# POTENTIALLY CONSTRUCTIVE IMPLICATIONS OF DISASTER IN IRAQ<sup>1</sup>

#### John Steinbruner

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It now appears likely that the invasion of Iraq will prove to be a seminal event in the evolution of international security generally. Legal order has evidently collapsed throughout the country, and the occupying forces have not been able to control the resulting pattern of predatory violence. The central reason is that the United States forfeited at the outset the critical asset of legitimacy necessary to establish and maintain consensual rule, and its continued presence undermines the indigenous institutions it is attempting to nurture. Similar breakdowns have occurred in other parts of the world, and the consequences have been tolerated over extended periods of time. Because of timing, location and the entanglement of the United States, however, intractable violence in Iraq can be expected to have much stronger global resonance. American forces alone are not likely to be able to master the situation but neither can they be withdrawn without intensifying internal violence and extending it into an already volatile region. The potential consequences of that dilemma are ominous, but for that reason the situation presents opportunity as well as danger. Calamity is sometimes a catalyst for greater wisdom.

Within the United States disengagement from Iraq promises to be a riveting issue in the forthcoming presidential election, but the formulae advanced for accomplishing that are unlikely to be realistic and even less likely to be constructive. The American political process is still in the early stages of absorbing the magnitude of disaster in Iraq and has not yet acknowledged the probable implications. To have any hope of achieving a tolerable outcome, an effective stabilization and reconstruction process would have to be established and sustained long enough for a viable government to form from a shattered social base – at least a decade presumably, perhaps even a generation. Responsibility for that effort would

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have to be transferred to a broadly representative international consortium that might be able to command the consensual cooperation the United States itself will never be able to achieve. United States military capability, which will remain necessary to prevent external incursion and to limit the scale of internal conflict, would have to be subordinated in practical effect to the authority of that consortium. Intensely reluctant governments would have to be induced to participate in the consortium and would have to be compensated for their efforts. Members whose established independence gives them the greatest potential for commanding acceptance within Iraq would have to be credibly reassured about the use of American military power generally. Those implications lie well outside the bounds of political acceptability at the moment and will not be prominently discussed during the course of the election. Less demanding alternatives have not yet been exhausted.

With the inauguration of a new administration in 2009, however, some process of fundamental reconsideration can be expected, whoever the incumbent proves to be. Relentless circumstance will eventually impose itself on even the most entrenched political attitudes and even the most established institutions. Reconsideration will undoubtedly begin with the inherited Iraq situation but cannot be confined to that. Global implications will have to be addressed. The fundamentals of policy will have to be engaged.

In the broader context of security policy, the Iraq venture has become a test for those who have argued for primary reliance on national military advantage achieved through adroit application of advanced technology, a project they have labeled transformation. Their primary claim has been that opposing military forces can be decisively defeated rapidly and at tolerable cost by superior combined arms operations, as was demonstrated in the initial assaults in Afghanistan and Iraq. The officially stated intention is to use superior military capability preemptively both to prevent the acquisition of mass destruction weapons by hostile governments and to alter the character of those governments before they present imminent threats of any sort. The less explicit but widely perceived implication is that transformation is to be undertaken exclusively by the United States thereby enabling global military dominance. Experience in Iraq has revealed the fallacy of that project by vividly demonstrating that security ultimately depends more on inducing adherence to consensual rules than on wielding coercive force. The process of globalization is changing the scale and character of threat as well as the entire context of human interactions and is making collaboration for

mutual protection far more important to all the major societies than competition for national advantage. That emerging fact is likely to require transformation not merely of the means of coercion but also the basic purposes and organizing principles of security policy as well as the resulting international relationships – a fundamental reconceptualization of vital interest.

Conceptual adjustment of that scope is admittedly difficult to achieve and consensus even more difficult. The general implications of specific events are never immediately apparent and are generally understood only with the advantage of lengthy retrospect. Some of the reasons why conceptual transformation is likely to be necessary are nonetheless evident. Human societies are obviously organized in separate jurisdictions prone to mutual distrust. Virtually all individuals identify with some segment of the others and not with the species as a whole. Many of them are actively hostile to those they set beyond the boundaries of their identity, and the central purpose of security policy has traditionally been to provide preferential protection against hostile intrusion. The process of globalization runs across all national jurisdictions, however, and transcends the control of any of them. It also appears to be imposing common interests at least potentially more significant than divisive ones to which security policy has traditionally been directed. All human societies face the increasingly demanding problem of acting effectively on behalf of common interest beyond the bounds of their primary emotional and legal affiliations, a process that pits circumstance against sentiment.

#### The Pressure of Circumstance

The defining feature of the apparent globalization process is a spontaneously occurring increase in the scope, range and intensity of human interactions. If it is indeed occurring as now commonly imagined and if we were able to measure it with complete precision, we would presumably observe that commodities, money, and information have all been flowing in recent years over greater distances at increasing volume with increasing velocity; that these transactions have involved an increasing proportion of the world's population; and that they have affected the social attitudes on which national jurisdiction is based. Some part of those expectations we can in fact observe – exponential increases in international financial transactions, for example, and more linear increases in commodity trade. Other aspects are considerably more obscure, but most of those who study the matter

nonetheless believe that economic activity in particular is spontaneously globalizing and is thereby escaping the effective control of any national government.

It is also fairly evident that the pattern of growth associated with the globalizing economy is highly inequitable: gains in standards of living have been heavily concentrated among affluent; population increases are occurring almost exclusively among the poor. The empirical relationship between equity and legitimacy is not well understood, nor is the empirical connection between economic equity and civil violence. It is prudent to assume, however, that these relationships are important even though they are not well measured. The process of globalization poses a threat to national governments not only because it escapes segmented jurisdiction but also because it appears to be undermining social consensus on which political legitimacy and social coherence depend.

Moreover, whether or not it is considered a defining characteristic, the term globalization also refers to the increasingly evident fact that aggregate human activity is beginning to affect basic features of the earth's ecology, most notably the atmospheric concentration of greenhouse gases on which all forms of life depend. Without the warming effect of those gases – the absorption and re-radiation of solar energy – the earth would be too cold to support organic life, but as with several other features of the physical universe the benign, enabling effect is confined to a narrow band of variation. Increases in the atmospheric concentration of greenhouse gasses projected to occur as a result of human activity – especially energy generation – are in principle capable of altering global weather patterns to an extent that might affect the viability of many if not all contemporary societies. At the moment effects of that sort can be credibly outlined, but their exact character, probability, timing and magnitude cannot be specified with scientific precision. If ever they can be specified to exacting scientific standards, the momentum of the effects in question is likely to make them irreversible as a practical matter. That probable fact imposes problems of prudent judgment and internationally coordinated action far beyond what any national entities have historically encountered.

## **Selected Security Implications**

Prevailing security policy is based on principles of active confrontation forged primarily during the Cold War. And despite the rhetorical accommodation that has occurred in the aftermath of that historical period, legacy policies have not been fundamentally altered. The countervailing deterrent operations of American and Russian nuclear forces still dominate international security arrangements in operational reality if not in public consciousness. Although there have been largely declaratory reductions in the inventories of those forces, they are essentially as lethal as they ever have been and as actively deployed. Both countries continuously maintain several thousand nuclear weapons on alert status, and they are programmed to initiate massive bombardment within minutes and to complete it within hours. As an objective matter that situation presents what is by far the greatest physical danger to both of the societies in question and to all others as well. According to the doctrine of deterrence, the threat provides decisive protection against deliberate assault, but it also creates the possibility of a catastrophic accident – an inconvenient fact the significance of which that is heavily discounted by disciples of the doctrine.

With regard to conventional forces, the active confrontation associated with the Cold War period has disappeared, leaving United States forces embedded in their alliance arrangements with dominance over any operation large enough to contest sovereign control over national territory. The traditional principle of confrontation remains in the sense that United States forces pose an implicit threat to any country not formally allied, are not credibly balanced by any independent force and are not reliably restrained by any formal agreement. That situation presents an inherent security problem to all countries outside of the United States alliance system. Most of those countries plausibly judge that cross border aggression is not likely to occur on the scale experienced during the last century, in significant part because any such exercise would threaten economic performance – the dominant imperative of the globalization era. Nonetheless some do have reason to worry.

Within the United States and to a lesser extent within its alliance system, public concern for these traditional forms of threat – massive nuclear bombardment and cross border aggression – has been almost entirely replaced by fear of terrorism inspired by the events of September 2001. That shift of focus has been less dramatic for the rest of the world, but nonetheless it is becoming generally apparent that smaller scale more broadly dispersed forms of violence are destined to be an increasing priority of security policy. Most of the violence actually encountered, in Iraq and elsewhere, arises from unresolved problems of civil conflict, and most of the terrorism that has occurred has been embedded in one or more of those conflicts. It is now recognized that the evident inability to resolve or even

effectively mitigate the more serious instances of chronic civil conflict is generating a threat to global order that could be increasingly serious even if the conflicts themselves remain contained within their host societies. That threat could become truly compelling if the extreme antagonism generated in unresolved conflicts becomes operationally connected to instruments of mass destruction. Mercifully that has not yet occurred, despite rampant speculation, but the barriers that are in principle possible have not been constructed, have not yet even been designed. Meanwhile the phenomenon of global warming – a source of threat of yet larger scale and yet more radically different character than the traditional concerns – has barely been acknowledged as a looming security problem.

It is, of course, virtually impossible to determine with any confidence how these fundamental changes in the scale and character of primary security threat might play out over an extended period of time. There are many outcomes that can plausibly be imagined, and experience accumulated under different conditions is a questionable guide to prediction. As Søren Kierkegaard once noted, life is understood backwards but lived forward. There are nonetheless some common sense suggestions as to how it ought to play out. Aspirations are easier to formulate than predictions.

Security policy responsive to the emerging circumstances of globalization would make the defense of global legal order its primary objective and would therefore elevate common interest over national advantage. The reason is simply that the coordination required to operate a global economy across divided jurisdictions can only be achieved by equitable legal principles that can command sufficiently broad allegiance to make enforcement possible. In such an arrangement all forms confrontation would be subordinated to direct collaboration, and the practice of deterrence in particular would be subordinated to reassurance, which has always been in fact a companion principle. Active monitoring would become the principle method of protection. That involves the organized exchange of information to set and enforce basic standards of behavior – a technique that can be extremely powerful if appropriately applied, in part because it would provide the legitimizing context for any use of force. Security relationships in such an arrangement would generally be inclusive rather than divisive, and legacy policies of confrontation among the United States, Russia, China and India in particular would have to be transformed. Territorial sovereignty would remain, but its protection would primarily be a common enterprise.

Those who can only think of what history has so far revealed will undoubtedly find that image of general security transformation to be implausible. Those with some sense of what globalization means are likely to find it more interesting. Wherever on the spectrum of receptiveness one might fall, however, most would concede that any transformation of security policy which does occur is not likely to be an exercise of general design and is more likely to be the emergent result of reactions to specific problems. Of the many broad issues that might play a catalytic role in an evolutionary process of transformation, four are especially significant: the management of nuclear explosive materials, the oversight of biotechnology, the regulation of space activities and the mitigation of global warming. These can and will be seen as separate issues, but there are significant connections between them.

### Nuclear explosives

The term nuclear explosive materials refers to any combination of radioactive isotopes that can generate an explosive chain reaction. There are nine principal isotopes which have this characteristic, of which U 235 and Pu 239 have been the most extensively produced and applied. Of all human produced commodities these two explosive isotopes have been the most assertively and exclusively subjected to national jurisdiction. They are managed by separate national accounting and physical security systems that are largely opaque to each other. As a result the United States government's estimate of the total number of nuclear weapons in existence has an uncertainty range of 5000, and the estimate for total explosive materials is even more uncertain. Nonetheless each single weapon and each amount of material equivalent to a weapon (48 kg of U 235 and 10 kg of Pu239 for the bare sphere critical masses) is of strategic significance given the devastation that can be caused in an urban area. During the Cold War period when the deterrent effect was embodied in upwards of 10,000 weapons in each of the two principal opposing arsenals, uncertainty about a single weapon appeared to be insignificant. If it is admitted that a dedicated terrorist might attempt to gain access to a nuclear weapon or an equivalent amount of explosive material, then managerial control over every single unit becomes a matter of high priority. Current national accounting and physical security systems cannot assure control of every single unit, particularly not the internally burdened system that Russia inherited from the Soviet Union.

Given inherent uncertainties about historical production of the explosive nuclear isotopes, it would take decades for an advanced accounting and physical security system to approach the standard of single unit accuracy, and many specialists believe that standard could never be

achieved. It is apparent, however, that much higher standards than now prevail could be achieved if managerial control were given priority over the active display of deterrent capability. The fact that that shift of priority has not occurred with the end of the Cold War and the advent of globalization is a massive scandal waiting to happen – an indictment of legacy policies. It is technically feasible to devise a common accounting and physical security system for all nuclear weapons and materials that over time would approach the standard of assuring single unit control while reliably preserving exclusive national jurisdiction over the details of weapons design and location. It is a reasonable expectation that political demand for such an arrangement driven by the fear of terrorism will eventually be insistent. It is also a reasonable presumption that achieving such an arrangement will require the termination of active nuclear force operations. That is itself a dramatic improvement in safety that can be achieved with little if any reduction in the underlying deterrent effect.

## **Biotechnology**

The second of the candidate catalytic issues – protective oversight of biotechnology – is comparable and potentially even greater in the magnitude of danger posed but fundamentally different in most other respects. The central driving fact is that the fundamental science of molecular biology has progressed to the point that extremely consequential interventions in basic life process have become feasible. Depending on how it is utilized the same basic knowledge can enable powerful therapies or devastating destruction, with the latter unfortunately being generally easier than the former. That promises the eradication of historical diseases. It also threatens the creation of diseases substantially more destructive than those that have naturally evolved. That possibility, which was generally doubted a decade ago, is now widely acknowledged. The inherent power of molecular biology has given human society as a whole an enormous stake in how it is applied and that transcendent interest almost certainly means that independent oversight procedures will have to be devised for the fundamental research process itself. Independent oversight is applied to virtually all matters of high social consequence. No one is allowed to manage large sums of money without audit. No single individual is ever allowed exclusive control over a nuclear weapon. It seems inevitable that robust oversight procedures will eventually have to be developed for those areas of biological research that pose large inherent danger.

The significant feature of that fact is that oversight procedures would have to be globally applied in order to be effective and that means that they would have to be globally devised. The research process in question is globally distributed in the biomedical research community, and it has achieved a degree of momentum that obviously exceeds the ability of any sovereign entity or limited collation to exercise control. Biomedical research cannot be isolated from normal daily life to the extent that the production of explosive nuclear isotopes can be and have been. Since there is no serious prospect of being able to exercise exclusive national control over the biomedical research process, inclusive international collaboration is the only realistic option. When the implications are absorbed, as they will eventually have to be, devising oversight procedures for purposes of mutual protection will be a very powerful incentive for security collaboration. As is already widely remarked and in fact immediately exaggerated, a nihilistic terrorist dedicated to mass destruction would logically choose an advanced biological pathogen as the agent of choice. The barriers to access are substantial but nothing like what they are for nuclear weapons and explosive nuclear isotopes. They will have to be made more significant.

## Space activities

At the moment assets in space do not directly threaten mass destruction on earth. The deployment of weapons that would has been successfully prohibited by the 1967 Outer Space Treaty, and that rule has not recently been contested. Space assets do contribute very substantially, however, to the emerging capability to undertake sudden precision attack at very long range. That capability was dramatically displayed by the United States in November of 2003 when an unmanned Predator aircraft destroyed a car traveling in the desert in Yemen that was said to be carrying a leading terrorist figure. Although the details of the operation were not revealed, it is apparent that the aircraft was controlled remotely and probable that the controllers were using communications relay and navigation services from space assets. At any rate those services as well as direct observation can in principle be used for operations of that sort, which from the perspective of sovereign jurisdiction might generally be labeled coercive intrusion. In that instance the summary execution of an alleged terrorist outside sovereign jurisdiction without trial or any other documented form of deliberative process was not prominently contested, but repeated exercises of that sort would certainly be contested, especially by the United States if anyone else did them. If the capacity for that type of operation develops as expected and

if many countries acquire it, as should be prudently assumed, there will assuredly be insistent demands for legal regulation and those demands will predictably focus on the utilization of space assets. Those assets may not be necessary for all forms of coercive intrusion, but in principle they provide greater reach and greater menace. Given the inherent vulnerability of space assets, they also provide a natural target for retribution.

In recent years the United States has been officially articulating an extremely provocative doctrine of space development, asserting the intention to dominate the military use of space for decisive national advantage and to deny comparable capability to any other country. It has rejected efforts by virtually the entire international community to initiate negotiations on rules that would prevent the introduction of conventionally armed weapons in space, making it apparent if a step short of explicit that it intends itself to introduce such weapons. Although the declared aspiration for dominance is not realistic either in technical or in economic terms, the scope for advanced forms of coercive intrusion is appreciable, and it is predictable that concern about operations of that sort will eventually generate insistent international demands for legal regulation. Since protective regulation is in the real interest of the United States itself, one can also plausibly suppose that formal negotiations on the subject will eventually occur and will provide an occasion for working out more advanced principles of security collaboration.

### Global warming

Over the course of the past decade, the Intergovernmental Panel on Climate Change (IPCC) has forged consensus within the scientific community on basic features of the global warming problem. They have determined that the concentration in the earth's atmosphere of those carbon gas molecules that absorb and re-emit infrared radiation has been increasing as a result of aggregate human activity since the industrial revolution and that the average surface temperature of the earth has increased by 0.4 to 0.8 °C over the past century as a result. They estimate that an additional increase of 1.5 to 6 °C would occur if the current pattern of carbon gas emission were to be continued for an additional century. They note that these temperature changes are very large and very rapid in comparison to the geological record and are in principle capable of triggering fundamental changes in the earth's climate pattern. Again, current scientific knowledge is not sufficient to establish with confidence the exact character, magnitude, timing, probability or consequence of those changes, but is sufficient to warn

of that they might be catastrophic for human societies. By the time a catastrophic threat could be identified with precision and confidence, moreover, the process generating it is likely to be irreversible on any time scale of human interest.

It is technically feasible to mitigate the inherent danger by changing the prevailing pattern of energy generation and consumption, but that would require a global policy initiative of unprecedented scope and consequence. In addition to introducing incentives for greater efficiency, those technologies capable of providing energy in the amount required to support equitable economic development would have to developed to the level of market viability, and the current trajectory of global energy markets would have to be assertively deflected to induce their adoption. Since the increase in carbon gas concentrations would have to be halted by 2050 at a level of 500 ppm or below to achieve a prudent standard of protection, there are only five basic technologies that could plausibly provide carbon free energy in amounts sufficient to meet rising global demand: wind, solar, biomass, carbon sequestration and nuclear fission. All will presumably have to have to be developed and applied to some extent, although the long term viability of the naturally favored option, carbon sequestration, has yet to be demonstrated and might not be able to meet the burden of proof that should be imposed.

The significance for security policy rests primarily on the degree to which the response to global warming depends on nuclear power generation. Global energy requirements might in principle be achieved by the some combination of the other methods, but that cannot be assumed at the outset. A dramatic expansion of nuclear power will certainly have to be seriously considered and probably undertaken. That in turn would require radical revision of current reactor designs, fuel cycle management practices and fundamental security relationships. It would be unsustainably dangerous to expand nuclear power generation using current reactor designs with nationally controlled fuel cycle management in the context of prevailing deterrent practices and confrontational security relationships. The incentive and opportunity for hostile diversion of nuclear explosive isotopes could not and would not be tolerated. The safe expansion of nuclear power generation in response to global warming would require intimate collaboration among China, the EU, India, Japan, Russia and the United States as a priority matter and that requirement can be expected eventually to reach the top of all the governments concerned. When all the technical and institutional

implications are absorbed, strong impulse will be given to the conceptual transformation of security policy.

#### **Immediate Context**

If the Iraq situation does indeed provide the catalyst for that general transformation, at least within the United States, then dealing with Iran's nuclear materials production efforts is likely to be the focus of one of its important initial stages. Iran is entangled in the internal violence in Iraq and simultaneously presents the most immediately troublesome threat of nuclear weapons proliferation. It is currently defying a United Nations resolution demanding that it suspend its efforts to enrich uranium and produce plutonium, thereby providing potential justification for an attack on the facilities in question before they are able to produce a sufficient amount of material to fabricate nuclear weapons. United States forces could carry out such an attack without undertaking the burden of a ground invasion, and highly inflammatory political statements by the Iranian President appear to invite it. The lessons emerging from Iraq clearly suggest, however, that such a development would be a disaster for all concerned. It would retard but not destroy the Iranian program and would presumably provoke an extended process of terrorist retaliation. Again, credible danger provides a strong incentive for devising constructive alternatives.

The formula for a constructive alternative is readily apparent. It would involve an agreement by Iran not to engage in uranium enrichment or plutonium production on sufficient scale to enable fabrication of nuclear weapons and to document its compliance with those restrictions by accepting IAEA monitoring under the Advanced Protocol rules. In exchange Iran would receive security assurances from the United States, ratified by the

International community generally, that it would not be attacked if it did not itself initiate attack. Compliance with those assurances would be documented in some manner roughly comparable to Iranian documentation of the materials production restrictions. Iran would also receive assurances of access to fuel cycle services for nuclear power generation at equitable market rates without political conditions. That is the basic formula being applied in the North Korean situation. It is an arrangement that Iran could not reasonably refuse if it was credibly offered accompanied by a commitment to normalization of political and economic relations.

The extensive substantive discussion and associated adjustment of prevailing political attitudes required to apply that formula to Iran would support the broader program of conceptual transformation not only by mitigating emotional resistance but also by demonstrating the significance of the principles involved. In requiring both Iran and the United States to accept standards of behavior and to document their compliance through the systematic exchange of information, such an arrangement would illustrate the practice of systematic reassurance. In a world of intense antagonisms and dispersed threats where small operations can have catastrophic consequences, all major states are likely to discover the value and consequence of systematic reassurance. That principle supported by advanced information technology can be expected to emerge as the necessary foundation for international security under the circumstances of globalization.