International Studies Quarterly (1990) **34,** 295–310

The (S)pace of International Relations: Simulation, Surveillance, and Speed

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Against the neorealist claim that the "reflectivist" or postmodernist approach is a dead-end unless it merges with the "rationalist" conception of research programs, this essay argues that new technological and representational practices in world politics require not synthesis but theoretical heterogeneity to comprehend the rise of chronopolitics over geopolitics. The theoretical approaches of Baudrillard, Foucault, and Virilio are drawn upon to investigate three global forces in particular: simulation, surveillance, and speed. They have eluded the traditional and re-formed delimitations of the international relations field—the geopolitics of realism, structural political economy of neorealism, and neoliberal institutionalism—because their power is more "real" in time than space, it comes from an exchange of signs rather than goods, and it is transparent and diffuse rather than material and discrete. This essay offers an alternative, poststructuralist map to plot how these and other new forces are transforming the traditional boundaries in international relations between self and other, domestic and international, war and peace.

Introduction

In his 1988 presidential address to the International Studies Association, Robert Keohane gave notice of a new approach to the study of international relations. He labeled it "reflective," in the sense of reflecting, for the most part critically, on how institutions are thought and written about in international relations. In an edited version of the address that appeared in the International Studies Quarterly, Keohane went on to criticize the reflective approach for failing to research the empirical reality of institutions. Within the criticism lies an implicit imprecation: if one is to find a "genuine research program" it is better to take the enlightened road of rationalist reflection than the benighted wood of poststructuralist reflexivity (Keohane, 1988). There is, moreover, a metaphoric power in Keohane's choice of terms which insinuates a kind of generic passivity in the reflectivist camp. It would seem that the reflectivist, by definition, prefers or has little choice but to reflect others' thoughts and actions rather than to engage in the more productive work of

Author's note: This paper was first delivered at the London B/ISA Meeting in March 1989. I would like to thank Ruth Abbey, Kiaran Honderich, M. J. Peterson, Nick Rengger, John Santos, Gerard Toal, Michael Klare, and the Editors of *ISQ* for their help and criticism. For those commentators at the B/ISA panel who at the time found my conclusion too utopian, I apologize if it now—after Berliners have danced on the Wall—sounds too dated.

empirically testing hypotheses. Then, after dazzling the reflective creature on this familiar road of the enlightenment tradition with an impressive pair of twin high-beams—rationalist theory and empirical research—Keohane concludes that "eventually, we may hope for a synthesis between the rationalistic and reflective approaches" (Keohane, 1989: 393).

I have reflected on Keohane's well-traveled road. I have weighed its quite reasonable rules against the historical evidence, the international events born out of both accidental (famine, flood, earthquake) and intentional (war, terrorism, genocide) disasters that have taken place on this road. I have considered Keohane's destination, the higher "normative grounds" of "international cooperation," and found it to be laudable, and indeed shared by many of the reflective routes. But his conclusion makes the unbeaten track seem more appealing if not necessary: it is not in synthesis but by learning to live with irreconcilable differences and multiple identities—in high theory and in everyday practices—that we might find our best hope for international relations. I think here Keohane might agree: unless we are willing now and then to head the big American car of international relations theory off in untried, untestable, even unreasonable directions, the only perpetual peace—to update Kant—will be that of the roadside kill.[1]

This essay is not a polemic against Keohane's rationalist institutionalism, nor is it a theoretical defense of poststructuralism. They are no longer needed, for each side has begun to recognize the legitimacy of the dialogue if not the epistemological claims of the other.[2] Judging, however, from critical comments that have arisen as much from confusion as from disagreement, a few prefatory points are in order about some differences between rationalists and poststructuralists that resist synthesis.

First, poststructuralism is a semio-critical *activity,* ever searching for and seeking to dismantle the empirico-rational *positions* where power fixes meaning.[3] Second, post-

[1] For critical enlightenment, as well as for casualty insurance, it is worth repeating Kant's opening remarks to his essay Perpetual Peace: " 'To Perpetual Peace' Whether this satirical inscription on a certain Dutch shopkeeper's sign, on which a graveyard was painted, holds for *men* in general, or especially for heads of state who can never get enough of war, or perhaps only for philosophers who dream that sweet dream, is not for us to decide. However, the author of this essay does set out one condition: the practical politician tends to look down with great smugness on the political theorist, regarding him as an academic whose empty ideas cannot endanger the nation, since the nation must proceed on principles derived from experience; consequently, the theorist is allowed to fire his entire volley, without the worldly-wise statesman becoming the least bit concerned. Now if he is to be consistent—and this is the condition I set out—the practical politician must not claim, in the event of a dispute with a theorist, to detect some danger to the nation in those views that the political theorist expresses openly and without ulterior motive. By this *clausula salvatoria,* the author of this essay will regard himself to be expressly protected in the best way possible from all malicious interpretation" (1983:341).

[2] In one of his last interviews Foucault presented a persuasive argument for taking up a dialogical approach over against a polemical one: "Questions and answers depend on a game—a game that is at once pleasant and difficult—in which each of the two partners takes pains to use only the rights given him by the other and by the accepted form of the dialogue. The polemicist, on the other hand, proceeds encased in privileges that he possesses in advance and will never agree to question. On principle, he possesses rights authorizing him to wage war and making that struggle a just undertaking; the person he confronts is not a partner in the search for the truth, but an adversary, an enemy who is wrong, who is harmful and whose very existence constitutes a threat. For him, then, the game does not consist of recognizing this person as a subject having the right to speak, but of abolishing him, as the interlocutor, from any possible dialogue; and his final objective will be, not to come as close as possible to a difficult truth, but to bring about the triumph of the just cause he has been manifestly upholding from the beginning" (1984:381–82). However, as I have argued elsewhere, this is not to support the kind of mushy, uncritical eclecticism that is found in much of the "contending approaches" school (See Der Derian, 1988).

[3] See Roland Barthes (1986:11–12): "Hence, there exists today a new perspective of reflection—common, I insist, to literature and to linguistics, to the creator and the critic, whose tasks, hitherto absolutely self-contained, are beginning to communicate, perhaps even to converge, at least on the level of the writer, whose action can increasingly be defined as a critique of language . . . This new conjunction of literature and linguistics, which I have just mentioned, might provisionally be called, for lack of a better name, *semio-criticism,* since it implies that

structuralism does not hold that reflectivists *or* rationalists reflect the field of international relations. Both use and are used by language, by the tropes, rhetoric, narratives and grammar that make up an array of ambiguous and indeterminate signifying practices. It is this heterological nature of discourse that dominant powers, in a demonstrative, hegemonic act, always dream of fixing, reducing, subjecting to a single, monological meaning. Third, the rationalists demonstrate this power play when they construct a transcendental, privileged space to make truth-claims about international relations (like those made by game and rational choice theory from the supposed high-point of scientific progress). Alternatively—and Keohane deserves credit for now making it less of an alternative—the rationalists might simply ignore the problem of discourse, in the vain hope that it will ignore them. But the poststructuralists are always aware of—and always irritating others by demonstrating—the stickiness of the web of meaning.

Perhaps they are too irritatingly aware and demonstrative, which is why I intend to de-script some criticisms of Keohane and others. I will do so not by metatheoretically arguing against them (for this has been done elsewhere—see Walker, 1990), nor by piling up empirical evidence (as I am sure numerous latter-day encyclopedists of international relations will soon be doing on Keohane's other, hyper-rationalist flank), but by reading poststructuralism or "reflectivism" as a powerful epistemological activity which can help us understand something that cannot be fully understood: the impact of an array of new technological practices that have proven to be resistant if not invisible to traditional methods of analysis. These (post)modern practices are elusive because they are more "real" in time than space, their power is evidenced through the exchange of signs not goods, and their effects are transparent and pervasive rather than material and discrete. They do not fit and therefore they elude the traditional and the re-formed delimitations of the international relations field: the geopolitics of realism, the structural political economy of neorealism, the possessive institutionalism of neoliberalism. In contrast, I believe that poststructuralism can grasp—but never fully capture—the significance of these new forces for international relations.

In this essay I will examine three forces that stand out for their discursive power and shared problematic. Their discursive power is *chronopolitical* and *technostrategic*, and they have generated a postmodern problematic for a system of states which increasingly seems resistant to comprehension by traditional systems of thought. To clarify: they are "chronopolitical" in the sense that they elevate chronology over geography, pace over space, in their political effects[4]; they are "technostrategic" in the sense that they use and are used by technology for the purpose of war (see Clausewitz, 1976: 128, 177; Der Derian, 1987: Ch. 9; Klein, 1989); they have a discursive power in that they produce and are sustained by historically transient statements which mediate our relations with empirical events (Foucault, 1972: 21–39, 46–47, 181–184); and the problematic is postmodern because it defies the grand theories or definitive structures which impose rationalist identities or binary oppositions to explain international relations (Der Derian, 1988: 189). Hence, a poststructuralist analysis of discourse is called for to show how these new technological practices mediate and often dominate our relations with other states, but also to demonstrate their relationship to ourselves, that is, how their power is manifested in

writing is a system of signs." And Foucault, "On the Genealogy of Ethics: An Overview of Work in Progress," (1984:343): "I am not looking for an alternative; you can't find the solution of a problem in the solution of another problem raised at another moment by other people. You see, what I want to do is not a history of solutions, and that's the reason why I don't accept the word *alternative*. I would like to do the genealogy of problems, of *problematiques*."

[4] On the displacement of "geopolitics" by "chronopolitics," see Virilio (1986).

the boundaries they establish for what can be said and who can say it with authority in international theory.

The three new forces in international relations that I will examine are *simulation, surveillance,* and *speed.* The problematic they have generated can be simply put: the closer technology and scientific discourse bring us to the "other"—that is, the more that the model is congruent with the reality, the image resembles the object, the medium becomes the message—the less we see of ourselves in the other. Back to the big American car: reflection loses out to reification.

This can be simply expressed but not fully explained. Why is this so? A full answer would surely lead to an ontological bog, so instead this article offers a partial explanation—and a provocation that might prompt others to lead the way on the onto-theological question that I have begged. I imagine that many of our leaders and scholars, like earlier estranged tribes who sought in heaven what they could not find on earth, have given up on peace on earth and now seek peace of mind through the worship of new techno-deities. They look up to the surveillance satellite, deep into the entrails of electronic micro-circuitry, and from behind Stealth protection to find the omniscient machines and incontrovertible signs that can help us see and, if state reason necessitates, evade or destroy the other. And should one pause too long to reflect skeptically on this reification of technical reason, one is consigned to the ranks of the dissident other, as infidels who refuse to believe that there can be a single power or sovereign truth that can dispel or control the insecurities, indeterminacies, and ambiguities that make up international relations.[5]

The three sections that follow investigate the impact of simulation, surveillance, and speed on international relations by providing: 1) an introduction to the relevant work of poststructuralist authors who have grappled with these issues; (2) an intertextual (as opposed to a content) analysis of samples drawn from documents, interviews, and periodicals; and 3) some foreign policy implications for the superpowers. This article outlines a larger project on the antidiplomatic discourses which have emerged with these new technostrategic practices.[6] It acts as a preface to establish that these new forces, in their theorization and practical application, respond better to interpretation than verification. Examples will follow, of how the radar operator on the *U.S.S. Vincennes* based his interpretation of data about an approaching Iranian aircraft on training simulations, how a former head of Air Force Intelligence found in surveillance photographs and computerized data evidence of systematic violations of arms control agreements while the head of the CIA saw an occasional misdemeanor, and how speed as the essence of modern warfare has radically changed the image of battle. And for those rationalists who might concede that what follows constitutes a sufficient body of empirical evidence but not proof unless it is

[5] In *The Twilight of the Idols,* Nietzsche exposes the origins of this tyranny of reason which first appears as but soon fences out dissident knowledge: "If one needs to make a tyrant of *reason,* as Socrates did, then there must exist no little danger of something else playing the tyrant. Rationality was at that time divined as a *savior;* neither Socrates nor his "invalids" were free to be rational or not, as they wished—it was *de rigueur,* it was their *last* expedient. The fanaticism with which the whole of Greek thought throws itself at rationality betrays a state of emergency: one was in peril, one had only *one* choice: either to perish or be *absurdly rational.*" (1968:33).

[6] The larger project, which attempts to answer questions raised in the final chapter on "Techno-diplomacy" in *On Diplomacy* with a reading of national security cultures, includes a critical inquiry into the late Hedley Bull's papers on diplomatic culture, interviews with specialists in terriorism and modeling at the RAND Corporation, discussions with lieutenant colonels from the War colleges, an intertextual analysis of over 520 issues (two years' worth) of the Defense Department's *Current News,* the absorption of over fifty espionage novels, and the deciphering of formerly classified CIA documents and NSC PROF notes on the Iran hostage crisis and the Iran-Contra affair that had been shredded or erased, rewoven like rugs or recovered from computer disks, and collected by the National Security Archive in Washington, D.C. For earlier samplings, see Der Derian, 1986, 1989a, 1989b. The project will be published as *Antidiplomacy: Speed, Spies, and Terror in International Relations* (Basil Blackwell, 1991).

scientifically tested, a model sits on my desk, constructed from a kit for a Stealth fighter-bomber three years before it officially existed, demonstrating that credible proof in national security matters is as much a function of hegemonic power as it is the product of visible knowledge.

Simulation: From Realism to Hyperrealism

Writing for the *Frankfurter Zeitung* in 1926, marveling at the immense popularity of the newly constructed picture palaces in Berlin, Siegfried Kracauer chronicled the emergence of a "cult of distraction." It is in these new "optical fairylands," he wrote, that "distraction—which is meaningful only as improvisation, as reflection of the uncontrolled anarchy of the world—is festooned with drapes and forced back into a unity that no longer exists."[7] In Kracauer's view the picture palaces served as a kind of Hegelian asylum from Weimar disorder, ornate spaces where the alienated Berliner could seek reunification through a new, totally imaginary, cinematic (yet organic) *Zeitgeist.*

Surveying the rise of a consumer society, anticipating the failure of conventional, radical, *spatial* politics in 1968, Guy Debord, editor of the journal *Internationale Situationniste,* opened his book Society of the Spectacle with a provocative claim: "In societies where modern conditions of production prevail, all of life presents itself as an immense accumulation of *spectacles.* Everything that was directly lived has moved away into a representation" (1983: 1).[8] At the root of this new form of representation was the specialization of power, with the spectacle coming to speak for all other forms of power, becoming in effect "the diplomatic representation of hierarchic society to itself, where all other expression is banned" (1983: 23).

After analyzing the political economy of the sign and visiting Disneyland, Jean Baudrillard, the French master of edifying hyperbole, notified the inhabitants of advanced mediacracies that they were no longer distracted by the technical reproduction of reality, or alienated and repressed by their over-consumption of its spectacular representation. Unable to recover the "original" and seduced by the simulation, they had lost the ability to distinguish between the model and the real: "Abstraction today is no longer that of the map, the double, the mirror or the concept. Simulation is no longer that of a territory, a referential being or a substance. It is the generation by models of a real without origin or reality: a hyperreal" (1983a: 2).

Baudrillard exceeds Nietzsche in his interpretation of the death of god and the inability of rational man to fill the resulting value-void with stable distinctions between the real and the apparent, the true and the false, the good and the evil. In the excessive, often nihilistic vision of Baudrillard, the task of modernity is no longer to demystify or disenchant illusion—for "with the real world we have also abolished the apparent world" (see Nietzsche, 1968: 40–41; Der Derian, 1987: Ch. 9)—but to save a principle that has lost its object: "Disneyland is presented as imaginary in order to make us believe that the rest is real, when in fact all of Los Angeles and the America surrounding it are no longer real, but of the order of the hyperreal and of simulation. It is no longer a question of false representation of reality (ideology), but of concealing the fact that the real is no longer real, and thus of saving the reality principle" (1983a: 25).[9]

[7] See Kracauer, 1987 and 1963.

[8] In a more recent work, Debord (1988) persuasively—and somewhat despairingly—argues that the society of the spectacle retains its representational power today.

[9] For related analyses of the representational shift that marks modernity and postmodernity see also Baudrillard (1983b), Benjamin (1969), McLuhan (1964), and Kittler (1987).

The representation of international relations is not immune to this development. In a very short period the field has oscillated: from *realist* representation, in which world-historical figures meant what they said and said what they meant, and diplomatic historians recorded it as such in Rankean fashion ("wie es eigentlich gewesen ist"); to *neorealist*, in which structures did what they did, and we did what they made us do, except of course when neorealists revealed in journals like the *International Studies Quarterly* and *International Organization* what they "really" did; to *hyperrealist*, in which the model of the real becomes more real than the reality it models, and we become confused.[10]

What is the reality principle that international relations theory in general seeks to save? For the hard-core realist, it is the sovereign state acting in an anarchical order to maintain and if possible expand its security and power in the face of penetrating, de-centering forces such as the ICBM, military (and now civilian) surveillance satellites, the international terrorist, the telecommunications web, environmental movements, transnational human rights conventions, to name a few of the more obvious. For the soft-core neorealist and peace-research modeler, it is the prevailing pattern of systemic power which provides stable structures, regime constraints, and predictable behavior for states under assault by similar forces of fragmentation.

Before we consider how simulations in particular "work" to save the reality principle, we should note the multiple forms that these simulations take in international relations. From the earliest *Kriegspiel* (war-play) of the Prussian military staff in the 1830s, to the annual "Global Game" at the Naval War College in Newport, Rhode Island, simulations have been staged to prepare nation states for future wars; by doing so, as many players would claim, they help keep the peace: *qui desiderat pacem, praeparet bellum.* Simulations are used at other defense colleges, such as the strategic and counterterrorist games played at the National Defense University or the more tactically oriented computerized "Janus" game perfected at the Army War College.[11] Then there are the early academic models, like Harold Guetzkow's seminal InterNation Simulation (INS), which spawned a host of second- and third-generation models: SIPER (Simulated International Processes), GLOBUS (Generating Long-term Options by Using Simulation), and SIMPEST (Simulation of Military, Political, Economic, and Strategic Interactions).[12] Many simulations are now commercially available: the popular *realpolitik* computer game *Balance of Power;* the remarkably sophisticated video games modeled on *Top Gun*, the Iranian hostage rescue mission, and other historical military conflicts; and the film/video *WarGames*, in which a hacker taps into an Air Force and nearly starts World War III. And then there are the ubiquitous think-tank games, like those at the Rand Corporation, that model everything from domestic crime to nuclear war, as well as the made-to-order macro-strategic games, like the war game between Iraq and Iran that the private consulting company BDM International sold to Iraq (the highest bidder?).

It may grate on the ears of some of the players to hear "gaming," "modeling," and

[10] An added impetus to leave reality behind can be found in the hyperrational test that much of international relations theory has set up for itself—the model's congruence with reality. See Keohane, 1989. As well, the clean, abstracted techniques of the game theoretic, or the structures of the more positivistic neorealists, have a certain technical appeal that the interpretive archives of genealogy and intertextualism do not. For eloquent yet varied defenses of genealogy and intertextualism in international relations theory, see the exchange between Richard Ashley and William Connolly in the epilogue to *International/Intertextual Relations,* pp. 259–342.

[11] For other examples of military simulations, see Thomas Allen's fine book on the subject, *War Games: The Secret World of the Creators, Players, and Policy Makers Rehearsing World War III Today* (1987).

[12] See Ward (1985) for a compilation of essays in honor of Harold Guetzkow, which provide a lengthy if uneven account of simulation in the discipline of international relations. See also Howard, 1987.

"simulation" used interchangeably.[13] Yet in the literature and during interviews I found users using all three terms to describe practices that could be broadly defined as *the continuation of war by means of verisimilitude* (Allen, 1987: 6–7). Conventionally, a game uses broad descriptive strokes and a minimum of mathematical abstraction to make generalizations about the behavior of actors, while simulation uses algorithms and computer power to analyze the amount of technical detail considered necessary to predict events and the behavior of actors. Judging from the shift in the early 1980s by the military and think-tanks to mainly computerized games—reflected in the change of the Joint Chiefs of Staff gaming organization from SAGA (Studies, Analysis, and Gaming Agency) to JAD (Joint Analysis Directorate)—it would seem that simulation is becoming the preferred "sponge" term in international relations. "Simulation" also has the obvious advantage of sounding more serious than "gaming" and of carrying more of a high-tech, scientific connotation than "modeling."

The object of this inquiry is not to conduct an internal critique of the simulation industry, nor to claim some privileged grounds for disproving its conclusions.[14] Rather, the intent is to show how, in the construction of a realm of meaning that has minimal contact with historically specific events or actors, simulations have demonstrated the power to displace the "reality" of international relations they purport to represent. Simulations have created a new space in international relations where actors act, things happen, and the consequences have no origins except the artificial cyberspace of the simulations themselves.

Over the last four years I have collected numerous examples of this new phenomenon; I will share two of them here.[15] The first is the case of the *U.S.S. Vincennes* which shot down an Iranian civilian airliner on July 3, 1988, in the mistaken belief that it was a military aircraft. The *Vincennes* was equipped with the most sophisticated U.S. naval radar system, the Aegis, which according to a later military investigation functioned perfectly.[16] It recorded that the Iranian Airbus was on course and flying level at 12,000 feet, not descending towards the *Vincennes* as the radar operator, the tactical information coordinator, and one other officer reported at the time. Somehow, between machine and man, a tragic misreading took place which resulted in the death of 290 people. One possible cause is stress: the *Vincennes* and its crew had never been in combat and were engaged with Iranian speedboats when the Airbus was first detected. Yet stress has many origins, and the military shows signs of ignoring the most serious one. The *Vincennes* trained for nine months before it went into the Persian Gulf. That training relied heavily on tapes that simulate battle situations, none of which included overflights by civilian airliners—a common occurrence in the Gulf.[17]

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[13] I was, in fact, counseled against conflating the terms by a top modeler at Rand, Paul Davis, who provided me with some valuable insights into the state of the art of simulations (interview, Rand Corporation, 18 February 1988). See also his monograph with Bankes and Kahan, 1986.

[14] Two excellent criticisms of the internal assumptions of gaming can be found in a review of the literature by Ashley, 1983, and in Hurwitz, 1989.

[15] A fuller account, based on teaching the prisoner's dilemma to—as well as learning it from—inmates at Gardner and Lancaster State Prisons in Massachusetts, interviews with lieutenant colonels from the U.S. Army War College in Carlisle, Pennsylvania, and Freedom of Information Act (FOIA) materials, can be found in Der Derian (1990).

[16] See *The New York Times*, 20 August 1988, pp. 1 and 5: "The 53-page 'Investigative Report' appeared to confirm earlier news accounts that human error resulting from combat stress was among the main causes of the tragedy. 'Stress, task fixation, and unconscious distortion of data may have played a major role in this incident,' it said."

[17] See *The New York Times*, 3 August 1988, pp. A1 and A6: "A Pentagon officer who previously served in an Aegis ship said crew train constantly with tapes that simulate every conceivable battle situation. But he said, 'the excitement factor is missing in such drills, because regardless of the realism of the simulation, it is just that, a simulation of the real thing.' "

To be sure, much more was involved in the decision to fire at the Airbus, not least the memory of the *U.S.S. Stark* which was nearly destroyed in the Persian Gulf by an Exocet missile from an Iraqi warplane. But I would like to suggest that the reality of the nine months of simulated battles displaced, overrode, absorbed the reality of the Airbus. The Airbus disappeared before the missile struck: it faded from an airliner full of civilians to an electronic representation on a radar screen to a simulated target. The simulation overpowered a reality which did not conform to it.

Let us look at another case, an exemplary intertext of simulation: the work of Tom Clancy. Clancy saves U.S. hegemony in *The Hunt for the Red October* when a Soviet commander of a nuclear submarine defects, *with* the submarine which contains advanced technology, more advanced than the silencing technology that the U.S. four years later penalized Toshiba (and jeopardized relations with Japan) for transferring to the Soviets. Clancy, whose *Red October* dustjacket sports a hyperbolic blurb from Reagan, supplied in kind one for Thomas Allen's book on strategic simulations, *War Games Today:* "Totally fascinating," Clancy wrote, "his book will be the standard work on the subject for the next ten years." Clancy's *Patriot Games* received a laudatory review from Secretary of Defense Caspar Weinberger in the *Wall Street Journal,* which was then reprinted in the *Friday Review of Defense Literature* of the Pentagon's *Current News* for the edification of the 7,000-odd Defense and State Department officials who make up its readership (*Current News* 7 August 1987: 6). Clancy's *Red Storm Rising,* inspired by war gaming, was cited by Vice-Presidential candidate Dan Quayle in a foreign policy speech to prove that the U.S. needs an anti-satellite capability.[18] In *Patriot Games,* Clancy magnifies the threat of terrorism to prove that the state's ultimate power, military counter-terror, still has utility. In a later novel, *The Cardinal of the Kremlin,* Clancy plots the revelations of a mole in the Kremlin to affirm the need to reconstruct with Star Wars the impermeable borders of the sovereign state. Taken together, Clancy's novels stand as strategic simulations: jammed with technical detail and seductive ordnance, devoid of recognizably human characters, and obliquely linked to historical events, they have become the perfect free-floating intertext for saving the realist principle of the national security state.

What policy implications are raised by these proliferating simulations? In the military arena we soon could see life copying the hyperreal art of *Aliens,* where the Colonial Marines are buffeted as they enter the planet's atmosphere and Ripley asks the obviously anxious Lieutenant how many drops this is for him. He replies "Thirty-eight," pauses, and then adds "Simulated." He quickly proves incapable of responding to situations that do not follow his simulation training. In interviews I conducted with fast-track lieutenant colonels attending the U.S. Army War College, where a state-of-the-art, multi-million dollar simulation center is currently under construction, I learned that simulations are becoming the preferred teaching tool. And at the Foreign Service Institute simulations like the "Crisis in Al Jazira" are being used to train junior-level diplomats in the art of crisis management and counterterrorism (see Redecker, 1986).

This is not to issue a blanket condemnation of simulations. Their proliferation can, from another perspective, be seen as symptomatic of a "neither war nor peace" situation that may be fraught with dangers but is certainly preferred to a shooting war. Properly executed, simulations can play an edifying role in alerting individuals to the horrors of war. It has been said that Ronald Reagan's participation in a

[18] The address, given to the City Club of Chicago, was the same one at which Quayle articulated his preference for offensive weapons systems: "Bobby Knight [the Indiana University basketball coach] told me this: 'there is nothing that a good defense cannot beat a better offense [sic].' In other words a good offense wins." See *The New York Times,* 9 September 1988, p. 1.

DEFCON alert simulation, which included an evacuation from Washington, D.C., noticeably altered his attitude toward strategic issues and arms control.

However, there is evidence of a *simulation syndrome* creeping into strategic discourse. I have provided some examples, but perhaps the best evidence is, suitably, metaphoric. Just as Army, Navy, and Marine Corps have become alarmed by the sharp increase in instances of "simulator sickness"—a condition in which users of flight simulators, especially those that provide the most realistic motions and graphic representations of flight, experience flashbacks, visual distortions, and physical disorientation[19]—we should be on the alert against a similar simulation syndrome appearing in the ranks of military and diplomatic officials as well as the international relations specialists who create and promote the simulations.

Surveillance: From Panopticism to TECHINT

Within the utopian dream of the Enlightenment for the expansion of the social contract into a universal eternal peace, there lies a darker shadow, one that the rationalists of international relations rarely note in their exaltations of modernity's promise. It is the perpetual dream of power to have its way without the visible exercise of will that would produce resistance. Readers of Gramsci have found evidence of a similar form of hegemonic power operating in international relations, but their focus has usually been limited to the state and class origins of this power. To understand the technostrategic origins of this pervasive power in international relations, one must turn to the rupture point of the Enlightenment, the French Revolution, as does Michel Foucault, who sees in it ample evidence that modern politics would progress as war by other means: "Historians of ideas usually attribute the dream of a perfect society to the philosophers and jurists of the eighteenth century: but there was also a military dream of society; its fundamental reference was not to the state of nature, but to the meticulously subordinated cogs of a machine, not to the primal social contract, but to permanent coercions, not to fundamental rights, but to indefinitely progressive forms of training, not to general will but to automatic docility" (1977: 169).

The French Revolution embodied both aspects of the Enlightenment: the high ideals of the Declaration of the Rights of Man coexisted with the power of terror, and both were promulgated by revolutionary wars that quickly took on imperial aims with the rise of Napoleon. These revolutionary tensions yielded changes over the battlefield, in the workplace, and in military institutions. In April 1794, for the first time, a company of *aerostiers* successfully used a balloon to observe the battle of Fleurus in Belgium; throughout the early 1790s "manufactories" were built according to principles found in the *Encyclopédie,* which called for close observation rather than coercion of the workforce; and in military schools, barracks, and hospitals a new architecture was developing, based on a monastic model of spatial distribution.[20] Looking first like a progressive, scientific reform, then playing a repressive, militarized role in the years of the *ancien régime,* and eventually flourishing in modern societies as a positive, benign form of social control and penal correction, a new

[19] See "Sickness in the Cockpit Simulator," in *The New York Times,* 20 February 1989, pp. D1 and D5: "Identifying causes and cures for simulator sickness is difficult, Dr. Kennedy said, because the malady is both polygenic and polysymptomatic; that is, it has many causes and produces many different symptoms in different individuals. But most experts agree that the root of the problem is "cue conflict," which occurs when the body's senses receive information in conflict with each other or with the mind's expectations based on experience."

[20] For three very different, very rich accounts of surveillance see Foucault (1977), Virilio (1984a), and Burrows (1986).

power took hold which now pervades modernity: a disciplinary power based on surveillance.

The same Bentham who coined the name that graces our discipline provided a name and a blueprint for the architecture of the new disciplinary regime: the "panopticon." By now almost everyone in the social sciences is familar with the concept of the panopticon, an annular structure with a tower in the center which contains—or might not contain—a guard to observe and through this observation indirectly, nonviolently control the behavior of prisoners, schoolchildren, hospital patients, military trainees, whomever is on the other side of the one-way gaze. In the final chapter of *Discipline and Punish,* after a detailed, critical historiography of the panopticon, Foucault elaborates a theory of "panopticism." The prison is merely the extreme version, the most graphic model, the ultimate "pen" of our disciplinary society which inscribes the difference between normal and abnormal behavior, the good citizen and the delinquent. It is the ultimate sign of modernity's twin powers of normalization and surveillance. Put bluntly by the literary critic Maurice Blanchot: "If it weren't for prisons, we would know that we are all already in prison" (1986: 66).

Foucault does not take his acute analysis of modernity much beyond the borders of the prison-state. But I would like to extend his ideas to international relations, to suggest that the discipline now faces similar developments. Obviously, in an anarchical society there is no central watchtower to normalize relations, no panopticon to define and anticipate delinquency. Historically, the great powers have reached relatively high levels of normalization by forging concerts of power, reciprocal codes of conduct, a body of international law. But this tenuous identity as a society was dependent upon a common diplomatic culture, as well as a collective estrangement from the "Anti-Christ Turk," the "colonial native," the "Soviet Threat," and the most recent pariah, the "international terrorist." In contemporary international relations, the diminution of the Soviet threat under Gorbachev and the renunciation of terrorism by PLO leader Arafat have removed critical points of collective alienation, and the efferent forces of states seeking resources and security grow stronger as America's ability to assert a hegemonic position declines. What power (some might prefer "regime" or "institution") can maintain stability and re-normalize relations in this (post)modern state of affairs, with multiplying state and non-state actors contesting the sovereign powers and truths behind "Western domination" (Hedley Bull's "Third World Revolt"), at the same time that the foundations of that domination are undergoing internal fragmentation and diversification?

That power is here and now, in the shadows and in the "deep black." It has no trouble seeing us, but we have had great difficulties seeing it. It is the normalizing, disciplinary, technostrategic power of surveillance. This modern panopticism takes many forms, but it is the communications intelligence (COMINT), electronic intelligence (ELINT), radar intelligence (RADINT), telemetry intelligence (TELINT), and photointelligence (PHOTOINT)—all operating under the 22,300 mile-high roof of technical intelligence (TECHINT)[21]—that constitute a new regime of power in international relations. Human intelligence (HUMINT) has played and continues to play an important role in normalizing relations through vigilance, but it lacks the ubiquity, resolution, and pantoscopic power of the technical intelligence system, as well as its apparent capability to provide value-free detailed information about the object of surveillance: "the picture does not lie."[22] Indeed, much of its power lies in

[21] One may go beyond the favored geosynchronous parking spots to include the U.S. Vela spacecraft which watches for the double flash of a thermonuclear explosion from sixty thousand miles out. See Burrows (1986:19–20).

[22] For a study of the power of "traditional" espionage, see J. Der Derian (1989a).

this aura of representational truth that surrounds the image, in spite of the interpretational debates—from the alarmist interpretation of Soviet civil defense bunkers by former head of Air Force Intelligence, Major General Keegan, in the early 1970s, to the supposed discovery of Soviet MIG airfields and "Cuban" baseball fields in Nicaragua in the early 1980s—that have marked the history of photoreconnaissance. Admiral Stansfield Turner, more than any other director of the Central Intelligence Agency, promoted this view of technical intelligence: "What espionage people have not accepted is that human espionage has become a complement to technical systems. Espionage either reaches out into voids where technical systems cannot probe or double-checks the results of technical collection. In short, human intelligence today is employed to do what technical systems cannot do" (quoted in Burrows, 1986: v).

My purpose is not to rant against the "machine in the garden," as Leo Marx put it; neither is it to offer a paean to our new techno-gods. It is rather to point out a neglected problematic of the surveillance regime, and to consider why it has been neglected. There is the obvious problem of secrecy and compartmentalized knowledge that surrounds the systems, and the attendant issue of accountability that automatically politicizes any inquiry. Technical intelligence systems are considered so sensitive that a new security classification was devised: SCI, for Sensitive Compartmented Information.[23] Perhaps, then, one reason why the politics of space surveillance has been understudied by the field of international relations is because there simply is no testable, scientific method to determine how it is controlled, used and budgeted. These remain matters for historical investigation, intertextual interpretation, and open-ended speculation—not the usual methods and concerns of behaviorists or neorealists, but prime material for a poststructuralist inquiry.

The central problematic of the surveillance regime is that it normalizes relations by continuing *both* war and peace by other, technical means. The same satellite that monitors and helps us verify whether the Soviets are conforming to the INF treaty simultaneously maps the way for low-level, terrain-following cruise missiles. TENCAP (Tactical Exploitation of National Capabilities), using the latest generation of KH-12 and Milstar satellites, will provide field commanders with the real-time command, control, communications, and intelligence (C^3I) necessary to fight the war of the future—and perhaps to deter it, as immediate, local, conventional deterrence becomes a high priority with the prospect of a nuclear-free Europe. Indeed, something of a paradox seems to be at work: the greater the transparency and the faster the response time of the new satellites (like the Lacrosse and Magnum) that provide C^3I, the greater the opportunity for deterrence to "work." This paradox would seem to be demonstrated by one case—if it is to be believed—that Carter canceled a highly secret plan to attack Iran with five thousand assault troops the autumn after the failed hostage rescue because U.S. satellites detected large Soviet troop movements (twenty-two full divisions) heading toward Iran. This move was in turn made possible by the fact that the Soviets had gained access to U.S. satellite-relayed messages because the traitor John Walker had sold them the encryption key (see Barron, 1987: 24–25).

One policy implication of the new surveillance regime is that the superpowers have created a cybernetic system that displays the classic symptoms of advanced paranoia: hyper-vigilance, intense distrust, rigid and judgmental thought processes, and projection of one's own repressed beliefs and hostile impulses onto another. The very

[23] Not that this classification prevented Christopher Boyce, employed in TRW's satellite program, and William Kampiles, a CIA watch officer, from stealing and selling to the Soviets detailed, comprehensive information about the Rhyolite and KH-11 satellite systems.

nature of the surveillance/cybernetic system contributes to this condition: we see and hear the other, but imperfectly and partially—*below* our rising expectations. This can induce paranoid behavior, that is, reasoning correctly from incorrect premises, as happened with the participants in a recent laboratory experiment at Stanford. Subjects unknowingly were subjected (through hypnosis) to a partial hearing loss; when placed in social situations they assumed that people were whispering about them and soon displayed symptoms of paranoia (Herbert, 1989: 62–63).

Forces internal to the national security state's surveillance system also reinforce paranoid behavior. Classic examples are the "bomber gaps" and "missile gaps" of the Fifties and Sixties, when Eisenhower and the CIA played superego to a warring military id that (ab)used the new U-2 photoreconnaissance to find bombers and missiles in every barn and silo of the Soviet Union.[24] Overclassification and overcompartmentalization of information in the national security state can lead to a form of overdetermined decision-making, with policy outcomes based on a surfeit of "deep," discrete sources that resist corrective feedback.

But what kind of feedback can possibly cure the modern cyber-paranoic? Perhaps our best hope and the best elevation for understanding the other at the highest reaches remains the much-maligned "summit." To be sure, there are many historical examples and counter-examples, but a recent case comes to mind: President Reagan approached his first summit with his Soviet counterpart with visions of the "Evil Empire," and came down from his third one saying (in Russian): "Trust, but verify."

Speed: The Final Frontier

In 1909 Filippo Marinetti gave notice in his famous *Futurist Manifesto* of an avant-garde movement for the modern industrial state: "The Futurist writer will make use of *free verse,* an orchestration of images and sounds in motion to express our contemporary life, intensified by the speeds made possible by steam and electricity, on land, on the seas, and in the air" (see Lista, 1986: 12–14).

To break out of the inertia of the prison-state as well as the prisonhouse of language, the Futurists exalted in paintings of the masses in perptual motion, in race cars, airplanes, and city streets, and in poetry and manifestos of the emancipation of words from syntax, punctuation, the requirements of reason itself. Paintings and writings bore titles like *Dynamic Expansion + Speed* and *Technical Manifesto of Futurism.* The technology and "polyphony" of the urban space was their church and litany. The Futurists soon fell victim to their project of marrying an ideology of the avant-garde with art-in-action, which in Italy in the 1920s meant falling in with Mussolini's Fascist movement. But they burned brightly in that period, and they powerfully illuminated a new force in modern industrialized societies: speed.

Paul Virilio has almost single-handedly brought the issue of speed back into political and social theory. Trained as an architect, Virilio (1975, 1977, 1978, 1980, 1983, 1984a, 1984b, 1984c, 1986, 1988) has curated museum exhibitions, studied military strategy, and written several remarkable books on topics ranging from the deterritorialization of international politics to the relationship of war to cinematic practices. It is not possible to summarize Virilio's work in this article. However, given the obvious importance of speed in international relations—from the rapid increase in weapon delivery speed and concomitant decrease in human response time, to the appearance

[24] Burrows gives a good account of the inter-service rivalry and its effect on photo interpretation during this period. He quotes a former CIA officer who said that "To the Air Force, every flyspeck on film was a missle" (1986;82–112).

of real-time representation and surveillance of the enemy—it does seem strange that Virilio's work has gone largely unnoticed in the discipline of international relations.[25]

In a word, Virilio's project is to politicize speed. The politics and power of wealth, war, and media have been studied, but not their political relationship to speed. In our own sub-field of international political economy we have taken steps to understand the relation of national wealth to violence, empire, and military power. But we have not given serious consideration to the political effects of excessive or insufficient speed in our systems of weapons, communications, and decision-making. Virilio is concerned about the issue because he believes a revolution has taken place in the regulation of speed. He outlined this argument in an interview with Sylvere Lotringer:

> Up until the nineteenth century, society was founded on the brake. Means of furthering speed were very scant. You had ships, but sailing ships evolved very little between Antiquity and Napoleon's time. The only machine to use speed with any sophistication was the optical telegraph, then the electric telegraph. In general, up until the nineteenth century there was no production of speed. They could produce brakes by means of ramparts, the law, rules, interdictions, etc . . . Then, suddenly, there's the great revolution that others have called the Industrial Revolution or the Transportation Revolution. I call it a *dromocratic* revolution because what was invented was . . . a means of fabricating speed with the steam engine, then the combustion engine. And so they can pass from the age of brakes to the age of the accelerator. In other words, power will be invested in acceleration itself. (1983:44–45)

Virilio is preoccupied with the violence of speed, and running through his various works is the common theme that speed is the essence of war. It is speed that transforms the hand into a dangerous fist, or as Napoleon applied the concept to military strategy, "Force is what separates mass from power" (Virilio, 1983:31). But speed coupled with the other technological changes has altered the battlefield: "Space is no longer in geography—it's in electronics. Unity is in the terminals. It's in the instantaneous time of command posts, multi-national headquarters, control towers, etc . . . There is a movement from geo- to chrono-politics: the distribution of territory becomes the distribution of time. The distribution of territory is outmoded, minimal" (Virilio, 1983:115). A radical claim, one that Virilio believes to be supported by the equally radical transformation of our visual representation of war. In *Guerre et Cinéma*, Virilio gives a detailed history of the logistics of military perception and the use of cinematic techniques in warfare. As hand-to-hand combat gave way to long-range conflict, the enemy receded from sight. An urgent need developed to accurately see and verify the destruction of the enemy at a distance. The necessity of collapsing distance, of closing the geographical space between enemies, led to the joint development of modern techniques for war filming and killing.[26] In modern

[25] The Anglo-American-centricity of international relations and the lack of translations might partially explain the neglect, but I would like to pre-empt any criticism of his difficult style by noting that his translated texts, *Pure War* and *Speed and Politics* are much more aphoristic and impressionistic than his much larger body of untranslated work.

[26] See *Guerre et Cinéma*, "Si la première guerre mondiale est donc bien le premier conflit médiatisé de l'Histoire, c'est parce que les armes à tir rapide supplantent la multitude des armes individuelles. C'est la fin du corps à corps systematique, de l'affrontement physique, au profit du carnage à distance où l'adversaire est invisible ou presque, *á l'exception des lueurs de tir* qui signalent sa présence. D'où cette impérieuse nécessité de la visee optique, du grossissement telescopique, l'importance du *film de guerre* et de la restitution photographique du champ de bataille, mais aussi et surtout, la découverte du rôle militaire dominant de l'aviation d'observation dans la conduite des opérations" (1984a:123).

warfare, as the aim of battle shifts from territorial, economic, and material gains to immaterial, perceptual fields, the war of spectacle begins to replace the spectacle of war.[27]

Virilio's analysis of the increasing strategic significance of battle-*sight* over the more traditional battle-*site* can be verified in articles from a variety of defense journals.[28] But what lies between the texts is particulary illuminating. For instance, an advertisement in *Defense Review* for General Electric's "COMPU-SCENE V" extolls the "visionic edge": "In combat, the eyes have it: you watch the environment; you stay in contact with the threat; you aim the weapon; you search for cover. The more you see, the more you win. You see without being seen; you see first; you have tactical vision" (November 1989:p 38). General Electric can provide this military advantage because it "builds the best visionics simulation and training systems in the world." It would seem that as the "real" arms race begins to slow down, a "simulation race" is winding up: "GE continues to set the pace with COMPU-SCENE V, the most powerful member yet of the COMPU-SCENE family of computer image generators. COMPU-SCENE V delivers true photo realism, it comes with a mission generation capability that translates raw photography into real-world databases and it simulates the full range of visionic devices—a major step toward full mission rehearsal capability."

To read Virilio and then to read the technostrategic discourse provides an important message for students of war and peace: as the image becomes more credible than the fact, as time displaces space as the more significant strategic "field," and as the usefulness of our ultimate power, nuclear weapons, is increasingly called into question, the war of perception and representation deserves more of our attention and resources than the seemingly endless collection and correlation of data on war that goes on in the field of international relations. One does not need to look any further than the latest generation of weapons and strategy—Star Wars, the Stealth Bomber, the Lacrosse satellite, Discriminate Deterrence—to find ample proof that the empires of simulation, surveillance, and speed are growing in significance every day.

The Beating of the Bounds

I have no conclusions to offer, only a review of questions inspired if not answered by Virilio, Foucault, and Baudrillard. The grand question is, How have the new technologies of speed, surveillance, and simulation and their emerging discursive practices transformed the nature of international relations? Surrounding it are some more speculative queries. Does the rapidity and totality of nuclear and cinematic war point away from spatial, shooting wars and towards temporal, perceptual wars? Is the transparency offered by the panoptic surveillance machine leading toward a new regime of normalization? Will international conflict eventually be consigned to the cyberspace of increasingly sophisticated simulations? How can we gauge politically

[27] See *Guerre et Cinéma*, "Des premières armes spatiales de la seconde guerre mondiale à l'eclair d'Hiroshima, *l'arme de théâtre* a remplace le *théâtre d'opération* et, bien que démodé, ce terme d'arme de théâtre employe par les militaires est révélateur d'une situation: *l'histoire des batailles c'est d'abord celle de la métamorphose de leurs champs de perception.* Autrement dit, la guerre consiste moins à remporter des victoires "matérielles" (territoriales, économiques . . .) qu'a s'approprier "l'immatérialité" des champs de perception et c'est dans la mesure où les modernes belligérants étaient décidé à envahir la totalité de ces champs que s'imposa l'idée que le véritable *film de guerre* ne devait pas forcément montrer la guerre ou une quelconque bataille, puisqu'à partir du moment où le cinéma etait apte a créer la surprise (technique, psychologique . . .) il entrait de facto dans la catégorie des armes" (1984a:10).

[28] See, for example, the special simulation issue of *National Defense* (November 1989), *Armed Forces Journal International* (November 1989); and *Marine Corps Gazette* (December, 1989).

and judge ethically the power of simulation, surveillance, and speed to deconstruct (and reconstruct) not just the traditional boundaries of international relations but also the inadequately mapped boundaries between self and other, inside and outside, war and peace?

Might we someday see at these international borders a ritual like the one I witnessed on Ascension Day at the Marks and Spencers store in Oxford? The parsons at St. Michael's Church arrived with a crowd in tow to conduct the Beating of the Bounds, a ritual which dates back to the medieval practice of gathering to walk the boundaries of the parish and to mark them with the beating of sticks. I am sure that at one time—probably for a very long time—it was a deadly serious ritual, formally an act of gratitude to Christ but simulataneously a supplication to much older gods who kept the borders safe and the fields fertile. But on that spring day in Oxford the ritual had been opened up to interpretation, transgression, even parody, as most of the children and many of the adults joined in, pounding on the floor and shouting out "Mark! Mark!" in a way that was much more carnivalesque than pious.

Would that it be so, on the boundaries between the NATO and Warsaw forces, between Irish Catholics and Protestants, between Khomeini and Rushdie. Could it not be so, in a territory in which we have more say, the contested space of international relations theory? This is not to pretend that the boundaries do not "really" exist, or that they can be synthesized away. Rather, it is to see and study them as mythic markers for differences that we need but need not war over.

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