in the shells of the atom actually interact. The electrons in one marble repel those of the other, causing one marble to fly off when another one hits it.
5. Neither is a subatomic particle, actually. Subatomic particles viewed within very short time spans may change form, turn into one another, and so forth, in accordance with laws governing their interactions, including self-interaction.
6. For the mathematically inclined, it is more precise to say the set of integer numbers.
7. Again for the mathematically inclined, functional operators (functors) are developed, and the "field" is actually a field of operations over the functors.
8. From a viewpoint inside the DFO, we have added dimensions.
9. Again for the mathematically inclined, the functions that a DFO can execute may be viewed as operators on the space-time within it. A cover can be defined which is the set of such functions, and it is often useful to speak of the properties of that cover. Indeed, the behavior of the DFO itself may be, in appropriate cases, determined by the function space that can be so derived.

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