

## INTRODUCTION

### *Between the Modern and the Postmodern*

May you live in interesting times.

—ANCIENT CHINESE CURSE

The road is always better than the inn.

—MIGUEL DE CERVANTES

Seek, Seeker.

The future is made of seeking.

—JOSÉ ORTEGA Y GASSET

The past several decades have exhibited vertiginous change, surprising novelities, and upheaval in an era marked by technological revolution and the global restructuring of capitalism. This “great transformation,” comparable in scope to the shifts produced by the Industrial Revolution, is moving the world into a postindustrial, infotainment, and biotech mode of global capitalism, organized around new information, communications, and genetic technologies.<sup>1</sup> This epochal process includes the growth of far-reaching transnational corporations, intensified competition on a planetary scale, and the relocation of industry and manufacturing to the developing world. Globalization has produced a world economic system and trade laws that protect transnational corporations at the expense of human life, biodiversity, and the environment. It is accompanied by computerization of all facets of production and expanding automation, generating heightened exploitation of labor, corporate downsizing, and greater levels of unemployment, inequality, and insecurity.

As we enter the Third Millennium, we are thus witnessing the advent of a digitized and networked global economy and society, fraught with promise and danger. The scientific–technological–economic revolutions of the era and spread of the global economy are providing new financial opportunities, openings for political amelioration, and a wealth of ingenious products and technologies that might improve the human condition. Yet these developments may

lead to explosive conflict, crisis, even catastrophe. Hence, the turbulent transmutations of the current condition are highly contradictory and ambiguous, with both hopeful and threatening features being played out on political, economic, social, and cultural fronts.

This novel situation and its myriad mutations are often subsumed under the label “postmodern,” although few discussions link the condition to both wide-ranging scientific and technological revolutions *and* the global restructuring of capitalism.<sup>2</sup> For us, the “postmodern” highlights what is singular and original in the contemporary era. It calls attention to discontinuities and ruptures, and signals that an extensive range of novelties are appearing that require fresh analyses, theories, and practices. But for the discourse of the postmodern to have theoretical and political weight, it must be articulated with the profound alterations of the day and given concrete substance and force. We will, accordingly, attempt to show that the transition to a postmodern society is bound up with fundamental changes that are transforming pivotal phenomena from warfare to education to politics, while reshaping the modes of work, communication, entertainment, everyday life, social relations, identities, and even bodily existence and life-forms.

Within politics today, one observes a broad expanse of events, ranging from local struggles over power and identity to new types of global conflicts and movements. The emergent movements against capitalist globalization challenge powerful sociopolitical forces such as transnational corporations, the World Bank, the International Monetary Fund (IMF), the World Trade Organization (WTO), and formations like the European Union (EU) and the North American Free Trade Agreement (NAFTA). The global economy and polity thus display new structures and alliances which in many cases surpass the power of the nation-state that became a key institution of the modern political order. Nonetheless, the nation-state arguably continues to be a much stronger governmental force than some theories of globalization indicate (see Chapter 5). Moreover, violence and political fragmentation in the former Soviet Union and Yugoslavia, as well as in Asia, Africa, the Middle East, and numerous other regions, have created a new world disorder fuelled by intense ethnic and territorial rivalries.

In the United States, the “New Deal” of the 1930s and the “Great Society” of the 1960s have devolved into a dysfunctional welfare state, which in the 1990s produced a disciplinary workfare camp and prison-industrial complex, while millions continued to fall through tears in the “social safety net.” Around the globe, neoliberalism has replaced social democracy. With the collapse of the Soviet Union, a predatory global capitalism and its hyper-commodified McCulture are now hegemonic, confronted with no alternative historical bloc. Yet novel kinds of spectacle, technopolitics, and multimedia are creating nascent oppositional public spheres and altering the locus and networks of communication and contestation. For decades, politics has been played out significantly in broadcast media. Now, with the Internet, cyber-

culture, and digital technologies, new public spheres and domains of political information, debate, and struggle are arising (see Chapter 5).

On the level of society and everyday life, individuals are bombarded by a spectrum of technologies that are reconstructing every aspect of experience. The entertainment and information industries have created innovative realms of interaction, where TV zappers surf proliferating numbers of cable channels and computer users cruise an ever-burgeoning Internet. Within cyberspace, everything from UFO cults and video voyeurism of live sex and child pornography to myriad modes of politics, alternative forms of art, and interactive information networks are on display. These emergent cultural technologies, and a rapidly materializing virtual reality (VR), are producing highly original domains that alter existing notions of space, time, reality, embodiment, and identity. VR technologies can simulate any world or experience through sound, advanced graphics, and intensely immersive and interactive environments; they are already being used to transform architecture, medicine, art, entertainment, and even the activity of war (see Chapters 2–5).

Societal evolution is especially striking in the United States, the epicenter of global capital, and where we ourselves live and write. Recent years have exhibited a burst of new technologies and an erratic economy, with accelerated periods of boom and bust, displaying an ever-changing cast of winners and losers. The past decade of highly uneven economic development has seen escalating urban violence, a wave of teen murders, the proliferation of guns, intensifying hate crimes, a high level of drug and alcohol addiction, steadily increasing divorce rates, declining wages for many, unprecedented levels of consumer debt, and growing divisions between the haves and the have nots. In this grave new high-tech world, existence is becoming stranger and increasingly dangerous. The specter of apocalyptic war threatens, as more nation-states develop nuclear bombs, and rogue terrorist groups purchase weapons of mass destruction on the international market. In the global Western imaginary, Saddam Hussein, Osama bin Laden, and other “terrorists” have declared a jihad on U.S. citizens and endanger global stability with biological, chemical, and nuclear weapons of mass destruction. In response, the U.S. government launched erratic bombing excursions on these demonized “foreign others,” and conspired with NATO to undertake a full-scale air war against Serbia, while resurrecting a “star wars” missile defense system.<sup>3</sup>

Cyberterrorism threatens the global economy, and the Y2K problem pointed to the potential collapse of the vaunted networked society. The bullish “new economy” seems headed for a sluggish recession as celebrated dot-com companies rapidly fold. At the same time, a dangerously unqualified figurehead, George W. Bush, assumes the presidency of the United States after stealing the election, with the aid of the U.S. Supreme Court, in an unprecedented crisis of legitimacy (see Kellner forthcoming). Furthermore, overdevelopment, overpopulation, rampant consumerism, ozone thinning, global warming, and rain forest destruction forecast massive species extinction and multiple ecological crises.

After an unprecedented decade of (admittedly uneven) development in the global economy and accompanying orgy of financial capital, during the early months of 2001 the economy went into crisis and stock prices dramatically declined. Market failures and financial malaise were accompanied by crises of the energy system, where deregulation and greedy energy providers produced a situation that led to frequent energy shutdowns in California. At the same time, globally transmitted viruses in the animal kingdom were producing epidemics of foot-and-mouth disease and mad cow disease, resulting in a highly controversial and, to many, barbaric wholesale slaughter of animals in Europe. Moreover, renewed dangers of global war emerged menacingly, as the Cold Warriors who took over the White House in 2001 proposed new weapons systems and accelerated political tensions to justify their military expenditures, provoking conflicts with North Korea, Russia, and, most dramatically, China in the opening months of their reign. These unsettling features of the contemporary era portend more dark and devastating dimensions to the postmodern adventure than its theorists have so far been able to countenance. In addition, the nascent “Biotech Century” is already undertaking “the most radical experiment humankind has ever carried out on the natural world” (Rifkin 1998: x). Gene therapy and biotechnology promise to cure numerous diseases, but also presage immense dangers arising from potential corporate monopoly control of the gene pool of plants, animals, and human beings. There are accordingly serious worries about the genetic engineering of the food supply and the creation of transgenic species, along with genetic pollution, eugenics, and genetic discrimination. As bioengineering technologies redesign life, the idea of “species” as something unique and inviolable is becoming obsolete and the notion of a “natural world” ever more problematic. Human identity itself is put in question with advances in cloning and the implosion of biology and technology (see Chapters 3, 4, Epilogue).

As dramatic socioeconomic, scientific, and technological developments occurred over the past decades, a paradigm shift has been underway in the realms of theory, the arts, science, and culture at large (see Best and Kellner 1997). By the 1980s, there were intense polemics over the importance of the postmodern turn, with some celebrating the evolving forms of theory and culture as an advance over moribund modern ones, and with others bitterly attacking them as irrationalist and regressive (Best and Kellner 1991). Many, especially in the older generation of theorists, went on with “business as usual,” ignoring the massive alterations taking place and the controversies over their significance.

The postmodern turn thus arose in part as an attempt to describe the intense shifts and crises in many realms of life. The turbulent transformations of the present age have proliferated a bewildering variety of contending theories to explain and make sense of them. Responding to this situation, our studies explore what kinds of theory and culture can best account for the striking changes and impassioned conflicts of the current era, and what modes of politics are needed to realize contemporary potentialities for justice, peace, self-fulfillment, solidarity, and an ecological, sustainable society. Throughout this text,

we raise the question of which theoretical and political perspectives can guide us into a better future and which are dead ends. Where are we going and what, if any, are our choices? Which turns lead to a viable and better future? Which paths lead to disaster and regression? And who are “we” and what are we becoming?

The many conflicting answers to these questions have generated controversies among advocates of modern and postmodern discourses. The polemics have circulated through academic and avant-garde cultural circles to media culture and everyday life, becoming a defining, albeit highly disputed, arena of the contemporary era. Theory today, like culture and politics, is a contested terrain with contrasting modern and postmodern theories claiming that they provide the most reliable account of the intricacies of the present. Leaving behind familiar guideposts and conventional wisdom thrusts us into a novel and uncharted territory. Consequently, the raging debates, controversies, and passions of the day have led many theorists, including ourselves, to interrogate the contemporary moment in order to produce fresh theoretical and political insights, to promote an incisive grasp of the prevailing situation, and to facilitate progressive social transformation.

Our two previous books documented the origin and proliferation of postmodern shifts from the 1960s into the 1990s and the rise of new paradigms in a wide range of fields. *Postmodern Theory* (1991) analyzed the genesis and trajectory of the discourse of the postmodern in philosophy and social theory and called for a multiperspectival approach that employed the best elements of modern and postmodern positions and politics. *The Postmodern Turn* (1997) analyzed mutations from the modern to the postmodern in society, culture, the arts, science, and politics, showing key commonalities across these areas. We attempted to demonstrate that the postmodern turn, far from being a fad or momentary fashion, is becoming deeper and wider in its range of influence. Aware of the extravagant and problematic positions taken by many advocates of the postmodern, we have always distanced ourselves from extreme versions of postmodern theory that postulate a complete break with modernity and a rupture between the modern and the postmodern. Accordingly, we will argue in this book for a reconstruction of theory and politics that combines the most useful modern and postmodern perspectives.

## CRISES OF MAPPING AND THE DIALECTICS OF THE PRESENT

Investigations of various topics and levels of abstraction that are collected here are united in the intention of developing a theory of the present society.

—MAX HORKHEIMER

What’s going on just now? What’s happening to us? What is this world, this period, this precise moment in which we are living?

—MICHEL FOUCAULT

In the realm of theory, the postmodern turn consists of a movement away from the mechanistic and positivistic conception of modern science, along with a repudiation of Enlightenment optimism, faith in reason, and emphasis on transcultural values and human nature. Postmodernists typically reject foundationalism and transcendental subjectivities within theory, the modernist emphases on innovation and originality in art, and a universalist and totalizing modern politics. With the belief that modern theories and politics have become reductive, illusory, and arrogant, diverse postmodern theorists, artists, and activists emphasize the countervalues of multiplicity and difference, antirealism, aesthetic irony and appropriation, ecological perspectives, and a proliferation of diverse forms of struggle.

We share many of these positions, but advocate the reconstruction and improvement of the best elements of modern theory, culture, society, and politics, rather than their abandonment, as in some extreme versions of postmodern theory. At the same time, we reject both completely affirmative or negative stances toward assorted postmodern theories and attempt to extract and develop what we consider to be valuable postmodern positions, while criticizing problematic ones. Rather than pursuing the modern logic of the “either/or” (i.e., either the modern or the postmodern), throughout our studies we pursue a postmodern logic of “both/and,” drawing on each tradition and situating the present era between the modern and the postmodern (see below).

Consequently, our “dialectics of the present” deploys a multiplicity of theories to attempt to capture the complexity and conflicts of the contemporary era. We use the notion of the “Third Millennium” to help dramatize the novelties, challenges, and possibilities of the contemporary situation. The discourse of the new millennium signals changing times, a new age, and is thus parallel to the postmodern, which signifies ruptures in history and movement into a different constellation. Both discourses reveal a penchant for periodization in the contemporary epoch, for reflecting on breaks with the past and on novelties of the present, and for considering what is coming in the rapidly approaching future. Of course, millennial discourse is based on a premodern Christian dating system and eschatology, while the postmodern is a construct of recent philosophical, social, and cultural theory.<sup>4</sup> Nonetheless, we find the concept of the Third Millennium useful as a marker that indicates we are moving into new constellations and should engage their defining features, challenges, and conflicts.

*The Postmodern Adventure* attempts to show that as we enter the Third Millennium we are in the midst of a tempestuous period of transition and metamorphosis, propelled principally by transmutations in science, technology, and capitalism. Our project is to combine critical social theory, science and technology studies, and cultural studies in a multiperspectivist and transdisciplinary framework that illuminates the dynamics of the present moment. We accordingly seek to grasp continuities and discontinuities with the earlier modern era, while mapping the changes, threats, and promises now before us.

Confronting the turbulence, excitement, and unpredictability of the day immerses us in what we are calling “the postmodern adventure.”

The concept of the postmodern adventure is deployed in our studies to describe engagement with the striking metamorphoses and the contentious controversies over how to characterize the vicissitudes of the current era.<sup>5</sup> Whereas Alfred North Whitehead (1967) charts the trajectories of Western culture through various “adventures of ideas,” we argue that fundamental changes stem first and foremost from material transformations in the domains of science, technology, and economics. The postmodern adventure involves leaving behind the assumptions and procedures of modern theory and embracing a dynamic and ongoing encounter with emergent theories, sciences, technologies, cultural forms, communications media, experiences, politics, and identities. It involves the traversal and exploration of emerging social and cultural spaces, alive with fresh possibilities for thought, action, and personal and social change. The adventure is also fraught with distractions and dangers, and it contests accepted types of thought and behavior. Postmodern adventures call for altering definitions of natural, social, and human reality, and require innovative modes of representation, mapping, and practice.

The concepts of the postmodern adventure and the Third Millennium are thus linked. In our interpretive construct, the postmodern adventure is coming to fruition in the contemporary epoch and is hurtling us into an unknown future. Yet, as our studies will show, the postmodern adventure has roots in the past and continuities with modernity. As we argue, the postmodern adventure took off during World War II with the production of novel forms of science, technology, and bureaucratic control systems that created the nuclear bomb and other apocalyptic weapons, as well as revolutionary computer and information systems, powerful cybernetic control networks, and new forms of society and culture (Chapter 1). The postmodern adventure is only fully becoming apparent in our story now, however, at the commencement of the Third Millennium, an era rife with claims of a new postmodernity, economy, and culture—declarations that we will historicize and interrogate, as we criticize the hype and ideologies that exaggerate and celebrate the transformations that we engage.

The postmodern adventure thus requires innovative mappings to represent evolving social conditions, economic shifts, sciences, technologies, experiences, and identities. In his classic essay “Postmodernism, or The Cultural Logic of Late Capitalism” (1984, rev. 1991), Fredric Jameson vividly describes the disorientation of contemporary life, which includes the loss of spatial coordinates, the confusing “hyperspace” of postmodern architecture and culture, the decline of historical consciousness, the waning of affect, and a consequent emotional numbness and detachment. Jameson also describes the cooptation of resistance and the abolition of critical distance, requiring new modes of representation and politics.

We agree with Jameson that during the postmodern adventure, the



boundaries of the modern world are breaking down, requiring theoretical and practical guides that will help us understand and navigate the tempests and turmoil of the day. Accordingly, we will be engaged in a form of *meta-cartography*, reflecting on the various processes of mapping and the contributions and limitations of the classical theories of modernity and the fledgling charting of the postmodern.<sup>6</sup> We interrogate the blindness and insights, limitations and visions, of opposing modern and postmodern modes of representation as we try to make sense of the epochal changes drawing the entire world into a maelstrom of flux. We reflect on diverse types of representations, including theory and science, art and media culture, quantitative and qualitative, descriptive and normative, ethical and political, and utopian and dystopian modes. We argue that multiple chartings are relevant, indeed necessary, because domains of social reality and specific social contexts *are* distinct; thus it is a pragmatic question to ask which modes of representation should be used in a particular constellation.

Different people use distinctive maps to make sense of the world, deploying various ideas, models, and theories to organize their experience, to orient themselves in their environment, and to hopefully replace multiplicity and disorder with structure and order. Mappings also help construct personal identities, pointing to ways of being in the world, existential options, and sense-making activities—as when social groups emulate “heroes of production” or “heroes of consumption” (Lowenthal 1961), or individuals follow the fashions and style of celebrities. Indeed, the postmodern adventure involves the dissolution of older traditional and modern identities and the construction of alternative ones. Whereas traditional identity maintained stable roles and social functions, postmodern identity allowed varied and richer subjectivities to proliferate. The ability to switch identities intensified problems of alienation and authenticity, as individuals felt that they were being severed from their true selves while, at the same time, passionately seeking their genuine or higher nature. In turn, the postmodernization of identity has engendered both the embrace of new technological transformations of the body and identity, as well as disparate searches for the authentic and the real. Hence, ersatz identities multiply, resulting in the growth of oppositional identity subcultures and politics. An always proliferating image and media culture, supplemented by the psychological games of the Internet where one can experiment with self-construction in ludic performative modes, generates a further expansion of identity (see Turkle 1995; Chapter 4).

An affirmative and productive version of the postmodern turn appropriates the best features from modern theory, recognizes the challenge and cogency of much postmodern critique, and undertakes new reconstructive projects (see Best and Kellner 1997). From our perspective, the postmodern adventure is a navigation through the commotion and complexity of the present, a search for order in the seeming disorder, as it maps both the disorganization of the previous forms of culture and society and their reorganization into



new modes and structures. This aspect of the postmodern adventure pertains to discovery and exploration of powerful technological realms such as those of genetic engineering, cloning, multimedia, cyberspace, VR, and technopolitics. These developments demand analysis of the ways that new technologies pose grave dangers and/or can be used to remake society, culture, and human beings in progressive forms. The postmodern adventure also comprises interrogating the discourses of emergent theories and sciences, engaging novel modes of culture and society, and constructing disparate identities, politics, and theories. There are, of course, hazards and dangers in this project, as there were in the modern adventure. No doubt, there will be successes and failures, triumphs and disasters, important discoveries and misadventures as well.

While there are clearly striking continuities with the modern era (Robins and Webster 1999), the changes wrought by scientific–technological revolution and the spread of a new global economy affect all aspects of politics, culture, and everyday life. One encounters startling metamorphoses that some are theorizing as the advent of a new postmodernity, qualitatively distinct from the modern era. These developments are highly ambiguous. On the positive side, there are exciting possibilities for new experiences in cyberspace, medical advances, and increased opportunities for labor and leisure. One also finds dynamic political openings and movements such as the protests against the Seattle World Trade Organization (WTO) meetings in December 1999 and anti-International Monetary Fund (IMF) and World Bank demonstrations in Washington, Prague, and Sydney in 2000, which signal evolving coalitions and activism against capitalist globalization.

But there are worrisome dangers that plague the scientific, technological, economic, and other shifts and mutations of our time. In some ways, the postmodern adventure may confront us with the dystopias that have haunted the modern mind, from Mary Shelley's *Frankenstein*, which anticipated genetic engineering and marketable body parts, to the futuristic visions of H. G. Wells whose *Island of Dr. Moreau* and *Food of the Gods* predicted that biological mutations and technologically created species would be fraught with unforeseen results. Orwell's *1984* foresaw the panoptic society of the present, with surveillance techniques becoming ever more sophisticated and privacy increasingly diminished. Similarly, Huxley's *Brave New World* prefigured the current situation, as eugenics looms on the horizon, cloning has arrived, and sundry brands of soma (e.g., Prozac, Ecstasy, and methamphetamine) and pleasure machines and multisensory spectacles are readily available in a high-tech, consumerist, pharmacopian society of the spectacle (see Chapters 3–5).

The “dialectics of the present” thus involves living through a highly chaotic and conflictual situation. Resisting both attempts to deny any fundamental ruptures or novelties of the existing sociohistorical situation, as well as hyperbolic claims for a postmodern rupture, we suggest that it is best to envisage the prevailing condition in a zone between the modern and the postmodern. Here one finds continuities and discontinuities with the past, striking changes and

enduring structures, peppered with perpetual conflicts between the old and the new. Our studies imply that the contemporary moment is a contradictory amalgam of progressive and regressive, positive and negative, and thus highly ambivalent phenomena, all difficult to chart and evaluate.<sup>7</sup>

The postmodern adventure has already produced unprecedented phenomena, some benign and fascinating, others frightening and deadly, as new forms of war (Chapter 2), science, (Chapter 3), technology (Chapter 4), and society, culture, and politics spring forth (Chapter 5). Collectively, these evolving possibilities and dangers constitute a panorama of phenomena that require fresh social, philosophical, ethical, and legal conceptions. The rigid boundaries constructed by modernity are beginning to unravel like a DNA double helix during reproduction. Borders that once were thought to be impermeable and impassable, as solid as “matter” itself (which at the quantum level is a vast emptiness), are now dissolving and melting, as happened for the premodern world in the Marxian vision. Seen as contingent, arbitrary, and repressive, the old perimeters are in the process of being deconstructed and reconstructed. Many are as obsolete as Checkpoint Charlie and the Berlin Wall. The conceptual divisions under contestation include those between humans and animals, society and nature, biology and technology, nation-states, and diverse racial, ethnic, sexual, and gender identities in an era of multiplying hybridization. Even the distinctions between life and nonlife, the living and the fabricated, are being rethought in the light of the findings of evolutionary biology, cosmology, and computer simulation technologies (Chapter 3).

As we show throughout our studies, society, culture and identity are all undergoing a tremendous rethinking. They currently are in a state of crisis and confusion, largely through the impact of new information, communication, and genetic technologies, and scientific theories and cosmologies. We are in a condition analogous to the remapping of the cosmos in the era of Copernicus, Brahe, Kepler, and Galileo. Because of intense social and technological developments not only are numerous human beings reshaping their ethnic, gender, and political identities, but humanity as a *species* is starting to seriously rethink its status in response to ecology and environmental ethics, evolutionary theory, animal cognition, and “smart machines.” With supercomputers like IBM’s Deep Blue outwitting chess masters, and genetic engineering and cloning technologies transcending species boundaries and portending the fabrication of individuals in a new age of designer bodies and babies, the very fate and future of the human being itself is at stake (Chapter 4; Epilogue).

The postmodern adventure, if nothing else, is indeed risky, and we do not mean just for a few entrepreneurs or finance capitalists; rather, the future of humanity and other complex life-forms is being mortgaged to a rampaging capitalism and profit-driven science and technological development. Nuclear waste and weapons proliferation, biowarfare, the growth of the global arms market, terrorism, DNA splicing, xenotransplantation (inserting animal blood and organs into humans), loss of cultural and biodiversity, the greenhouse ef-

fect, global capitalist reorganization, and other phenomena are leading the human race into dangerous ground and a possible endgame of social and ecological devolution. The postmodern voyage beyond the observable into the very stuff of life, past the limits of the human into new configurations of humans and technology, provides new powers and capacities for the human species. Technoscience not only enables humans to better manipulate the natural world, but also to produce new natures and beings, albeit with highly volatile results.

As contemporary societies continue to transgress ethical and ecological limits, begetting proliferating problems and intensifying crises, many have come to recognize the need to impose limits on the excesses of capitalist modernity and its sciences and technologies, while constructing more humane and ecological values, institutions, and practices to sustain life on earth. Without such insight, the mutating dynamics of capitalist overdevelopment might bring the adventure of evolution to a tragic close, at least here on this planet. The evolution of the universe itself is the greatest adventure story of all, a 12- to 15-billion-year odyssey, involving the maturation of organic matter from inorganic matter, life from nonlife, and its subsequent earthly unfolding over 4.6 billion years, advancing from carbon and hydrogen atoms to DNA and the first proteins, to plants, animals, and human beings. Evolution has generated boundless diversity and ever new and more complex forms of life.

Hence, critical reflection on the pathologies and illusions of the modern adventure and their continuation in the present is an important part of the postmodern adventure. A shift in mind-set consequently should be informed by an enhanced awareness of limits, contingency, and unpredictability, along with nonhierarchical thinking. A new gestalt of this type would also require repudiation of the modern will to power over society and nature, of arrogant Western-centric humanism, of a disenchanting or cynical worldview, and of the fantasy of control and belief in technofixes for critical social and ecological problems. Where the modern adventure was predicated on the values of domination, endless growth, mastery of nature, and a cornucopian world of limitless resources, a key aspect of the postmodern adventure is the systematic dismantling of this modern ideology while keeping the best aspects of modernity—humanism, individuality, enlightened reason, democracy, rights, and solidarities—to be tempered by reverence for nature, respect for all life, sustainability, and ecological balance.

## TOWARD A TRANSDISCIPLINARY CULTURAL STUDIES

There is *only* a perspective seeing, *only* a perspective “knowing,” and the *more* affects we allow to speak about one thing, the more complete will our “concept” of this thing, our “objectivity,” be.

—FRIEDRICH NIETZSCHE

It is our view that we are now between the modern and the postmodern, in an interim period between epochs, where we are undergoing spectacular changes in all realms of life. We therefore resist both attempts to deny fundamental changes in the existing sociohistorical situation and hyperbolic claims that we are experiencing a postmodern rupture; we stress instead both continuities and discontinuities. The Renaissance was a long period, between the premodern and the modern, that lacks easily datable beginnings and endings; today, a similar period of protracted transformation is underway. This time the interim is between the modern era and a new era, the characteristics of which we do not fully know. The term “postmodern” serves to call attention to novelties and discontinuities of the current interim period. It also happens that, at the end of the Third Millennium, the postmodern adventure both undermines and advances millennial thinking. This mode of thought is rooted in Christianity and continued through the Enlightenment, Marxism, and other utopian movements. From the dawn of Christianity through Enlightenment projects of social construction to the scientific and technological revolutions of today, Western culture has constructed a story of the gradual movement of humanity toward a state of progress and perfection (see Becker 1964; Rifkin 1998; Noble 1998).

Many of our contemporaries continue this salvationist and linear historical narrative, believing that science, technology, and capitalism will solve all human problems and create a new world of wealth, democracy, and well-being (see critical discussions of this discourse in Chapters 4 and 5). The postmodern assault against grand historical narratives has been used to undercut the meta-narrative of historical progress, such as claims that we are at the “end of history” in a triumphant state of capitalism and democracy (Fukuyama 1992). Some argue that globalization will create a world of affluence and democracy (Friedman 1999), that new technologies and cyberculture will fashion utopian cultural and social spaces, and that embryonic sciences like biotechnology will do everything from curing our diseases and feeding the world’s starving children, to prolonging human life and producing a state approaching immortality. In the imagination of many bioengineers, the genetic sciences allow the realization of the vision of Enlightenment visionary Marquis de Condorcet, who proudly proclaimed: “No bounds have been fixed to the improvement of the human faculties—the perfectability of man is absolute” (cited in Rifkin 1998: 170).

Thus, far from breaking with religious values and narratives, science and technology in many ways have extended them. For their advocates are claiming that genetics and eugenics will perfect us and bring us grace without the need for divine intervention. On the other hand, the juggernaut of capital, technology, and science undercuts religious cosmologies and provides a highly secular and materialist ethos, focusing people on surviving and succeeding in a rapidly shifting present. As we enter the Third Millennium, the postmodern adventure is extremely ambiguous and contradictory. There are postmodern

trends that celebrate a return to tradition, and there has been an upsurge of religious faith and millennial thinking.<sup>8</sup> But there are also expanding secular forms of postmodern identity politics, possessive individualism, and a willingness to embrace the destruction of the past and tradition for the glories of the present moment (see Best and Kellner 1997).

Contemporary developments exhibit so many twists and turns, and are so highly complex, that they elude simple historical sketches, reductive theoretical explications, and facile generalizations. What is required, we would suggest, is a multidimensional optic on the trajectory of the postmodern adventure that combines historical narrative, critical social theory, and cultural mappings. Representing the contours of the postmodern adventure in the Third Millennium accordingly involves an enterprise that crosses theoretical borders into a new transdisciplinary and multiperspectivist space.

The social maps called classical social theories are to some extent torn, tattered, and fragmented, and in many cases outdated and even obsolete. Fresh theories need to be constructed constantly, using both the resources of past theories and salient sketches of the contemporary era to make sense of our current historical condition. Maps and theories provide orientation, overviews, and contexts. They show how parts relate to each other and to a larger whole. If something new appears on the horizon, a good map will chart and contextualize it, including sketches of future configurations of potential promises and perils. But while numerous older theories and authorities decay and are discredited, others continue to provide important guideposts for thought and action today.

Given our emphasis on mapping, it should be clear that we do not accept the self-refuting postmodern attacks on theory that are sometimes advanced by writers like Lyotard, Foucault, and Rorty. Nor do we embrace postmodern rejections of a “hermeneutics of suspicion” that strive to overcome social illusions, mythologies, and fetishized appearances by locating underlying forces and causes of domination and destruction.<sup>9</sup> Without theory, interpretation, and critical charts, we are as lost and hapless as Columbus on his first voyage. Theory and interpretation are necessary to the extent that the world is not completely and immediately transparent to consciousness. Because our social and cultural situation is hard to grasp, especially in a hypercapitalist culture of spectacles, simulacra, and disinformation, we need to comprehend how our lives are being shaped and controlled. Postmodern claims that “theory” necessarily commits the sin of illicitly totalizing irreducibly heterogeneous phenomena are themselves reductive and homogenizing. Ludic postmodern calls for formalistic analysis oriented toward surfaces and the aesthetic pleasures of the text disarm cultural studies and political hermeneutics that read culture in terms of social and ideological conflicts and contradictions. To refuse interpretative depth is to vitiate critique and transformative practice by reducing analysis to description of surface and form detached from radical theory and politics (see Best and Kellner 1987). The extreme postmodern argument for the

abolition of critique and transformative politics thus becomes a self-fulfilling prophecy as some pomos suspend substantive sociopolitical critique and substitute nihilistic verbal posturing for political activism.

We believe that theory can provide social maps and inform historical narratives that supply spatial and temporal contextualizations for the present age. These critical theories should study society holistically, moving from specific phenomena and modes of human experience to an ever expanding analysis. Such inquiry may extend from the individual self and its network of everyday social relations, to its more encompassing regional environment, national setting, and finally to the international arena of global capitalism. Within this dialectical framework, social maps shift from one domain to another, articulating complex connections between economics, politics, the state, science and technology, media culture, everyday life, and their contending discourses and practices. We still find that the most powerful methodology for social analysis is a historically informed, dialectical method that sees human reality as evolving and conflict-ridden. This outlook grasps societies, and history in general, as coherent wholes, with specific spheres of economics, politics, science, technology, culture, and so on. They have their own history, autonomy, and conflicts, but interact with each other in a holistic social context.

In more contemporary language, we shall investigate how key phenomena like science and technology “coevolve” in response to mutations in the economy, culture, and polity, all of which develop together and mutually shape and co-construct one another (see Chapters 2–5). We advocate a socio-historical approach that theorizes the interaction and coevolutionary development of science, technology, capitalism, society, and human individuals as part of reciprocally interacting social processes. Our perspective emphasizes the mutual unfolding of all realms of life, such that nature is integrated into social, technological, and human development. The concept of coevolution avoids the determinism, reductionism, and monoperspectival outlooks found in many scientific and sociological perspectives. We link it to a critical social theory that avoids conflating separate forms of social development and idealizing society as one only of cooperation and harmony, thereby missing how social relations today are shaped principally by competition, conflict, struggle, and domination.

We also stress the co-construction of people, society, science, and technology, arguing that while people create the artifacts of their culture and everyday life, they are in turn shaped by major forces such as capitalism, science, and technology. The concept of co-construction serves to emphasize that science and technology are not neutral, that specific societal interests and biases enter into their production and development. The notion underscores the constructedness of our science, technology, and culture; they are fabricated in specific ways in particular contexts. But it also signals that these fields can be reconstructed to meet human needs. Societal forces and potential instruments of human liberation and domination such as science, technology, and culture can be redesigned to serve public interests and to promote the creation of a

more democratic, just, humane, and ecological world—freed from the imperatives of the state, the military, and a predatory corporate capitalism.

Thus, we propose dynamic coevolutionary, co-constructivist, and reconstructive perspectives for theorizing the dynamics of the Third Millennium. Operating in the tradition of critical theory, we believe that the role of theory is to provide weapons for social critique and change, to illuminate the sources of human unhappiness, and to contribute to the goals of human emancipation and a democratic, socially just, and truly ecological society. Critical theory involves the construction of concepts to illuminate the present and historical narratives to identify how the constellations of the contemporary have been shaped by the past and are open to alternative futures.

As argued in the historicist tradition that began in the 19th century (e.g., in the work of Hegel, Marx, Weber, Dilthey, etc.), all values, worldviews, traditions, social institutions, and individuals themselves should be understood historically as they evolve through time. In the form of Foucault's genealogies, historical narratives chart the temporal trajectories of significant experiences and events, of political movements, or the forces constituting subjectivities. Against the postmodern tendency to randomize history as a disconnected series of events, we believe historical narratives should grasp continuities, as well as discontinuities. Such sociohistorical analysis should engage both negative and positive developments, criticizing forms of oppression, domination, and exploitation, while valorizing positive possibilities for moral and technical evolution.

Together, social maps and historical narratives study the points of intersection between individuals and their cultures, between power and knowledge. To the fullest degree possible, they seek to lift the veils of ideology and expose supposed givens as contingent and the present as a social construct, while providing visions of alternative futures. Theories and narratives, then, are meant to overcome quietism and fatalism, to sharpen political vision, and to encourage translation of concepts into practice in order to advance personal freedom, social justice, and ecological preservation and reclamation. Theories and narratives should not be confused with the territories and times they analyze; they are approximations of a densely constituted human world that requires theories and imagination to conceive and depict it. Nor should social mappings be seen as final or complete, because they must be constantly rethought and revised in light of new information and rapidly changing situations. Mappings and narratives can thus only be provisional, reports from diverse explorations that require further investigation, testing, and revision. Hence, we are offering *a* mapping, not *the* mapping, of our contemporary world, one that will require sustained revision and updating.

On the whole, border crossing, transgressing boundaries between fields carefully delineated and segregated under the regime of the modern, is a productive aspect of the postmodern turn in both theory and the arts. Theoretical crossings of disciplinary borders that subvert the modern academic division of



labor have given rise to a wide array of studies that have provoked new insight and produced valuable results. Earlier attempts at modern and postmodern transdisciplinary work tended to be carried out in the realms of cultural and social theory. Yet we would argue that revolutions in science and technology require broadening our theoretical perspectives. Previously, calls for transdisciplinary work concerned integration of the perspectives and the methods of the social and cultural sciences, often without regard for significant components of the natural sciences or the new philosophies of science and technology. We affirm, however, inclusion of both the natural and the social sciences to overcome the gap between the “two cultures” (C. P. Snow 1964), along with analysis of the impact of technological revolutions, in order to provide more integrated and comprehensive frameworks for theory and critique today.

Formerly, major philosophers from Diderot to Dewey, and many in the humanities and social sciences, stayed in touch with cutting-edge developments in science, looked to scientific method as the source of knowledge, and critically engaged the latest works of scientific theory. Indeed, the major social theorists of the 18th and 19th centuries saw science and technology as the driving motors of change and progress that would lift humanity from the dungeons of premodernity. They regarded science and technology as major civilizing forces that would bring a rational society in their wake. Karl Marx championed science and technology as liberating forces and went so far as to equate human emancipation with advancement of the “productive forces” of society. Likewise, John Dewey directly linked science and democracy, claiming that the scientific method of experimentation was the best pedagogy for education and the form of a democratic society and culture.

However, with a variety of critiques of modern science developing in the 20th century, ranging from phenomenological and feminist assaults on scientific objectivity to critical theory attacks on positivism and the scientific method, many leading theorists and schools of thought distanced themselves from science, ignored its developments, and did not engage its results. This was and is a crucial mistake. Our argument is that science should once again become part of a transdisciplinary effort and should be returned to its status as a valuable theoretical resource. While we wish to avoid the uncritical modern embrace of science and technology, such as was advanced by classical liberalism, Marxism, and pragmatism, we also eschew totalizing critiques that reduce science and technology to one-dimensional reason and a force of social domination. Like it or not, science and technology have been major constituent forces of modernity, and similarly are key catalysts of change for postmodernity. As such, they need to be engaged in light of their considerable importance and carefully theorized so that their positive potential can be realized through theoretical critique and political struggle.

Accordingly, we will develop critical theories of science and technology that appreciate their emancipatory aspects, but also challenge their limitations, dangers, and possible destructive effects. Such approaches strive to

overcome one-sided affirmations or rejections, produce dialectical perspectives that distinguish between positive and negative features and consequences, and thus grasp contradictions and ambiguities in these highly complex and significant phenomena. Critical theories of science and technology are also transdisciplinary and historical. Transdisciplinary interpretation is necessary because science and technology have shaped our society and identities to such a profound degree that they are part and parcel of our culture, the stuff of everyday life, and are interfacing with our very bodies and subjectivities in unpredictable ways. A critical theory, for example, that synthesizes philosophy, sociology, and anthropology, but ignores the impact of science and technology on culture, is clearly limited in its ability to grasp the fundamental dynamics of the current conjuncture. Thus, a postmodern transdisciplinary theory should include reflections on science, technology, and ecology in a multiperspectivist project that integrates critical social theory, cultural studies, science and technology studies, race theory, postcolonial analysis, feminism, and environmental concerns. Such an enterprise draws on the most useful resources of both modern and postmodern theory, as well as on theoretical and fictional mappings.

Our project of reconstruction incorporates a variety of transdisciplinary enterprises, including cultural studies and the new advances of “science and technology studies” (STS). Taking its lead from Kuhn’s (1970) analysis of paradigm shifts in science, STS addresses the social construction of science, questions modern philosophy and self-understandings of science, and develops alternative “social epistemologies” of science” (see Haraway 1991, 1997; Fuller 1991, 1995, and forthcoming; and Harding 1993 and 1998). In addition, a wide spectrum of related works are emerging. They range from specific studies of key episodes in modern science and analysis of current scientific research and development, to investigations of alternative forms of scientific activity and knowledge and inquiries into how disparate social groups use science and technology to promote democracy and social justice (see Harding 1999; Kleinman forthcoming).

Some versions of STS, however, tend to be scholastic and conservative. They historicize science and technology, but fail to explicitly politicize them in the context of the coevolution of science, technology, capital, the state, and the military, and thus, more generally, within social relations of power and resistance. Moreover, while sociologically oriented analysts may see science as culture—a product of a changing community of scientists, cultural assumptions, and social practices—not all STS theorists analyze science and technology from the optic of its impact on politics, identities, and everyday life, or engage how media culture represents science and technology.

In the 1980s and 1990s, numerous theorists rooted in cultural studies moved beyond their usual terrain of film, television, and other “cultural” artifacts to address science and technology. Whereas these cultural studies theorists therefore could be considered as doing STS, the converse is not necessarily

true. The past decades have exhibited furious battles over the nature and effects of science and technology. Working from positions that include critical theory, feminism, multiculturalism, radical green theory, and postmodern theory, philosophical and political challenges to regnant modern paradigms led to the eruption of heated “science wars” between neopositivists and so-called social constructionists (see Ross 1996; Best and Kellner 1997; Chapter 3). Guided by the sound assumption that science and technology are too important to be left to scientists and technocrats themselves, theorists such as Sandra Harding (1986, 1993, and 1998), Donna Haraway (1989, 1991, 1997), Andrew Ross (1991, 1994, 1998), Katherine Hayles (1984, 1990, 1999), Stanley Aronowitz (1988, 1993, 1995), and others have undertaken historical, philosophical, cultural, and political approaches to these fields. In case studies and specific readings, cultural studies theorists have analyzed the ideologies and effects of science and technology on the social and natural worlds. Typically, they call for democratic, ethical, and ecological uses of science and technology (see Taylor et al. 1997). According to Peter Taylor (1997: 204), the potency of a cultural studies orientation to STS is to historically situate acontextual universal claims to Truth and Progress; to destabilize natural and self-evident facades; to disrupt oppressive linkages of knowledge with power; to advance counterdiscourses rooted in sites including domestic life, schools, workplaces, and popular culture; to work across disciplinary boundaries; and to promote intellectual and sociopolitical transformation.

Like Haraway, Aronowitz, Taylor, and others, we seek to absorb STS into the field of cultural studies, as we also work to overcome the limitations of many cultural studies approaches to science and technology themselves. We wish to avoid overly abstract, academic, and pretentious postmodern jargon, as we engage science and technology from a multidisciplinary perspective. This involves combining theoretical analyses of science, technology, and capitalism, enriched by consideration of cultural artifacts ranging from literature and science fiction to the texts of media culture, and grounded in a critical theory informed by ecological concerns. Moreover, we engage the complex interactions among science, technology, and capital in the broad context of the global restructuring of capitalism currently in process and in its constitutive scientific and technological revolutions.

Furthermore, we attempt to expand the project of cultural studies to take account of such phenomena as modernist and postmodernist literature, war and its representations, technology, science, environmental issues, politics, and critical theory itself. We engage and build on British and North American cultural studies, but believe that this tradition has been vitiated in recent years by a cultural populism that is too uncritical of media and consumer culture. This tradition is excessively dismissive of so-called elitist high culture, neglects the complex and important ways in which economics mediates cultural artifacts, and abandons the perspectives of critical social theory and radical politics too readily (Kellner 1995a).

Consequently, while it was an important move to intensely focus on media culture, it has been a mistake to turn away from literary texts and so-called high culture for sometimes exclusive focus on the “popular” in contemporary cultural studies. We also believe that both modernist and postmodernist theory have potentially emancipatory effects that have been sacrificed by a postmodern turn in cultural studies that contemptuously swings away from high art and theory, which it dismisses as “elite.” We engage the politics and effects of a wide range of cultural artifacts and reject rigid and often dubious distinctions between high and low culture, interrogating examples ascribed to both categories. Our notion of a critical cultural studies combines formal analysis of style, texture, and surface with interpretation of content, ideology, and normative values.<sup>10</sup> Our concept of “text” encompasses theory and literature, including the writings of Thomas Pynchon, Michael Herr, Mary Shelley, H. G. Wells, Philip K. Dick, and cyberpunk; popular media like film and television; as well as a global transnational image culture, the Internet, and events like the Gulf War. Our maps deploy the resources of both “theory” and “fiction,” since each provides key illuminations of social experience from different vantage points that supplement and complement each other. At stake is the development of modes of social theory and cultural criticism adequate for capturing salient aspects of our contemporary predicament, and connecting them with projects of radical democratic social transformation.

## NOTES

1. In a classic work, Karl Polanyi (1957) described the “great transformation” from preindustrial to industrial society. We argue that a similarly momentous metamorphosis is taking place today. A vast literature explains the shift in terms such as postindustrialism, post-Fordism, or postmodernity, developments that we interpret as new constellations in global technocapitalism (see Chapter 5). While such theorists as Offe (1985) and Lash and Urry (1987) describe the restructuring process as “disorganized capitalism,” we see this as a complex development involving disorganization and reorganization, constituting a new mode of economy and society. We are using “the postmodern adventure” to designate dramatic changes not only in the economy and society, but also in science, technology, politics, culture, nature, and human identity and existence. The focus of our studies is our own experience and situation in the United States. Yet in a globalized world, technologies, commodities, cultures, ideas, and experiences rapidly circulate throughout the world, so that, for those living outside the United States, we recall what Marx said to all in regard to his analysis of capitalism in England: “De te fabula narratur!” (“The tale is told of you”).

2. As we will demonstrate throughout this book, many discourses of the postmodern make shifts in technology largely responsible for the rupture with modernity, as does that of Baudrillard (1983a, 1993) who neglects the significance of the restructuring of the economy. While Jameson (1984, 1991), Harvey (1989), and others relate postmodern culture to transformations in capitalism, they do not adequately engage the roles of scientific and technological revolution. Other theorists, such as Lyotard (1984), interpret the “postmodern

condition” largely through mutations of discourse and culture. Throughout this book, we argue that if notions of postmodernity, or a postmodern condition, are to have any force, they require sociohistorical grounding in analysis of the conjuncture of scientific and technological revolution and the resulting cultural, social, and political transformations, all in the context of the global restructuring of capitalism.

3. The recently installed Bush administration is proceeding full-speed ahead to resurrect Reagan’s “Star Wars” missile defense system. Bush’s Defense Secretary, Cold Warrior Donald Rumsfeld, has long been an ardent opponent of arms control and proponent of a space-based National Missile Defense system (NMD); see Michael Klare’s article in *The Nation* (January 16, 2001), accessible at <http://www.alternet.org/print.html?StoryID=10341>.

4. Stephen Jay Gould (1997) has offered a cogent summary of the history of the discourse of the millennium and his thoughts on the significance of the concept. For Gould, the millennium, a form of dating system, is part of an apocalyptic Judeo-Christian tradition that postulates the end of history, the coming of a new reign of God, and a rupture with secular history. Gould also reminds us that the millennium discourse is bound up with how we parcel time and experience, and peculiar modes of organization of calendar time. From this perspective, the millennium is a function of the dominant mode of calendarization, of the decision to begin history with the birth of Christ, and is thus a peculiarly Christian dating system (Gould also reminds us of the controversies over exactly when the millennium began and when the new millennium commences). Notions of the Third Millennium are becoming increasingly popular: a survey of books with the concept in the title at Amazon.com reveals hundreds of texts touting the concept. We are also following Donna Haraway’s *Modest\_Witness* (1997), which presents the state of technoscience, society, and culture at the end of the Second Millennium. A few years down the road from her, we present our studies at the beginning of the Third Millennium as an updating of critical social theory and cultural studies that is looking forward at the same time we attempt to understand our recent past.

5. For an excellent interrogation of adventure in modernity and the notion of the modern adventure, see Nerlich (1987).

6. In *Violent Cartographies* (1997) Michael J. Shapiro argues that maps are functions of power in which borders and terrain are artificially constructed and legitimated in ideological discourses and narratives. Part of the postmodern adventure involves undoing the violent cartographies of modernity (nation-state, national borders, scientific and academic disciplines, hierarchical forms of culture, prescribed identities, etc.) in the contemporary era, and constructing alternative mappings and border crossings.

7. We do not want to imply, however, that change and complexity render theory and mapping impossible. While we continuously stress contradictions, ambiguities, and transformations, and draw on paradigms of probability, contingency, and multiplicity developed by chaos and complexity theory, we reject the assault on theory contained in some versions of extreme postmodern discourse. In general, we attempt to navigate the tricky and treacherous shoals between overtheorizing and renouncing theory in favor of flux, change, and complexity by developing analyses that are contextual, provisional, and hermeneutical.

8. We are amused by the number of books we’ve found in Amazon.com’s data base and in other sources that link concepts of the postmodern and of the Third Millennium to religion. On the upsurge of Christian fundamentalism and its articulation with political conservatism see Diamond (1995) and Berlet and Lyons (2000); on the proliferation of de-politicizing new forms of religion and spirituality, see Boggs (2000).

9. Ironically, at the very time in which the epochal transformations that are the topic

of our studies were becoming evident, a mode of postmodern theory, promoted by followers of Lyotard and a misunderstood Foucault, argued for the suspension of “grand narratives,” “totalizing theory,” and the global and macrotheories of classical theory in favor of local narratives, microtheory and politics, and more modest theoretical perspectives (see Lyotard 1984 and the critique in Best and Kellner 1991). Against this version of postmodern theory, we are arguing for a reconstructed type of the global and critical perspectives of classical social theory that we believe are necessary to analyze contemporary social and theoretical developments. Yet we are also in favor of combining the global and the local, micro- and macrotheory and politics, and mediating modern and postmodern perspectives (see Best and Kellner, 1991, Ch. 8, and Cvetkovitch and Kellner, 1996, “Introduction”).

10. See our earlier critique of a postmodern cultural criticism that primarily focuses on style, form, and surface, to the neglect of content, ideology, and hermeneutical interpretation of meaning, in Best and Kellner (1987) and the later critique in Kellner (1995a).

