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James Der Derian

International Affairs (Royal Institute of International Affairs 1944-), Vol. 76, No. 4. (Oct., 2000), pp. 771-788.

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Virtuous war/virtual theory

JAMES DER DERIAN

The destructiveness of war furnishes proof that society has not been mature enough to incorporate technology as its organ, that technology has not been sufficiently developed to cope with the elemental forces of society.

Walter Benjamin, *The work of art in the age of technical reproducibility*

My search for a virtual theory of war and peace began several years ago on a hilltop in the high Mojave Desert, watching the first digitized war game at the US army's National Training Center. According to the briefing papers for Desert Hammer VI, a new array of high technology was being tested 'to enhance lethality, operations tempo, and survivability'. It was hard to tell if it was working. I had spent most of the first morning trying and, for the most part, failing to discern the significance of distant dust trails of M1A2 Abrams tanks, Bradley armoured personnel carriers, and swarming humvees. The NTC at Fort Irwin might be a military base stuck in the middle of the Mojave Desert, but like nearby Las Vegas, it was a perfect stage for the evocation of past and future, hopes and fears. I had entered the theatre of war, not literally but *virtually*.

This was to be the first of several encounters with the virtual continuation of war by other means. The means were technological; the continuation was one of distance foreshortened by speed of bytes and bits, missives and missiles. Distance was afforded by the F-16s and A-10s flying overhead; the simulated launch of precision munitions; the remote video cameras perched on the hilltops; the laser-sensor arrays on every soldier and every weapon; the computer networks which controlled the battle space; and all the other digital technologies operating as 'force-multipliers'. To be sure, accident, friction, or miscalculation could, and at times did collapse this virtual distancing. However, the ultimate measure of distance in war, the difference between life and death, was nowhere in sight.

At first take, this represents a worrying—perhaps even shocking—but hardly revolutionary transformation of military and diplomatic affairs. After all, the telephone in the First World War provided generals with the means and the arrogance to send hundreds of thousands of soldiers to their deaths from the

relative safety of their chateaux headquarters. The radio, the tank, and especially the airplane before the Second World War, and then thermonuclear weapons after, were all vaunted by one strategist or another as technologies that would radically transform if not end traditional warfare. Obviously, it takes more than technological innovation to make a revolution. However, unlike prior radical developments in means of transportation, communication and information, virtual innovation is driven more by software than hardware, and enabled by networks rather than agents, which means adaptation (and mutation) is not only easier, but much more rapid. Moreover, the 'Advanced Warfighting Experiment', as it and a series of subsequent war games are called, is taking place at a pivot-point in history. Post-ford, post-modern, or just post-Cold War, the political and economic as well as rhetorical and cultural forces that shape the international system have entered a state of flux.

So, is the virtualization of violence a revolution in diplomatic, military, let alone human affairs? On its own, no. However, deployed with a new ethical imperative for global democratic reform, it could well be so. In spite of, and perhaps soon because of, efforts to spread a democratic peace through globalization and humanitarian intervention, war is ascending to an even higher plane, from the virtual to the *virtuous*. At one time, the two words virtual and virtuous were hardly distinguishable (although the Latin *virtuosos* preceded *virtualis*). Both originated in the medieval notion of a power inherent in the supernatural, of a divine being endowed with natural virtue. And both carried a moral weight, from the Greek and Roman sense of virtue, of properties and qualities of right conduct. But their meanings diverged in modern usage, with 'virtual' taking a morally neutral, more technical tone, while 'virtuous' lost its sense of exerting influence by means of inherent qualities. Now they seem ready to be rejoined by current efforts to effect ethical change through technological and martial means.

The United States, as *deus ex machina* of global politics, is leading the way in this virtual revolution. Its diplomatic and military policies are increasingly based on technological and representational forms of discipline, deterrence, and compellence that could best be described as *virtuous war*. At the heart of virtuous war is the technical capability and ethical imperative to threaten and, if necessary, actualize violence from a distance—with *no or minimal casualties*. Using networked information and virtual technologies to bring 'there' here in near-real time and with near-verisimilitude, virtuous war exercises a comparative as well as strategic advantage for the digitally advanced. It has become the 'fifth dimension' of US global hegemony.

On the surface, virtuous war cleans up the political discourse as well as the battlefield. Fought in the same manner as they are represented, by real-time surveillance and TV 'live-feeds', virtuous wars promote a vision of bloodless, humanitarian, hygienic wars. We can rattle off casualty rates of prototypical virtuous conflicts like the Gulf war (270 Americans lost their lives—more than half through accidents), the Mogadishu raid (18 Americans killed), and the Kosovo air campaign (barring accidents, a remarkable zero casualty conflict for

the NATO forces). Yet, in spite of valorous efforts by human rights organizations, most people would probably come up short on acceptable figures for the other side of the casualty list. Post-Vietnam, the United States has made many digital advances; public body counts of the enemy are not one of them.

Unlike other forms of warfare, virtuous war has an unsurpassed power to commute death, to keep it out of sight, out of mind. In simulated preparations and virtual executions of war, there is a high risk that one learns how to kill but not to take responsibility for it, one experiences 'death' but not the tragic consequences of it. In virtuous war we now face not just the confusion but the pixillation of war and game on the same screen.

The United States leads the way, but other countries are in hot pursuit of virtual solutions to long-running political conflicts. At the height of the Israeli withdrawal from Lebanon, the British *Daily Telegraph* newspaper pronounced from a safe distance on its 'real' meaning:

[T]he Israeli dot-com generation seems not to have the stomach for mortal combat. They have started to ask why they should risk their lives when precision weapons can reduce war to a video game. For the pony-tailed youth of Tel Aviv's night spots, the war in Lebanon was becoming their Vietnam and they would rather their government fought it by remote control.¹

However, the *Daily Telegraph* article conspicuously failed to note that virtuous war is anything *but* less destructive, deadly, or bloody for those on the short end of the big technological stick. And the newspaper is not alone in this sometimes blithe but often intentional oversight. Bloody ethnic and religious conflicts involving land mines, small arms, and even machetes persist. For the last few years I have been trying to comprehend how the sanitization of violence that began with the Gulf War has come to overpower the mortification of the body that continues to mark communal wars in Nagorno-Karabakh, Somalia, Bosnia, Rwanda, and elsewhere. A felicitous oxymoron, a growing paradox, an ominous sign of things to come, virtuous war is, in that final analysis it seeks to evade, still about killing.

In a sense, war has always been a virtual reality, too traumatic for immediate comprehension. Trauma, Freud tells us, can be re-enacted, even re-experienced, but cannot be understood at the moment of shock. This is what Michael Herr was getting at in *Dispatches*, when he wrote about his experiences in Vietnam: 'It took the war to teach it, that you were as responsible for everything you saw as you were for everything you did. The problem was that you didn't always know what you were seeing until later, maybe years later, that a lot of it never made it in at all, it just stayed stored there in your eyes'.² But now there is an added danger, a further distancing of understanding. When compared to the real trauma of war, the pseudo-trauma of simulation pales. But an insidious

¹ *Daily Telegraph*, 23 May 2000 (online).

² See Michael Herr, *Dispatches* (New York: Avon Books, 1978), p. 20.

threat emerges from its shadowing of reality. In this high-tech rehearsal for war, one learns how to kill but not to take responsibility for it, one experiences 'death' but not the tragic consequences of it. In the extreme case, with the predisposed pathologies of a Milosevic in Serbia, a McVeigh in Oklahoma City, or a Harris in Littleton, Colorado, this can lead to a kind of doubling or splitting of the self that psychologists Robert Jay Lifton and Erik Markusen see as a source of the 'genocidal mentality'. But what I have witnessed is more a closing than an opening of a schism, between how we see and live, represent and experience, simulate and fight war. New technologies of imitation and simulation as well as surveillance and speed have collapsed the geographical distance, chronological duration, the gap itself between the reality and virtuality of war. As the confusion of one for the other grows, we now face the danger of a new kind of trauma without sight, drama without tragedy, where television wars and video war games blur together.

From the 1950s cybernetic notion of the 'automaton', to William Gibson's 1987 coining of 'cyberspace' as a 'consensual hallucination', the virtual has shared an isomorphic relationship to the dream. And like the dream, it requires critical interpretations if we are not to sleepwalk through the manifold travesties of war, whether between states or tribes, classes or castes, genders or generations. Quoting Karl Marx—"The reform of consciousness consists *solely* in the awakening of the world from its dream about itself"—the Jewish-German literary critic Walter Benjamin wonders how the modern, seduced and traduced by radio, film, and other new forms of technological reproduction, can possibly awake from the interwar crisis. In *The arcades project*, he identifies two first steps, one virtuous the other not, to escape modernity's most pernicious effects:

The genuine liberation from an epoch, that is, has the structure of awakening in this respect as well: is entirely ruled by cunning. Only with cunning, not without it, can we work free of the realm of dreams. But there is also a false liberation; its sign is violence.³

Virtuous war is much more than a new form of organized violence. Call it a dream-state, a symbolic realm, or an unreality: virtuous war projects a mythos as well as an ethos, a kind of collective unconscious for an epoch's greatest aspirations and greatest insecurities. Indeed, it is heroic if not Homeric in its practice and promise: on one side, the face of Achilles, a tragic figure who represents the *virtù* (as well as hubris) of the great warrior, of honour, loyalty, and violence, willing to sacrifice his life for others in a strange land; and on the other, Odysseus, a man of many devices (*polymechanos*) and many contrivances (*polymetis*), who prefers *techné* to *virtù*, cunning (and punning) to warring and wandering, who just wants to come home. Again, Benjamin: 'Only a thoughtless observer can deny that correspondences come into play between the world of modern technology and the archaic symbol-world of mythology'.⁴

³ See Walter Benjamin, *The arcades project* (Cambridge, MA: Belknap Press, 1999), pp. 456 and 173.

⁴ *Ibid.*, p. 461.

Any portrayal of war presents dangers for the chronicler, many obvious, some not so obvious; but virtuous war in particular poses some serious obstacles. One tactic is to record war from the bunker and the beaches, so close that the word on the page, the image on the film is imprinted by, practically drips with the carnage of war. We might call this approach, *pace* Spielberg, 'saving the reality principle'. Another, most often practised in IR theory, is to keep a distance, to extract or abstract the causes, structures, and patterns of war. Either way, the choice seems to be Hobbes or Hobson: the blood-drenched prose, the *cinéma vérité*, the permanent war-of-all-against-all of the realist; or the bloodless, value-free, hygienic wars of the social scientist. Some writers, like John Keegan and Stephen Ambrose, have managed to work effectively, even eloquently, the space between the trenches and the ivory tower. But the wars they wrote about, full of heroic figures caught in black-and-white representations, are not the wars that we face now and in the future. These wars are fought in the same manner as they are represented, by military simulations and public dissimulations, by real-time surveillance and TV 'live-feeds'.

Clearly, the problem of representation is compounded when the foxhole itself goes virtual. The nature of war is mutating, morphing, virtualizing with new technologies and strategies. New media, generally identified as digitized, interactive, networked forms of communication, now exercise a global effect if not ubiquitous presence through real time access. Moreover, with the magnification and dramatization of old ailments like nationalism, balkanization, and civil war by new media, virtuous war reaches not only into every living room but splashes onto every screen, TV, computer and cinema. People will live and die, figuratively and literally, by the power of images, previewed by the famine child that drew American troops into Somalia, and of the dead US Ranger dragged through the streets that hastened their departure.

Today, in war, diplomacy, and the media, the virtual proliferates. As war goes virtual, through infowar, netwar, cyberwar, through a convergence of the PC and the TV, its foundation as the ultimate reality-check of international politics begins to erode. Sovereignty, the primary means by which the supreme power and legitimate violence of the state is territorially fixed in international politics, declared once, many-times dead, now seems to regain its vigour virtually, through media spasms about new terrorist threats that never materialize, like States-of-Concern-formerly-known-as-Rogues (to invoke the other Prince) that warrant a \$60 billion ballistic missile defence, or new strains of killer diseases that make the *X-Files* seem understated. The favourite virtual threat is the 'cyber-attack', ominously mooted by the media and anticipated by the Pentagon as the 'next Pearl Harbor'—which must amuse (and motivate) teenage hackers who make up the overwhelming bulk of such 'attacks'.⁵

⁵ In March 1999, Air Force Major General John Campbell, then vice-director of the Defense Information Systems Agency (DISA is in charge of cybersecurity and provides worldwide communication, network and software support to the Defense Department), told Congress that there were a total of 22,144 'attacks' detected on Defense Department networks, an increase of 5,844 in 1998. From January to

With the virtualization of war comes the simulation of peace and perhaps even more obscure yet obdurate dangers. 'Virtual diplomacy'—from teleconferencing to preventive media—is presented at high-level Washington conferences and in beltway defence industries as the ultimate technical fix for intractable political problems. And, where virtual diplomacy fails, the virtual economy supposedly amends. According to the techno-wizards of the 'new economy', the global economy is on the verge of total virtualization.⁶ Whereas many policy-makers, including the present and previous US presidents, view this as one more step towards a global, democratic peace, some specialists in the field fear otherwise. As the Asian financial crisis swept westward, the global economy verged further towards the viral and the virtual: one financial expert emphatically stated that 'the distinction between software and money is disappearing', to which a Citibank executive responded, 'it's revolutionary—and we should be scared as hell'.⁷

Questions go begging. Is virtualization, not globalization, turning the millennial tide? Is the sovereign state disappearing in all but legal form, soon to be a relic for the museum of modernity? Or has it virtually become the undead, haunting international politics like a spectre? Is virtualization the continuation of war (as well as politics) by other means? Is it repudiating, reversing, or merely updating Clausewitz? Is virtuality replacing the reality of war? Will real or just simulated peaces result? In short, is virtuous war and simulated peace the harbinger of a new world order, or a brave new world?

New technologies engender new questions, which require new approaches. Digitized, interactive, networked forms of communication now exercise a global presence: instant video-feeds, satellite link-ups, T1-T3 links, overhead surveillance, global mapping, distributed computer profiling, programmed trading, and movies with Arnold Schwarzenegger make up some of the most visible forms. Virtualization represents the most penetrating and sharpest—to the point of invisibility—edge of globalization. The power of virtuality lies in its ability to collapse distance, between here and there, near and far, fact and fiction. And so far, it has only widened the distance between those who have and those who have not.

We are in need of a *virtual theory* for the military strategies, philosophical questions, ethical issues, and political controversies surrounding the future of war and peace. All journeys entail rituals in which the end is prefigured by the negotiations and preparations that take place at the beginning. The choice of what to and not to believe, where to go and who to see, what to record on tape and finally to interpret in writing, always involves rituals of knowledge (*techné*)

August 2000, there have been a total of 13,998 reported 'events', according to Betsy Flood, a spokeswoman at DISA (she defined 'events' as 'probes, scans, virus incidents and intrusions'). However, according to Richard Thieme, a technology consultant and one of the chairs of the annual 'DEF CON' computer hackers convention, all but 1,000 of last year's reported attacks were attributed to recreational hackers. See Jim Wolf, 'Hacking of Pentagon computers persists', *Washington Post*, 9 August 2000, p. 23.

⁶ See e.g. cover story of *Time Magazine* 151: 16, 27 April 1998.

⁷ *Ibid.*

and negotiations of power (*virtù*). In search of the virtual, it is a struggle between the disappearing original and the infinitely reproducible. It is about interests: which interests matter most in an increasingly virtualized world; which interests obstruct, which interests facilitate the investigation; and, of course, what interests me versus what might interest the reader. Most fundamental is the negotiation at the root of interest itself (*inter-est*), between states of being, between the senses of self and reality with which one begins and one ends a journey.⁸

In search of a virtual theory, I travelled with a rather unconventional set of intellectual tools. To be sure, the who, when, where, and whatever did inform my interests, questions, and eventual conclusions. I had like many others in our field read the classic works on war: Sun Tzu, Machiavelli, Jomini, Clausewitz, Delbrück, Mahan, Hart, and others. Tutorials, seminars, and lectures from professors such as Charles Taylor, Hedley Bull, Michael Howard, and Adam Roberts provided a deeper historical and theoretical context, as well as an attitude of intellectual scepticism that tested the canon as it was taught. Moreover, a four-year stint at Oxford coincided with the most dangerous years of the second Cold War, when much of Europe was divided over NATO war fighting strategies and the stationing of SS-20, Cruise, and Pershing missiles. The anti-nuclear movement—especially the writings and remarkable public presentations by E. P. Thompson—also informed much of my thinking about war and peace. And I spent as much of my spare time as I could in Paris, where my French-Armenian relatives and a brilliant group of continental philosophers—Roland Barthes, Michel Foucault, Gilles Deleuze, Jean Baudrillard, and, at the head of the pack, Paul Virilio—provided valuable French antidotes to British weather, food and common sense.

Together it made for an eclectic group of travel companions; but when you're setting off for the belly of the beast, it's best to be diplomatically and theoretically over-equipped. On my research trips I made it a habit to take along one of the small, cheap Semiotext(e) books, with the excerpted quotes on the back cover that confuse many and provoke others. They included: Baudrillard's *Simulations* ('The very definition of the real has become: that of which it is possible to give an equivalent reproduction...The real is not only what can be reproduced, but that which is always already reproduced: That is, the hyperreal...which is entirely in simulation'); Deleuze's and Guattari's *Nomadology: the war machine* ('The war machine is exterior to the State apparatus... It is the invention of the nomads...The very conditions that make the State possible...trace creative lines of escape'); and Virilio's *Pure war* ('We tried to reveal a number of important tendencies: the question of speed; speed as the essence of war; technology as the producer of speed; war as logistics, not strategy;

⁸ In his 1994 Dewey Lectures at Columbia University, the philosopher Hilary Putnam provided the best word of caution for a virtual journey, warning against 'the common philosophical error of supposing that the term "reality" must refer to a single super thing, instead of looking at the ways in which we endlessly renegotiate and are *forced* to renegotiate our sense of reality as our language and our life develops'. 'Sense, nonsense, and the senses: an inquiry into the powers of the human mind, *The Journal of Philosophy*, vol. XCI, 1995, p. 452.

endocolonization; deterrence; ultimate weapons; Pure War'). The books came along for inspiration, but also because they fit nicely in a back pocket; and, on more than one occasion, they triggered conversations with soldiers, sailors, and marines that went much deeper than the usual public affair's sound-bite.

At this point, one usually defends or apologizes for their choice of fellow travellers. I won't: whichever theorist helps me best understand the subject of my inquiry gets to the head of the class. For some time, it meant that post-modernists, post-structuralists, post-anything ruled. As a concept, 'post-modern', enjoyed from the outset the curious utility of transparent meaning for some and utter meaningless for others. Debates raged on the very existence of an epochal break ('post-modernity') and the explanatory value of such an incoherent body of intellectual attitudes ('post-modernism'). For me, it represented an interpretive struggle to comprehend how modern history never seemed fully to awake from the Enlightenment dream of linear progress; how cultures as advanced as the ones that produced Bach and Goethe, or Jefferson and Emerson could also produce an Auschwitz or Hiroshima; how the past was uprooted and the future predetermined by new technologies of representation; how every universal meta-narrative and foundational grand theory (be it Immanuel Kant or Karl Marx) was unravelling in the face of accelerated change in global politics; how talk-radio, reality-based TV, and webcams made everyday life a public spectacle above and beyond conventional means of comprehension.

At some point academic fatigue set in, and I grew weary of the theoretical debates surrounding post-modernism. I just couldn't see the point of writing (or refereeing) one more journal article on whether we are pre-, post- or just preposterously modern. And truth be told—never an easy task in post-modern circles—I had a problem with 'problematize', and all the other cant terms that have increasingly come to signify membership and little else. Taking pluralism seriously, I had little time for any academic approach—from rational choice to post-positivist theory—that prescribes one way of inquiry over and against another at a purely theoretical level. Besides, isn't it *time*—after the US President states in a court video that the truth of the matter depends on what you mean by 'is', the US War College publishes a book on 'Post-modern warfare', and Amazon.com heavily discounts *Postmodernism for beginners*—to move on?⁹ Are we not 'always already', as Derrida wrote, what Devo sang (with no gender sensitivity) in their ironic sequel to their memorable hit, 'post-post-modern men'?

But where to next? As is so often the case, the destination was to be found in the journey. In my travels I discovered ample evidence that we had accelerated beyond a 'post-modern condition', first identified as such by philosopher François Lyotard in 1979, and that we were entering a digitally enhanced *virtual immersion*,

⁹ My last foray into the theory wars can be found in, 'Post-theory: the eternal return of ethics in international relations', in Michael Doyle and John Ikenberry, eds, *New thinking in international relations theory* (Boulder, CO: Westview Press, 1997), pp. 54–76. For my take on the superannuation of post-modernism, see James Der Derian, ed., *The Virilio reader* (Oxford: Blackwell Publishers, 1998), Introduction, pp. 1–15. See also Steven Metz, *Armed conflict in the 21st century: the information revolution and post-modern warfare* (Carlisle, PA: Strategic Studies Institute, 2000).

in which instant scandals, catastrophic accidents, impending weather disasters, 'wag-the-dog' foreign policy, live-feed wars, and quick-in, quick-out interventions into still-born or moribund states are all available, not just prime time, real time but 24/7, on the TV, PC, and PDA. Both on and off the road, in search of supplemental modes of understanding, I began to see the need for a *virtual theory* of war and peace.

From the beginning right up to the end of my travels, I also held to what some call a given, others a belief, and a few an episteme: that global politics remains a place of power and identity, space and borders, legitimacy and meaning. But where I once trusted thinkers like Hobbes, Grotius and Kant to tell the complete story of security in the language of sovereignty, I increasingly came to rely on critical theorists like Nietzsche, Benjamin, Baudrillard, Deleuze and Virilio to interpret new mimetic codes of competing authorities and cultural clashes that had yet to be mapped let alone deciphered in global politics. Facing new hyper-realms of economic penetration, technological acceleration, and new media, the spatialist, materialist, positivist perspective that informs realism and other traditional approaches cannot begin fully to comprehend the temporal, representational, deterritorial and potentially dangerous powers of virtualism. By tracing the reconfiguration of power into new immaterial forms, post-modernists provide a starting point. They help us to understand how acts of inscription and the production of information, how metaphor, discourse, and language in general, can reify consciousness, rigidify concepts, predetermine the future. But they also provide the critical tools to float signifiers, dismantle binary hierarchies, free the imagination. As the realities of international politics increasingly are generated, mediated, simulated by new digital means of reproduction, as the globalization of new media further confuses actual and virtual forms; as there is not so much a distancing from some original, power-emitting, truth-bearing source as there is an implosion; as meaning is set adrift and then disappears into media black-holes of insignificance, a little po-mo can go a long way.

I took my bearings regularly, with interviews and archival research as well as strategic and diplomatic theory; but it would be an act of stupidity, arrogance, or, as is often the case, both, to think one could map this new virtual terrain by conventional means alone. I sought not to enclose but to encompass virtuous war, with a mix of new and old techniques and theories, ranging from maps that had sea monsters at the edge (humanitarian intervention must go no further than Bosnia—darkness lurks in Rwanda) and global positioning systems that made weapons smarter and diplomacy dumber ('We hit what we were aiming for...But we did not mean to hit the Chinese Embassy').¹⁰

Obviously it wasn't just a love of the open air that spurred this virtual road trip. I must admit that I also saw it as a way to escape the disciplinary boundaries (and extensive border skirmishes) of the academic field of International Relations. In general, the social sciences, an intellectual laggard when it comes to tech-

¹⁰ Unnamed NATO representative, quoted in Michael Gordon, 'NATO says it thought embassy was arms agency', *New York Times*, 2 May 2000, p. 1.

nological change, are not the best vehicle for understanding the virtual. Highly complex in the philosophical idiom, yet practically ubiquitous in popular discourse, it understandably comes with an intellectual taboo in the social sciences. It just doesn't seem to fit into a disciplinary inquiry. I've never needed a reason, but I do think going off-road is about the only way to assess fully the benefits against the dangers of the virtual.

Some might place it further down on the ladder than theoretical inspiration, conceptual incentives, ethical imperatives, or disciplinary escapism, but there is as well a good etymological reason to undertake the virtual trip. 'Theory', from its Greek root of *theorein*, contains within it the notions of a journey or embassy (*theoria*), which involves an attentive contemplation (*horao*) of a spectacle (*theama*), like theatre (*theatron*) or oracular deity (*theon*).¹¹ 'Virtual', from the Latin *virtualis*, conveys a sense of inherent qualities that can exert influence, by will (the *virtù* of Machiavelli's Prince) or by potential (the virtual capacity of the computer). By this unification of the classical and the digital, virtual theory becomes both software and hardware: it has the potential to make meaning, produce presence, create the actual through a theatrical differentiation and technical vision. It constructs a world—not *ex nihilo* but *ex machina*—where there was none before.¹²

On the epistemological spectrum, this clearly places the virtualists nearer to the constructivists than the rationalists or realists. Virtual theory repudiates the philosophical realism and positivism underlying most social science theory, where words transparently mirror objects, facts reside apart from values, and theory is independent of the reality that it represents.¹³ Yet, I have found little of intellectual or pragmatic utility in the metatheoretical, structuralist, and curiously amorphous forms (again, where are the bodies/agents?) that constructivism has taken in International Relations. To me it is a step backwards, from structuralism to bloburalism, to invoke that classic of the 1950s, 'The Blob', where misunderstood teenagers (something of a stretch for the star, Steve McQueen) took on an extra-terrestrial goeey blob that had emerged from a meteor. In spite of efforts to destroy it by conventional means (i.e. lots of firepower), it grows to gargantuan proportions by parasitically sucking the life out of humans.

¹¹ This etymology is drawn from Martin Heidegger, *The question concerning technology and other essays*, trans. William Lovitt (New York: Harper, 1977); Costas Constantinou, *On the way to diplomacy* (Minneapolis, MN: University of Minnesota Press, 1996); and the always insightful suggestions of Michael Degener.

¹² This definition and the description of the virtual which follows is a shorthand, highly condensed interpretation drawn from the work of Martin Heidegger, Gilles Deleuze, Félix Guattari, Jacques Derrida, Pierre Lévy and Paul Virilio. See Heidegger, *The question concerning technology*; Gilles Deleuze, *Becoming virtual*, trans. Hugh Tomlinson and Barbara Habberjam (New York: Zone Books, 1988), *Différence et répétition* (Paris: PUF, 1968); Gilles Deleuze and Félix Guattari, *A thousand plateaus: capitalism and schizophrenia*, trans. Brian Massumi (Minneapolis, MN: University of Minnesota Press, 1987); Jacques Derrida, *Specters of Marx*, trans. Peggy Kamuf (New York and London: Routledge, 1994); Pierre Lévy, *Becoming virtual: reality in the digital age*, trans. Robert Bononno (New York and London: Plenum, 1998); Paul Virilio, *The Virilio reader*, trans. Michael Degener, Lauren Osepchuk and James Der Derian (Oxford: Blackwell Publishers, 1998). I have found the best philosophical synopsis to be Wolfgang Welsch's, 'Virtual anyway?', in Candido Mendes and Enrique Larreta, eds, *Media and social perception* (Rio de Janeiro, Brazil: UNESCO, 1999), pp. 242–85.

¹³ See James Der Derian, 'A reinterpretation of realism: genealogy, semiology, and dromology', in Der Derian, ed., *International theory: critical investigations* (New York: New York University Press, 1995), pp. 363–96.

This might be something of a dramatic exaggeration, but some hyperbole might be warranted, if we are not to awake one day in the future, to find where once regime theorists ruled, critical theorists critiqued, standpoint feminists stood, epistemic communities communed, and post-structuralists problematized, only a protoplasmic trace remains. Not even the 'English school' of international theory appears to have raised the Oxbridge in time against the constructivist onslaught. Only neo-realists and neo-liberals, occupying the higher reaches of the discipline, protected by positivism from non-observable phenomena like the Blob, have so far escaped its saprophytic attack.

Constructivism in International Relations has demonstrated a remarkable capability to absorb any approach that privileges epistemology over methodology, identity over interest, relativism over rationalism, social facts over empirical data. To be fair, there are less metaphorical, not quite so philosophically obtuse, more practical reasons for the growth of constructivism. It can be attributed to the quality of its scholarship, the proselytizing energy of its proponents, as well as the strategic if somewhat compromising position it strives to occupy between other 'post-modern', 'rigid', 'hardcore', 'radical' or 'strong' approaches.¹⁴ It could be argued that constructivism is spreading because it provides new and valuable concepts for interpreting a rapidly changing world that older approaches in IR have not, and perhaps cannot provide.¹⁵ Indeed, it could be argued that argumentation itself, now thriving in the increasingly pluralistic and fragmented subfields of IR and schools of the social sciences, favours constructivism, which at least theoretically practises (a pragmatic evaluation of competing truth-claims) what it preaches (the world is what we make of it).¹⁶

¹⁴ These are terms used by many constructivists to self-differentiate from similar approaches, as well as to claim the 'modern', 'soft' and 'mediative'; 'milder'; or more 'conventional' middle ground in IR theory. See respectively Alexander Wendt, 'Anarchy is what states make of it: the social construction of power politics', in James Der Derian, ed., *International theory: critical investigations* (New York: New York University Press, 1995), pp. 131-3, 153-5; Emanuel Adler, 'Seizing the middle ground: constructivism in world politics', *European Journal of International Relations* 3: 3, September 1997, pp. 321-3, 333-7; Ronald Jepperson, Alexander Wendt and Peter Katzenstein, 'Norms, identity, and culture in national security', in Peter Katzenstein, ed., *The culture of national security* (New York: Columbia University Press, 1996), pp. 33-75; Daniel Deudney, 'Binding sovereigns: authorities, structures, and geopolitics in Philadelphian systems', in Thomas Biersteker and Cynthia Weber, eds, *State sovereignty as social construct* (Cambridge: Cambridge University Press, 1996), pp. 192-5; and Ted Hopf, 'The promise of constructivism in International Relations theory', *International Security* 23: 1, summer 1998, pp. 171-200.

Dating back at least to Aristotle, the *via media* is hardly a novel move. However, earlier practitioners of it in the so-called 'English school' of IR, such as Martin Wight and Hedley Bull who advocated a 'Grotian' approach against 'Kantian' or 'Machiavellian' ones, recognized and advertized this gambit as an ethical preference, especially when one takes into account the cultural, social, and economic diversity in typological classification. See Hedley Bull (pp. xiv, xxi) and Martin Wight (pp. 259, and esp. 265, where he also distinguishes 'soft' from 'hard' versions of realism, rationalism, and revolution, in Gabriele Wight and Brian Porter, eds, *International theory: the three traditions* (Leicester: Leicester University Press, 1991).

¹⁵ As for testing constructivism by its ability to interpret or explain international politics, there is another obstacle: the singular tendency in IR to confuse causal links between theory and practice with the food chain of disciplinary schools of thought and proximity to powerful institutions (for *prima facie* evidence, see the ingratiating notes of acknowledgement which grace most *IO* or *ISQ* articles).

¹⁶ Two recent articles stand out in this regard: Ted Hopf, in one of the best overviews to date of constructivism, makes a virtue of its 'heterogamous research approach: that is, it readily combines with different fields and disciplines'. (see 'The promise of constructivism', p. 196); and Neta Crawford presents a persuasive case for a constructivist ethics in post-modern times (see 'Postmodern ethics and the critical challenge', *Ethics and International Affairs* 12, 1998).

How, then, to link virtual theory to constructivism without falling prey to its blob-like qualities? There is the conventional approach, that would rest constructivist claims with precise definitions, comparative literature reviews, theoretical analysis, and the reductionist diagram *viz.*, the kind of professional activity that keeps us all busy and our journals in business. Following economic models, this primitive accumulation of knowledge might well result in a great leap forward to a new stage of intellectual development in International Relations. However, progress in history, as well as discontinuous, epistemic innovation in science, rarely takes the linear path of incrementalism. A less direct critique might be more effective. It need not be on the order of past polemics, like Hedley Bull's infamous frontal assault on behaviouralists, which, we should remember, was spurred by his belief that one should 'study their position until one could state their own arguments better than they could and then—when they were least suspecting—to turn on them and slaughter them in an academic massacre of Glencoe'.¹⁷ Given the nature of the beast, it might be more appropriate to play down the minor differences, to *mimic* constructivism, say, as predators do their prey, and co-opt it from without. As Steve McQueen discovered the hard way, Blobs are pretty much immune to flaming or caging: direct confrontation is just more thought for food. Not wishing to escalate to the thermonuclear level (as they did, counter-productively, in the sequel, 'Beware the Blob!'), I suggest a different strategy for the de-blobbing of constructivism, one that is *empirical*, *historical*, and *political*, which refigures constructivism as a progenitor rather than pre-empter of virtual theory.

This would clearly require another article. But I can give three good reasons for undertaking such an investigation. First, constructivism in IR, for all its metatheoretical trappings, is a curiously *sui generis* creature; as conventionally told in IR theory, constructivism could just as well as come from outer space.¹⁸ Original conceits are not confined to constructivists, but one would think that, by stint of name and nature, they would be less inclined to contribute to the philosophical amnesia that seems to strike successive generations of IR theory. Some might venture only so far from the mainstream as the near-abroad, to the recently emergent 'schools' of constructivism clustered, not surprisingly, around a variety of universities which have expediently assembled over the last decade a critical mass of professors, graduate students, and fine scholarship, as demonstrated by the 'Minnesota', 'Copenhagen' and 'Aberystwyth' schools. Others have recognized the extra-disciplinary influence of social and political theorists such as Anthony Giddens and Jürgen Habermas. But we need to travel further afield, to avoid the internecine wars of taxonomy that pose as theoretical

¹⁷ Wight and Porter, eds, *International theory*, p. xi.

¹⁸ The two early exceptions, by Nicholas Onuf and Friedrich Kratochwil, provide extensive, critical expositions of the precursors of constructivism in IR. The fact that they rely for the most part on legal philosophers and speech-act theorists, not a favoured analytic in North American IR, helps to explain their limited impact on the development of constructivism. See Onuf, *World of our making* (Columbia, SC: University of South Carolina Press 1989); and Kratochwil, *Rules, norms, and decisions* (Cambridge: Cambridge University Press, 1989).

dialogue, but also to estrange through genealogy the parochial version of constructivism which currently prevails in IR. A genealogy of constructivism is long overdue, and doubly needed, to re-establish the disparate beginnings and multiple alternatives that have escaped the official story. A genealogy—what Nietzsche refers to as ‘effective history’ (*wirkliche Historie*) and Foucault as a ‘history of the present’—functions as a theoretical intervention into the past that illuminates and seeks to transform present political practices.¹⁹

Second, a genealogy is needed because constructivism in IR has been bleached of politics as well as history. Although it might make constructivism more amenable to the disciplinary imperative of a value-free social science, this renders it less useful for a transformative and transvaluative period in contemporary International Relations. Third, constructivism, in its currently de-historicized and de-politicized adaptation of structuralism, is left incapable of responding to the most vexing ethical question that it first raised (if not then begged). If we do indeed construct the world we live in, if our theories are inextricably interdependent with our practices, why do we go on reproducing so much of its violence, criminality, and outright evil? Such political questions and hard ethical choices have become subsumed by the constructivist equivalent of a ‘structural adjustment’.

Perhaps these last remarks are unfairly directed and overly righteous. After all, most constructivists are quick to claim that there is no *theory* of constructivism *per se*: it is only an ‘approach’, ‘analysis’, ‘model’ or, at best, a ‘research programme’ for IR, and as such should not be held to strict scientific, predictive, or prescriptive standards.²⁰ Nor do I—as someone close to the constructivist project (and identified by others as one²¹)—wish to contribute to one of the least attractive pathologies of the academy, the narcissism of petty intellectual differences. Theory-bound and structurally constrained, constructivists nonetheless should suffer from an ethical imperative that other approaches—or at least those on its epistemological right—do not. Post-structuralism has, from its beginnings outside and through its deliberations inside International Relations,

¹⁹ If one takes a strictly nominalist approach, constructivism first appears in Russian in the early 1920s to describe the revolutionary effort ‘to create a new world’ out of new technology and politics by artists like Valdimir Tatlin, El Lissitzky, Naum Gabo, Antoine Pevsner, and most prominently, Aleksandr Rodchenko. From the outset, the concept is a site of great semantic, artistic and political contestation. One of its earliest invocations, ‘The realistic manifesto’, written by Gabo and Pevsner for an open-air exhibition and posted all over Moscow in 1920, calls for ‘the construction of the new Great Style’ which would succeed where the Futurists (‘clad in the tatters of worn-out words like “Patriotism”, “militarism”, “contempt for the female”’) and Cubists (‘broken in shards by their logical anarchy’) had failed: ‘We construct our work as the universe constructs its own, as the engineer constructs his bridges, as the mathematician his formula of the orbits... We affirm in these arts a new element, the kinetic rhythms as the basic forms of our perception of real time. We assert that the shouts about the future are for us the same as the tears about the past: a renovated day-dream of the romantics’. See Naum Gabo and Antoine Pevsner, ‘The realistic manifesto’, in Stephen Bann, ed., *The tradition of constructivism* (New York: Da Capo Press, 1974), pp. 3–10.

²⁰ See respectively Adler (1997), pp. 321–3; Wendt (1995), pp. 153–6; Wendt (1996), pp. 242–5; and Hopf (1998), pp. 196–7.

²¹ See Hopf (1998), p. 182.

wrestled with this issue.²² ‘Hardcore’ realists, evincing material interests, amoral actors and repetitious history, need not bother with such ‘idealist’ concerns, thereby repudiating any responsibility for reproducing a world they claim only to record. Even ‘softer’ rationalist variants of neo-realism and neo-liberalism, focusing on the behaviour of given identities interacting at domestic and systemic levels, can offer explanatory, if not totally exculpatory answers based on game-theoretic issues like transaction cost and asymmetrical uncertainty that result in sub-optimal outcomes. Constructivists, operating in a more intersubjective, constitutive, normative model of the world, cannot so easily duck the ethical question. They might ‘problematize’ the subject of the question, by attacking the universalist and masculinist assumptions behind the use of a self-identical ‘we’ and a metaphysical sense of human nature.²³ They might ‘disaggregate’ the object of the question, by positing a more ‘mediative’ and scientific, rather than ‘constitutive’ and critical role for constructivism.²⁴ They might even ‘interpellate’ the answer, by arguing that a ‘bounded’ rationality delimits the constitutive options of the structurally ‘embedded’ agent.²⁵ However, demonstrations of epistemological correctness and ontological hair-splitting will not make the ethical question go away, and like the dead upon the living, the question will continue to haunt constructivism until it confronts its variegated past as well as its current abeyance of responsibility for the future.

Constructing a de-territorialized sense of being—neither here nor there as being but always as becoming different—virtually represents a paradoxical extra-reality that does not fit the dominant dyads of the social sciences, the real and the ideal, structure and agent, fact and value. It represents and provides an *interzone*, an interstice in which future possibilities are forged from the encounter between critical imagination and technological determinism. It offers a theoretical, historical and political mediation for International Relations. It is the first step towards the awakening, of which Benjamin wrote, from a perpetual state of interwar to a potential state of postwar.

The French philosopher Gilles Deleuze is most at home in this virtual interzone. He views the virtual as possessing a reality that is not yet actual, somewhat like Proust’s remembrances, which are ‘real without being actual, ideal without being abstract’.²⁶ Unlike the Aristotelian conception of the virtual as potential (*dynamis*), the virtual now has a constitutive capacity of its own, creative of rather than dependent upon the actual. Deleuze traces this modern

²² There has been an continuing debate in post-structuralism on subjectivity and ethics, based on the work of Nietzsche, Bakhtin, Foucault, Levinas, Derrida, Rorty and others, in the political theory of Judith Butler, Wendy Brown and William Connolly; and in the international theory of David Campbell, Daniel Warner and Jim George, among others. For a synopsis, see Der Derian, ‘Post-theory’, pp. 54–76.

²³ See Ann Tickner, ‘Identity in International Relations theory: feminist perspectives’, in Yosef Lapid and Friedrich Kratochwil, *The return of culture and identity in IR theory* (Boulder, CO: Lynne Rienner, 1996), pp. 147–62; and *Gender in International Relations* (New York: Columbia University Press, 1992), pp. 22–66.

²⁴ See Adler, ‘Seizing the middle ground’, pp. 330–36.

²⁵ See Alexander Wendt and Daniel Friedheim, ‘Hierarchy under anarchy: informal empire and the East German state’, in *State sovereignty as social construct*, pp. 245–53.

²⁶ See Deleuze, *Bergsonism*, pp. 96–7. See also Constantin Boundas, ‘Deleuze–Bergson: an ontology of the virtual’, in Paul Patton, ed., *Deleuze: a critical reader* (Blackwell Publishers, 1996), pp. 81–106.

formulation of the virtual back to the coeval emergence of cinema and Bergson's concept of the *élan vital*. Just as images begin 'to move' in cinema, so too do our concepts need to incorporate mobility and time if they are to keep up with rapidly shifting events. The moving image/concept represents a kind of 'self-moving thought', which produces powerful effects of perception, affection, and action. Just as the simulacrum of the cinema has no 'real' identity, there is no natural 'there' to the virtual: its identity is based on pure difference, a difference-in-itself, which privileges differentiation over resemblance, and the creative over the imitative—except, perhaps, in the case of the *Diehard* or *Lethal weapon* sequels. 'The virtual', says Deleuze, 'does not have to be realized, but rather actualized; and the rules of actualization are not those of resemblance and limitation, but those of difference or divergence and of creation'.²⁷

Deleuze provides a complex model of the virtual as a problematic which is resolved through the interpretation of its eventual actualization. Organic examples—like the seed that carries the virtual code for but cannot control the circumstance of its actualization as a tree—do not adequately convey the power, ambiguity, and complexity of the virtual in a media-saturated environment.²⁸ Following Deleuze's dictum that 'the task of philosophy is to be worthy of the event', one is better advised to pick up the newspaper to find potential interzones in search of a worthy theory. Consider a single day in the *New York Times*. An Op-Ed piece by the economist Paul Krugman invokes the Wall Street crash of 1987 (which was virtually and literally programmed by computer trading) to demonstrate how the economic crisis in Asia and Russia will cease to be a 'real-economy non-event' and could be transformed into a global slump should the private sector succumb to 'a self-fulfilling pessimism'.²⁹ After the movie *Wag the dog* became the virtual standard by which President Clinton's foreign policy was framed, it is no surprise that in another article, this one on President Clinton's trip to Russia, former Secretary of State Lawrence Eagleberger says 'the trouble Clinton is going to have...is that we talk so much about him weakened that it becomes a self-fulfilling prophecy'.³⁰ And in perhaps the clearest if most metaphysical example of the prophetic powers of the virtual, the front page carries a story on Audrey Santo, a girl from Worcester, Massachusetts, 'inert and unspoken' for 11 of her 14 years because of an accident, who is believed by thousands to have miraculous healing powers after blood appeared four times in her presence on the eucharistic hosts, the virtual body of Christ.³¹

Most traditional approaches in the social sciences, assuming the bifurcation rather than interaction of subjective mind and objective nature, are not philosophically equipped to explore this interzone of the virtual, where simulacra reverse causality, being is simultaneously here and there, and identity is

²⁷ See Deleuze, *Bergsonism*, p. 97.

²⁸ See Lévy, *Becoming virtual*, p. 24.

²⁹ See Paul Krugman, 'Let's not panic—yet', *New York Times*, 30 August 1998, p. 13.

³⁰ See Elaine Sciolino, 'Dear Mr President: what to do in Moscow', *New York Times*, 30 Aug. 1998, p. 11.

³¹ See Gustav Niehbur, 'Unconscious girl inspires stream of pilgrims', *New York Times*, 30 Aug. 1998, p. 24.

deterritorialized by interconnectivity. Virtual theory posits that the retrieval of facts—empirical or social—is preceded by interpretation, conveyed by technical media, conducted through experimentation, and succeeded by the creation of new virtualities. War and peace both are still in need of approaches that study *what* is being represented. But it is also in need of a virtual theory that can explore *how* reality is seen, framed, read, and *generated* in the actualization of the event. Virtual theory does not, as vulgar realists would claim, deny the existence of ‘reality’. Virtual theory seeks to understand how new technologies create the effects of reality, but it also begins with the premise, argued forcefully by philosophers from Leibniz and Nietzsche to Peirce and Putnam, that reality has always been inflected by the virtual.

This does not preclude a scientific investigation—unless one ignores the advances of Heisenberg, Einstein and quantum theory in general, and confines science (as is often the case in the social sciences) to the Baconian-Cartesian-Newtonian mechanistic model. Virtual theory relies on the scientific approach mapped out with clarity if not clairvoyance by Heisenberg:

We can no longer speak of the behavior of the particle independently of the process of observation. As a final consequence, the natural laws formulated mathematically in quantum theory no longer deal with the elementary particles themselves but with our knowledge of them...The atomic physicist has had to resign himself to the fact that his science is but a link in the infinite chain of man’s argument with nature, and that it cannot simply speak of nature ‘in itself.’ Science always presupposes the existence of man and, as Bohr has said, we must become conscious of the fact that we are not merely observers but also actors on the stage of life.³²

Empirically, historically, and politically, a virtual theory of International Relations begins where General, turned President, Eisenhower left off in his famous (but now little debated) 1961 farewell address, warning of the ‘danger that public policy could itself become the captive of a scientific-technological elite’. But with the addition of the media and entertainment industries to the mix, a seductive captivation now augments the powers of what he had labelled the ‘military-industrial complex’. When the simulations used to train fighter pilots show up in the special effects of the film *Independence day*, four-person Marine fire-teams train with the videogame ‘Doom’, and Disney’s former head-Imagineer, Bran Ferren shows up as the keynote speaker at an annual joint meeting of industry and military on high technology, reality becomes one more attraction at the Virtual Theme Park of War and Peace.

With apologies to Eisenhower, virtual theory takes aim at the cyborg heart of the ‘Military-Industrial-Media-Entertainment’ network (MIME-NET for short), not only to investigate its role in the production of war, but to study up close the mimetic power that travels along the hyphens. It would be historically

³² See Werner Heisenberg, *The physicist’s conception of Nature*, trans. Arnold J. Pomerans (New York: Hutchinson, 1958), pp. 12–16, 28–9, 33–41.

specious to claim this relationship is wholly new. For instance, the Ford Motor Company's River Rouge plant at which my grandfather worked owed a great deal to Henry Ford's copying of the British Royal Navy's innovations in the mass production of cannon and ships; and in turn, Ford's assembly line production and hierarchical system of manufacturing became a mimetic model for the new Hollywood studio system of vertically controlling actors, movies, and theatres.³³ The feedback loop between military and civilian technology, particularly during and after the Second World War, from the cracking of German codes at Bletchley Park (the computer), to the early development of radar (the television), to the first semi-automated air defence systems (networks), has also been well documented.³⁴ What is qualitatively new is the power of the MIME-NET seamlessly to merge the production, representation and execution of war. The result is not merely the copy of a copy, or the creation of something new: it represents a convergence of the means by which we make the distinctions between the original and the new, the real and the reproduced.

Where once the study and practice of war began and ended with the black box of the state, new modes of production and networks of information have erased old and created new demarcations of power and identity, reality and virtuality. A virtual theory is needed to map these new developments: how new technologies and media of simulation create a fidelity between the representation and the reality of war; what are the political consequences when the human mimetic faculty for entertainment and gaming joins forces with new cyborg programmes for killing and warring; and what does it mean for peace and security, in an increasingly accelerated, highly contingent, uncertain global condition, when war goes virtuous.

In search of answers, and to separate the hype from the hyperreality of virtuous war, I decided early on to forego the public affairs machine of the Pentagon, to avoid the vices of academic abstraction as well as second-hand journalism, and to go where doctrine confronts reality (or, as my military handlers liked to put it, 'where the rubber meets the road'). I have spent the last seven years trying to get behind and beyond the images of modern warfare. My travels in virtuality have taken me to places not usually visited by scholars or pundits. My stops included Orlando, Florida, to see military officers and corporate leaders showcase their information technology at joint conferences on simulations; the East Mojave desert to chase after the 'Krasnovian Brigade' for two digitized war games at the Army National Training Center; to Central Command in Tampa to learn how computer gamers were busy programming the lessons of the Gulf war for the next war; to Fort Knox, Kentucky, to observe a distributed SimNet tank exercise in action; to the Combat and Maneuvering Training Center in Hohenfels, Germany, to watch the First Armored Division 'peacegame' their

³³ See Martin Walker, *America reborn* (New York: Knopf, 2000).

³⁴ See Paul Edwards, *Closed worlds: computers and the politics of discourse in Cold War America* (Cambridge, MA: MIT Press, 1996); and Friedrich Kittler, *Literature, media, information systems* (Amsterdam: OPA, 1997).

humanitarian intervention into Bosnia; to X-File territory at the Defense Advanced Research Projects Agency (DARPA) in Virginia, to learn how the Synthetic Theater of War (STOW) was being created to integrate virtual, live and constructive simulations of war in real time; back again to visit STRICOM (Simulation, Training, and Instrumentation Command), the newest, and probably the most unusual command post in the military; to the Bay area to observe its occupation by the Navy and Marines in the 'Urban Warrior' experiment; and finally to Vicenza, Italy, to compare the claims and the outcome of the air campaign in Kosovo. I did eventually make the pilgrimage to the Pentagon, interviewing, among others, Andrew Marshall, Director of the Office of Net Assessment, the Yoda of the 'Revolution in Military Affairs' (RMA), and General Wesley Clark, former Supreme Allied Commander in Europe, on the day before his retirement from the army.

My travels ended not far from where they started, in Los Angeles, where the Pentagon and Hollywood announced at the University of Southern California a new collaborative project. Over \$40 million dollars will be spent to establish an 'Institute for Creative Technologies', where the best military gamers and studio artists will gather to prepare for the next war. From the desert to the laboratory to the studio, a virtual theory chronicles the successive stages—and staging—of virtuous warfare.

Inside and outside the military, the future of war is up for grabs. With lives and profits at stake, wars of position and manoeuvre are being fought on multiple fronts, within and among the military services, between Congress and the White House, in think-tanks and defence industries, at home and abroad. In my travels, I came across many other cases of open dissent and secret battles, where 'mud soldiers' were fighting a rearguard action against the 'virtuous warriors'. All are struggling with the uncertainties of the post-Cold War.

When critical thinking lags behind new technologies, as Albert Einstein famously remarked about the atom bomb, the results can be catastrophic. My encounters in the field, interviews with experts, and research in the archives do suggest that the 'MIME', the 'RMA' and virtuous war are emerging as the preferred means to secure the United States in highly insecure times. Yet critical questions go unasked by the proponents, planners, and practitioners of virtuous war. Is this one more attempt to find a technological fix for what is clearly a political, even ontological problem? Will the tail of military strategy and virtual entertainment wag the dog of democratic choice and civilian policy? Most worrying, is there potential for catastrophe, as with all new complex systems, from what organizational theorists call *negative synergy*, 'normal accidents' of the sort that produced Three Mile Island, Chernobyl, Mogadishu? Or even a system-wide, networked accident?

In spite or because of virtuous war and democratic peace, global violence persists—and continues to resist both moral indictment and technological fixes. Virtual theory might not be the solution. But in a world where the virtual tail increasingly wags the body politic, it can point us in the right direction.