Deterrence and Systemism: A Diagrammatic Exposition of Deterrence-Related Processes Leading to the War in Iraq

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Abstract

This article explores deterrence, a time-honoured concept in International Relations (IR), through the application of systemism, a concept borrowed from the philosophy of science. The purpose of this study is to provide a diagrammatic exposition that establishes the “value added” from systemism vis-à-vis the research on deterrence. A series of exchanges involving US-led efforts to deter Saddam Hussein, from the aftermath of the Gulf War of 1991 to the brink of the Iraq War of 2003, will be used to reveal the insights that systemism can bring over and above existing approaches to the study of deterrence.

Introduction

This article explores deterrence, a time-honoured concept in International Relations (IR), through the application of systemism, a concept borrowed from the philosophy of science. The purpose of this study is to provide a diagrammatic exposition that establishes the “value added” from systemism vis-à-vis the research on deterrence. A series of exchanges involving US-led efforts to deter Saddam Hussein, from the aftermath of the Gulf War of 1991 to the brink of the Iraq War of 2003, will be used to reveal the insights that systemism can bring over and above existing approaches to the study of deterrence.

Present efforts to apply systemism to highlight elements of deterrence in the context of Iraq fall under the rubric of the “fourth wave” of deterrence research as recently identified in overlapping ways by Knopf and Lupovici. According to Knopf, the fourth wave of deterrence research is “primarily a response to real-world developments” that focuses on “asymmetric threats”. 9/11 is the principal triggering event that has shifted the global focus. Other developments reinforcing the agenda of fourth wave deterrence are the acquisition, as opposed to use, of weapons. Ongoing incidents in North Korea, Iran, and (previously) Iraq are illustrations of this.

Lupovici adds that the new agenda includes significant attention to theorizing, notably from constructivists, but at some distance from the empirical research on asymmetric deterrence emphasized by Knopf. Learning across states, in particular, is regarded as a challenge for the contemporary practice of deterrence. Put simply, deterrence is “not easy” because a wide range of factors may get in the way.

As will become apparent by the conclusion of this study, the combination of systemism, complex deterrence, and a multifaceted case study of Iraq is consistent with the fundamental aspects of fourth wave research. Deterrence remains important, but increasingly operates in asymmetric domains within which learning is difficult.

This project unfolds as follows. First, systemism is defined. Second is an overview of deterrence in its complex contemporary form. Third, systemism is applied, through a series of diagrams, to further understand deterrence-related processes leading up to War in Iraq. Finally, contributions of the study are reviewed and suggestions are offered for future research.

**Systemism**

Systemism is distinguished by its emphasis on completeness, in a structural sense, with regard to theory. All social systems feature processes at the aggregate and unit levels. Thus, for an account of these processes to be compelling, it should not focus primarily on one level at the expense of the other. A fully enumerated theory must incorporate all logically possible connections, in at least a minimal way, to meet the standards of systemism. From its origins in the philosophy of science, systemism emerges as a means to assess the progress in a given research enterprise.

The advantages of systemism are demonstrated through a major exposition of system effects by Jervis. Jervis rejects holism and reduc-
tionism in the quest for explanation. In particular, he does not see the whole as greater than the sum of its parts; instead, it is different. Holism therefore is off base. Comprehensive analysis of a system, according to Jervis, must allow for emergent properties. It is not possible to anticipate fully the impact of any given interaction because of indirect and delayed effects. Thus the characteristics of a system will be different than what would be expected from a simple addition of specific bilateral relations. For that reason reductionism is rejected as well.

The tendency of social science tends toward either holistic (aggregate) or reductionist (unit) theorizing, as opposed to comprehensive specification is somewhat surprising. Consider, for example, prominent work within the study of domestic and international politics. On the one hand, structural realism, a major player in IR theory for three decades and beyond, is cast in aggregate terms. Its fundamental ideas about cooperation and conflict focus on how the number of great powers in the system impacts the balance of power and likelihood of war. Various critiques of structural realism emphasize its inability to account for foreign policy; in the language of systemism, structural realism's theorizing is limited to connections at the aggregate level. In a word, structural realism corresponds to holism. On the other hand, theories of domestic politics generally focus on internal processes, such as state-society relations. A classic example is pluralism. This theory concentrates on the impact of interest group politics on policy outcomes. Theories regarding the comparative study of government, with few exceptions, resemble pluralism in so far as they exclude the aggregate level. These theories, therefore, are reductionist in character.

Systemism goes beyond holism and reductionism through its inclusion of all basic connections that can make up a theory. Figure 1 depicts functional relations in a social system from a systemist point of view. Variables operate at macro (X, Y) and micro (x, y) levels. Outside of the system is the environment (E). The environment can be expected to provide inputs to, and experience outputs from, the system. For example, the Asian subcontinent might be regarded as one such system, with the environment corresponding to the world beyond that region. Within a system, four basic types of linkages are possible: macro-macro (X → Y), macro-micro (X → x), micro-macro (y → Y) and micro-micro (x → y). In this figure, and in the subsequent diagrams, upper- and lower-case characters correspond to macro- and micro-level variables respectively. Thus, in the time-honoured sense of levels of analysis in IR, the macro-level would refer to the international system, with processes inside of states (i.e., system members) taken as the micro-level.
Figure 1 is generic and may apply to any social system. Its basic contents will be elaborated through illustrations from the study of politics. The linkages conveyed by Figure 1—(a) between the environment and the system and (b) within the system itself—will be covered in turn. This process will reveal how, in principle, the contents of any theory can be translated into the language of systemism.

Figure 1: Functional Relations in a Social System

![Diagram of functional relations in a social system]


One issue to resolve before moving forward is how the environment may be distinguished from the system. In this study, boundaries will be taken to have a geographic basis. It is acknowledged that some degree of arbitrariness will exist in any attempt to spatially demarcate the system from its environment. For example, what is to be done with Turkey, which exists in Europe as well as Asia Minor and plays a significant role in the Middle East? Such theoretical questions are deemed beyond the scope of the present investigation, and best specified in the context of a given study. Consider the Asian subcontinent as an example of a system in operation. Its boundaries would coincide, for the sake of argument, with India, Pakistan, and lesser adjacent states, along with Sri Lanka. Actors outside of those boundaries, whether states or other entities, would be considered to collectively constitute the environment.

For purposes of illustration regarding linkages between a system and its environment, the concept of “pivotal deterrence” is a helpful reference here. “In pivotal deterrence,” Crawford observes, “the defender sits in a pivotal position between ambitious adversaries, and it seeks simultaneously to deter both of them.” While it is not always the case,
the mechanism of pivotal deterrence tends to involve an actor from outside the system. In such cases, pivotal deterrence entails an example of an environmental input into the system: “HEGEMONIC MEDIATION → GREAT POWER NEGOTIATION”. At the level of observation, this could refer to of the various attempts by the US as a hegemonic power to cool down Indo-Pakistani crises, most notably during the nuclear stage of their rivalry. An analogous output from the system to the environment would be “GREAT POWER RIVALRY → HEGEMONIC MEDIATION”. A leader such as the contemporary US or nineteenth century Britain would be motivated to manage great power rivalry to preserve the generally beneficial status quo it experiences at the system level.

Among the linkages within a system, the macro-macro form corresponds with holism. Social aggregates impact each other at the level of the system itself. Within IR, the standard meaning would be interactions beyond internal processes of the state. Thus balance of power in the classic sense, for instance, might be modelled as “POWER IMBALANCE → BALANCER JOINS WEAKER SIDE IN CONFLICT”. This expectation corresponds to the role historically attributed to Great Britain in its hey-day as the leading great power of the post-Napoleonic world. Britain, according to the balancer model, would have an incentive to help restrain conquest on the European continent by assessing imbalances as favouring aggressor coalitions and then counteracting them.

Macro-micro linkages refer to an effect from the system level imparted to one or more of its units. One such linkage in IR would be “WAR OUTCOME → social change”. An obvious example would be movement toward racial integration in the US after World War II. The process began in the military, as effective wartime service by non-whites undermined arguments in favour of segregation based on racial superiority. A civil rights movement then picked up momentum throughout society. An even more dramatic change in state and society can be expected for those on the losing side of a war; the demise of the Tsarist regime in Russia as a result of its disastrous performance in World War I is just one such instance.

A micro-macro linkage is one that wells up from the unit to the aggregate level. One example of this type of connection in IR would be “regime change → PURSUIT OF REGIME CHANGE ELSEWHERE”. A successful revolution in a given state, for instance, might try to export itself. Iran’s revolution in 1978-79, in hindsight, may be seen as the key development in the rise of political Islam as a force around the globe. The overthrow of the Shah, a US-backed quasi-dictator, brought to power a regime dedicated to spreading its version of Islam both within and beyond Iran. Efforts by Iran to weaken the secular Turkish regime through
support of Islamist political activity, some of it violent, thus serve as an example of a revolution attempting to export itself.¹⁹

Finally, the micro-micro level refers to processes within a unit. One example from IR would be "public perception of threat → enhanced security policy". At the extreme, citizens could find themselves living under conditions labelled, in one prominent exposition, as a "garrison state."²⁰ After 9/11, the US public perceived a threat to the homeland that greatly exceeded anything in living memory—a sense of danger far beyond that created by terror attacks such as those directed a few years earlier at the USS Cole or Khobar Towers. The Patriot Act came into being as a government response to public demand for action in what seemed like a suddenly more dangerous world. A corollary to the linkage just stated would be that increased threat perception is connected to a general willingness among the public to sacrifice personal autonomy—a trait reflected in opinion polls from the years following the 9/11 attacks.

Now consider the preceding types of linkage in combination. The essence of systemism is that any fully specified explanation must contain at least one linkage from each basic type, along with a demarcation of the system from its environment. Systemism thus transcends explanations that are strictly holistic or reductionist; it includes both of these elements (macro-macro and micro-micro), along with connections between the levels (micro-macro and macro-micro).

What are the purported advantages of systemism? Why bother to draw pictures like Figure 1 when one might simply produce a narrative saying the same things? One advantage of the approach is that systemism is able to take diverse theoretical connections and place them in a unifying framework. Ideas as diverse as the balance of power, pluralism, and the garrison state, as seen already, can be included within the types of linkage from an operating system.

Another positive aspect of this visually-oriented frame of reference is that diagrams of social systems, created in accordance with systemism, force contradictory assumptions regarding boundaries and linkages into the open. Narrative alone may unintentionally but effectively disguise logical inconsistencies. Critics of realism, for example, have identified a wide range of contradictions within it; the application of systemism helps to sort through these problems in search of a more consistent overall statement of that paradigm.²¹ Enhanced logical consistency results from the process of creating a visual representation of theory. This positive result is shared with research based on formal that is, mathematical modelling, but systemism offers the further advantage of very low "start up" costs to those seeking to apply it. Formal theory
offers great payoffs in terms of theoretical exactness, but its use requires considerable training in comparison to systemism.

One further advantage of systemism over pure narrative is that it is much easier to detect whether a theoretical edifice is missing one or more types of linkage when rendered in visual form. What if, for instance, a theory lacks any micro-macro linkage? The idea that such a fundamental process simply can be held constant is not compelling. An enduring problem for virtually all variants of Marxism, for example, is an inability to solve the transformation problem, that is, answers are still lacking as to how alienation among the proletariat translates into collective action and ultimately revolution at the level of society itself. In the language of systemism, orthodox Marxism lacks a micro-macro component.

While systematism has many positive features, limitations exist as well. It is time to pause and consider potential shortcomings, along with the degree of originality, of systemism. Systemism trades elegance for completeness in explanation. In principle, the diagrams and analysis it produces will be intricate rather than streamlined and parsimonious. However, this level of detail is not necessarily a drawback in practice. It is reasonable to employ a more complex account if it offers a more favourably regarded and complete explanation. The verdict on systemism’s application awaits a sufficient range of studies from which one can judge the trade-off between detail and parsimony in practice.

Another point of criticism, from the opposite direction, is that systemism is overly simplified. With analysis in IR pitched at multiple levels of analysis, is it adequate to focus on just two, as in systemism, with its macro and micro designations? Consider the following list of candidate levels of analysis for potential inclusion in a model of deterrence: system, regional system, state, components of the state, society, and individual. It is easy to identify theories from each of the preceding levels, so systemism might appear, on the surface, to be leaving out a lot.

For an initial foray into deterrence theory, however, intuition favours starting with the two classic levels—the state and the system—and adding complexity in an incremental way. An immediate shift to six levels versus two would require a vast range of potential linkages in order to achieve theoretical completeness. If counted in a bidirectional way within and across levels, forty-two linkages would need to be considered. Moreover, the application of systemism under this new regime would require something other than the box and arrow diagrams that can only convey two dimensions. It is not obvious how a visual representation could be maintained as a basic feature of systemism under these new and more demanding conditions. Instead, it makes sense to work with two levels and consider incorporating more in response to gaps identified through
such an initial approach. Put differently, the present two-level approach provides a logical foundation for adding complexity down the road.

What about the question of whether systemism really constitutes an innovation? Systems analysis, after all, gained prominence with the work of Easton in the 1950s and 1960s. While common ground exists between the approach from that era and systemism today, the latter is an indirect descendant of the former. The prior incarnation of the systems approach received considerable criticism and ultimately lost favour because of its homeostatic bias. Earlier work concentrated on persistence of the system itself rather than the goals of actors. The 1950s and 1960s agenda, upon reflection, is more in line with holism than systemism. Thus contemporary systemism, with its emphasis on interactions between the macro- and micro-levels is innovative as it offers a more complete treatment of social systems, and does not entail the bias toward the status quo that critics saw as embedded in the earlier work.

The previous work of several IR theorists anticipates the case for systemism, even if it is not advocated in an explicit manner. Consider, for example, neoclassical (also known as neo-traditional) as opposed to structural realism. Neoclassical realism calls for an examination of how factors within states and societies effect the foreign policies that ultimately combine to create system-level processes. In the language of systemism, this constitutes a micro-macro connection. In addition, it would be fair to say that liberal, constructivist, English School and other approaches pay significant attention to linkages across levels of analysis. Constructivism, for example, focuses extensively on norms at the aggregate level as an influence on foreign policy. This, from a systemist point of view, stands as an input from the macro-level (or possibly even the environment) to the micro-level.

All of these contributions to IR, obviously in line with systemism's emphasis on exploring a wide range of linkages across levels of analysis, should be recognized with the proviso that none calls for application of the full set of criteria of systemism. Any one of the preceding paradigms, for instance, would tend to hold constant one or more types of linkage. Just as important to point out is the fact that the various paradigms just noted do not emphasize visual representation of presumed linkages in any systematic way.

**Complex Deterrence**

Deterrence entered a potentially new era after 9/11. As identified by Knopf, a fourth stage of deterrence studies took hold in response to the events of
that terrible day in particular.\textsuperscript{27} Complex deterrence, as will become apparent, is an important attempt to advance the policy-oriented agenda of the fourth wave, but with equal emphasis on a rigorous approach that will build theory. The goal of the research agenda inspired by complex deterrence is to meet the analytical challenges that accompany the fourth wave. Most notably, these were described by Knopf and Lupovici as the tendency for events to be played out in asymmetric settings and under conditions that are challenging for the process of learning.

Interest in the concept of complex deterrence continues to build, in light of the question: Is the world today a fundamentally different place vis-à-vis deterrence and compellence? Paul begins to answer this question in an overview of deterrence at both the conceptual and empirical level. Deterrence, he observes “is a theory, a tactic, a national security strategy, a larger defence policy approach, and a critical component of security for the international system.”\textsuperscript{28} As a theory, deterrence assumes (a) state-centrism, (b) states as rational actors, and (c) rivalry. To function, it requires capability, credibility, and clear communication on the part of the state seeking to engage in deterrence or compellence.\textsuperscript{29} In sum, the preceding items constitute the axiomatic basis of deterrence theory in its classic form, whether applied in the conventional arms or nuclear domains.

What, then, is complex deterrence? According to Paul, states operate in an “increasingly complex global setting” that includes a range of new actors and the overarching presence of the global War on Terror.\textsuperscript{30} The US, notably, is expected to show leadership regarding Weapons of Mass Destruction (WMDs). Is deterrence still relevant under these new conditions? Paul answers “yes”, and explains what is meant by complex deterrence: an ambiguous deterrence relationship, which is caused by fluid structural elements of the international system to the extent that the nature and type of actors, their power relationships, and their motives become unclear, making it difficult to mount and signal credible deterrent threats in accordance with the established precedents of deterrence theory.\textsuperscript{31}

Given this new, intricate type of deterrence, a review of contemporary issues in theory and policy is regarded by Paul as “overdue.”\textsuperscript{32} Thus, with others, he initiated a large-scale, team project on complex deterrence. It is impossible to apply systemism to all of the contributions ultimately published in Complex Deterrence: Strategy in the Global Age, and correspondingly the next section of the present study will focus on one particular case study in some detail. The objective is to show how applying systemism can triangulate existing results as well as produce new insights.
This section will convert an existing narrative analysis of deterrence-related processes leading up to the Iraq War of 2003 into a series of figures based on systemism. Harvey and James identify six exchanges regarding deterrence and compellence extending from the end of the Gulf War through the outbreak of War in Iraq. An exchange is defined as a series of events that produces an outcome regarding efforts to deter or compel an adversary’s actions within a given substantive domain.

All exchanges begin with what is assessed by Harvey and James as a significant departure from the status quo. In some instances the episode is deemed to begin with an effort toward deterrence, while others begin with a signal that deterrence may be challenged. An example of the former is the beginning of exchange B (Figure 3), where the United States, Britain and France established a No Fly Zone (NFZ) along the thirty-second parallel in southern Iraq. An example of the latter is exchange C, which began with a troop movement by Iraq to within thirty kilometres of the Kuwaiti border. An exchange is regarded as over when the effort to change the status quo is resolved, that is, deterrence success or failure. Starting and finishing points for exchanges are assigned as precisely as possible.

For Harvey and James, the focus across the exchanges is on the US-led efforts to deter and compel Iraq regarding: (1) acquisition of WMDs; (2) the lack of respect for the sovereignty of Kuwait; and (3) poor treatment of Shiites and Kurds. All of this takes place under the general rubric of security. What, then, is the substantial contribution of Harvey and James prior to conversion of their research into a series of diagrams based on systemism? Harvey and James confirm the basic traits associated with the “complex security environment” of the new millennium. Their study reveals how deterrence operates over time and in stages. This is in line with Paul’s exposition of complex deterrence, which is, as previously noted, the larger rubric for the larger project within which Harvey and James conducted their case study.

More precisely, Harvey and James demonstrate that a binary, “all or nothing” sense of deterrence and compellence is just too simple in assessing interactions that are iterated and include multiple interactions at any given stage. Their study of the six exchanges between Iraq and the coalition of states seeking to deter and compel its behaviour spanning the course of more than a decade produces a nuanced picture of the theory’s performance. The bottom line, identified by Harvey and James, is that
three exchanges resulted in successful deterrence (B, C, D), with two mixed (A, F) and one coded as a failure (E).41 (The letters in parentheses correspond to the exchanges depicted by Figures 2-7.) This is far from a "yes" or "no" answer and affirms the complex, multi-stage nature of contemporary deterrence.

Harvey and James also affirm several longstanding traits associated with deterrence theory as enumerated by Paul.42 During the years in question, deterrence operates mainly at the interstate level and unfolds within the context of an ongoing rivalry—that is, Iraq versus the United States. Rational choice also is supported throughout the exchanges; calculations of benefit versus cost are clear despite the fact that one of the key participants, Iraq, had at its helm a stereotypical "mad dictator," Saddam Hussein.43 The outcomes of Exchanges B-D (see Figures 3-5 below) establish that point; a clear threat of significant action—with credibility on the part of the highly capable US-led coalition—produced compliance from Iraq. For example, in Exchange C, UN Security Council Resolution (UNSCR) 949 required Iraq to withdraw to its original position vis-à-vis Kuwait. Saddam Hussein reacted by having the terms from the United Nations Security Council (UNSC) read out on Iraqi television and complying with the resolution.

What, then, is added to the case study by Harvey and James through the series of diagrams produced under the auspices of systemism? Figures 2-7 correspond to the respective exchanges designated by Harvey and James. Each figure contains a number of specific linkages that have been identified inductively. It is quite possible that critics might find some of the connections problematic or point out links that should have been included. In other words, the coding of linkages by Harvey and James in each figure represents just one possible interpretation. It is a strength, however, not a weakness, of the systemist approach that the figures facilitate criticism. Rival expositions could be superimposed quite easily on what appears in the current figures to facilitate debate of any aspect of the historical record. This property encourages progress in explanation rather than impeding it due to a presentation that is difficult to pin down.

Figures 2-7 will be analyzed with the intention of drawing additional insights from the visual presentation. Lower-case font indicates the micro-level and events at the macro-level are in upper-case. Table 1 summarizes the linkages conveyed by Figures 2-7.44 The columns in the table identify the exchanges associated with the five figures, the four types of linkages within each, and the total number of linkages for a given row. Rows correspond to the respective types of exchanges and the sum of linkages within them. The total of all linkages in the six exchanges is recorded in the lower-right of the table. For the time being,
each of the fifty-nine linkages is treated as equal in importance in the analysis that follows. It is understood that in practice some connections would matter more than others in determining outcomes, but the question at hand is the distribution of linkages among the possible types (i.e., macro-macro, etc.) as opposed to individual characteristics of linkages. It therefore makes sense simply to count the linkages rather than implementing some type of weighting scheme.
IRAQ TESTS US WILLINGNESS
IRAQ COMPLIES
US SHOOTS DOWN IRAQI PLANE AND INCREASES ITS WARPLANES
US, UK, FRANCE, AND RUSSIA ISSUE ULTIMATUM ON SURFACE-TO-AIR DEPLOYMENT
IRAQ BACKS DOWN
IRAQI INCURSION INTO KUWAIT
UK, FRANCE, AND US BOMBING/US TROOPS TO KUWAIT BORDER
IRAQ ACCEPTS NFZ

attacks on Shiites in southern Iraq subside

Figure 3: Exchange B, August 26, 1992, to January 19,
Figure 4: Exchange C, October 7-16, 1994

- Iraq repositions troops 300 kilometres from Kuwaiti border
- US warnings against Iraqi aggression/Naval and troops
- Iraq sends reinforcements
- Further US reinforcements
- Iraq begins withdrawal
- UNSC discusses exclusion zone
- UNSC support for containment declines
- UNSC 949 requires Iraq to withdraw to original position
- Iraq complies with UNSC 949

Support in US for containment declines

UNSCR terms read out on Iraqi media
Figure 5: Exchange D, August 31 to September 13,

- USthreatens Iraq and launches cruise missiles
- Russian and UN criticism of US action
- Counter-threats from Iraq
- US expands southern NFZ and opposes oil sales
- Iraq complies with US demands

Iraqi armed force invades Kurdish capital Irbil
UN ALLEGES THAT IRAQ CONCEALED WMD PROGRAMME

IRAQ SUSPENDS COOPERATION WITH UNSCOM AND INTERNATIONAL ATOMIC ENERGY AGENCY

UNSCOM INSPECTOR SCOTT RITTER RESIGNS AND CITES WEAKENING OF US/UK POLICY TOWARD IRAQ

US SECRETARY OF STATE DENIES ALLEGATIONS

UNSCR 1194 ADOPTED

IRAQ REFUSES TO COOPERATE

UN OFFICIAL RESIGNS OVER SANCTIONS

UNSCR 1205 ADOPTED/EIGHT ARAB STATES CONDEMN IRAQ’s DEFIANCE/ALL UNSCOM PERSONNEL WITHDRAWN

US/UK LAUNCH AIRSTRIKES AGAINST IRAQ

IRAQ COMPLIES JUST BEFORE AIR STRIKES LAND

UNSCOM INSPECTORS RETURN TO IRAQ

IRAQ IMPEDES INSPECTIONS

OPERATION DESERT FOX

RUSSIA AND CHINA OPPOSE MILITARY ACTION

US ENDS MILITARY OPERATIONS

IRAQ DECLARES NO MORE UNSCOM INSPECTIONS

Scott Ritter continues criticism after resignation

sanctions continue to hurt Iraqi public

Figure 6: Exchange E. July to December 1996
US/UK Threat of Unilateral Deployment Against Iraq

UNSCR 1441

Iraq Accepts Resolution

UNMOVIC Inspectors Arrive in Baghdad

France, Russia, and China Reluctant on Second UN Resolution

Iraq Defies US Ultimatum

US-led Coalition of the Willing Invades and Occupies Iraq

US midterm elections favourable to President

Figure 7: Exchange F, November 8, 2002, to April
Visual presentation from Figures 2-7 triangulates and reinforces the point regarding deterrence unfolding primarily at the state level. Among fifty-nine linkages from the six exchanges summarized in Table 1, forty-five are macro-macro—either interstate or pertaining to states in conjunction with organizations composed of them. This is consistent with a standard realist account that stresses state-to-state interactions. Reinforcement of that result through the diagrammatic exposition is significant due to the degree to which the deterrence model is criticized in contemporary scholarship. As Table 1 reveals, each of Figures 2 through 7 exhibits a minimum of four macro-macro linkages, with some much higher in number. Thus, even under conditions of complex deterrence it is possible to find continuity. Realist expectations about state-centrism are borne out.

**Table 1: Exchanges and Linkages**

<table>
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<th>Exchange</th>
<th>macro-macro</th>
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<td>1</td>
<td>0</td>
<td>9</td>
</tr>
<tr>
<td>C</td>
<td>7</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>11</td>
</tr>
<tr>
<td>D</td>
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<td>0</td>
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<td>7</td>
<td>6</td>
<td>59</td>
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</tbody>
</table>

Also in line with a state-centric outlook on deterrence is the relative scarcity of purely micro-micro connections. In Exchange A, Iraqi forces attacked Kurdish forces, which increased security concerns for Kurds. This is the only micro-micro connection throughout the long and complex process depicted by the figures.

The variation in the point of origin and termination for the respective exchanges from Figures 2-7 is also consistent with a systemist outlook. Four exchanges start, and five conclude, as a state-centric account would anticipate: with a macro-macro connection. However, two exchanges begin with a micro-macro linkage and one finishes with a macro-micro linkage. These connections convey visually how most processes begin and end in macro-macro terms, but with significant representation involving links across levels as well. For example, Figure 3, which depicts...
Exchange B, concludes with Saddam Hussein accepting the southern NFZ, with attacks on Shiites in southern Iraq then subsiding.

Put forward decades ago by Gourevitch,\textsuperscript{46} the idea of the system impacting on its units finds strong support through the existence of seven macro-micro linkages in Figures 2-7. Forces from the system level impinge upon the state level in four of the six figures. For example, in Figure 2 regarding Exchange A, the US designated a NFZ north of the thirty-sixth parallel and its coalition flew sorties that produced positive results: the relocation of refugees and restoration of villages in Iraq. Two other macro-micro connections appear in Figure 6, which depicts Exchange E. At one point, UN Special Commission (UNSCOM) inspector Scott Ritter resigned, citing weakening of US/UK policy toward Iraq, and further criticizing the deterrence coalition after leaving office. Later in the story, Baghdad refused to cooperate with UNSCR 1194, which caused sanctions to further harm the Iraqi public.

Six linkages in Figures 2-7 are micro-macro in nature. These connections support increasingly well-regarded theories emphasizing the impact of domestic politics on foreign policy.\textsuperscript{47} Consider, in that light, the micro-macro connection depicted in Figure 7 regarding Exchange F. US midterm elections in 2002 came out favourably for the Republican Party and President George W. Bush. This, in turn, facilitated the US/UK threat of unilateral deployment against Iraq. The strategically significant consideration, here, is that the president gained major political capital from defying the odds; normally, the incumbent’s party loses seats at the midterm. The strong Republican performance enabled Bush to take the lead in joining forces with his British counterpart, Tony Blair, to pursue a hard line against Saddam Hussein. This and other prominent micro-macro linkages are revealed through the series of diagrams as an overall property of the exchanges articulated by Harvey and James.

Interestingly, the one outright failure of deterrence, as assessed by Harvey and James, occurred during Exchange E. This penultimate exchange, as conveyed by Table 1, included nineteen linkages—eight more than any of the others. Figure 6, which conveys Exchange E, begins with a UN allegation that Iraq concealed its WMD program and ends with Baghdad declaring an end to UNSCOM inspections. In contrast, successful compellence in Exchange D starts with Iraqi armed forces invading the Kurdish capital of Irbil and ends with Baghdad complying with US demands in just five stages of interaction. Thus the figures and summary table combine to produce the hypothesis that success and failure, respectively, will tend toward shorter and longer sequences of interaction. This proposition is not articulated by Harvey and James but
is derived from the summary table of a systemist-driven, diagrammatic exposition.

Conclusion

With its emphasis on diagrammatic presentation, systemism offers several benefits to the deterrence research enterprise, as well as that of other subjects: the integration of potentially diverse ideas into a common visual framework; the promotion of intra-theory logical consistency; and the exposure of key gaps in theorizing. Deterrence, as articulated today, is more complex than in the past. Efforts to deter or compel perceived aggressors, on the part of status quo-oriented states, take place within the global War on Terror (even if no longer conducted officially by the US under that name), as well as in the presence of a larger network of relevant states vis-à-vis WMDs.

Results from the analysis of the various processes leading up to the Iraq War reveal a difference of degree rather than kind regarding the practice of deterrence and compellence. A review of six exchanges identified by Harvey and James shows complex deterrence maintaining the basic traits of traditional deterrence: rationality, state-centrism, and conditions of rivalry. When capability, credibility, and communication are present, as with traditional deterrence, all but one of six exchanges produce either full or partial success.

Deterrence as a concept thus seems far from obsolete, even if its operation is more complex than in the past. As per Knopf’s assessment of the fourth wave of deterrence research, noted at the outset of this study, deterrence remains “viable and relevant” and takes a “broader” form than in the past. In the present study, for instance, deterrence is asymmetric—the US and its allies versus Iraq—and focuses not just on the prevention of attacks but other aspects of behaviour as well. These results are consistent with the fourth wave of deterrence studies as identified by Knopf.

Complex deterrence emerges from the case study of Iraq as multi-staged and challenging. As per Lupovici’s reflections on the fourth wave, efforts to “teach” Iraq utilizing deterrence have met with uneven results. The diagrammatic exposition based on systemism triangulates the narrative from Harvey and James, as noted above. Systemism also adds value through its visual approach, which can draw attention to aspects of a narrative that have escaped notice. The series of figures reveals the importance of domestic sources for security policy—i.e. the appearance of numerous and significant micro-macro linkages. A review of the
figures also reveals that the one exchange leading to deterrence failure contains significantly more steps than the others.

In general, further research involving systemism and complex deterrence could follow a number of directions. Possibilities include extending the case at hand forward in time, exploring connections with contemporary events, focusing on more than just two levels of interaction, and pursuing the study of rising powers. This could include the expansion of the current study to analyze subsequent events in Iraq. For instance: what would exchanges from the era of occupation, insurgency, and counter-insurgency in Iraq look like as conveyed by systemism? Would the exchanges and components within them be more or less numerous? Could a higher proportion of micro-micro linkages be expected relative to what has been seen so far, given the recent experience of civil, as opposed to inter-state, war in Iraq? All of this awaits discovery.

Another avenue to consider is the possibility of connecting the long struggle in Iraq to recent events in the Middle East and North Africa as a whole. Is there a linkage between regime change in Iraq and the “Arab Spring”? The Arab Spring saw successful challenges to longstanding dictatorships in Tunisia, Egypt, and Libya, with important events still unfolding in Syria and elsewhere. Systemism could offer a visual and rigorous portrayal of the causes and effects of the Arab Spring.

While ruled out for an initial study, it is interesting to consider how the present case, and others, might look when viewed through more than two levels of analysis. Models based on the individual (e.g. cognitive psychology), components of the state (e.g. organizational process), regional (e.g. comparative regional studies), and other levels of analysis could be added to the current exposition to widen and deepen its contribution. Exactly how that research would take place through the usual mechanism of systemism, which emphasizes depiction of cause and effect through diagrams, is a challenge that remains to be addressed.

Also interesting to consider is the practice of deterrence in a future that includes rising new powers. Major questions await answers: What does deterrence say about the power transitions underway now? Will rising powers such as Brazil, Russia, India, and China be more likely to challenge deterrence in both regional and global systems? How is uncertainty about power positions likely to influence behaviour? All of these questions could be answered, in principle, through application of systemism.

This study merely begins the process of introducing systemism into security studies via application to deterrence theory in the context of a dozen years of experience in Iraq. It is hoped that the current theorizing,
and results from the case study, will encourage further applications of
systemism within security studies in particular and IR in general. ■

Notes

1 I would like to thank Carolyn C. James for a helpful commentary and Indira Persad for excellent work on the figures.


4 Lupovici, “The Emerging Fourth Wave of Deterrence Theory.”

5 Ibid., 722.

6 For an exegesis of systemism, see Mario Bunge, Finding Philosophy in Social Science (New Haven, CT: Yale University Press, 1996).


8 Bunge, Finding Philosophy in Social Science.

9 This critique applies to the original exposition of structural realism from Kenneth N. Waltz, Theory of International Politics (Reading, MA: Addison-Wesley, 1979). Later efforts in the structural realist tradition have attempted to overcome such limitations; see, for example, Patrick James, International Relations and Scientific Progress: Structural Realism Reconsidered (Columbus, OH: Ohio State University Press, 2002).


12 In Bunge’s original presentation of systemism, Finding Philosophy in Social Science, an additional requirement for theoretical completeness is to specify a functional form for each linkage. For instance, is the presumed connection incremental or step-level? Unless otherwise indicated, it is assumed that all of the linkages conveyed here are incremental because it is beyond the
scope of an initial systemist-oriented study of deterrence to achieve a higher
degree of specificity regarding functional form.

13 The analytical purpose of division regarding system and state is explored
at length in J. David Singer, “The Level-of-Analysis Problem in Interna-

14 One possible point of confusion concerns the notion of environment in
terms of issues rather than location. The agenda of world politics includes a
much wider range of issues than in the past; human rights, cyberwarfare,
criminal syndicates, and the fate of the oceans would be just a few promi-

15 Timothy Crawford, “The Endurance of Extended Deterrence: Continuity,
Change, and Complexity in Theory and Policy,” in Complex Deterrence: Strat-
egeny in the Global Age, eds. T. V. Paul, Patrick M. Morgan, and James J. Wirtz.
(Chicago, IL: University of Chicago Press, 2009), 277-303.

16 Ibid., 294.

17 On hegemonic stability theory, see Charles Kindleberger, The World in

18 A path-breaking effort to identify variations of balance of power theory
from the vast range of narratives in realism appears in Dina Zinnes, “An

19 Yasemin Akbaba and Patrick James, “The Evolution of Iranian Interven-
tionism: Support for Radical Islam in Turkey, 1982-2003,” in Radical Islam
and International Security: Challenges and Responses, eds. Efraim Inbar and

20 See Harold D. Lasswell, “The Garrison State,” American Journal of Sociol-
ogy 46, no. 4 (1941): 455-468.

21 The most enduring critique of the internal logic with respect to the realist
paradigm appears in John A. Vasquez, The Power of Power Politics: From Cla-
cssical Realism to Neotraditionalism (Cambridge: Cambridge University Press,
1999).

22 A more detailed argument in favor of applying systemism to evaluate theo-
ries of IR appears in Patrick James, “Systemism and International Relations:
Toward a Reassessment of Realism,” in Millennial Reflections on International

23 The standard critique of the idea that large groups such as the proletariat will form naturally and realize their interests at the level of society, is found in Mancur Olson, The Logic of Collective Action: Public Goods and the Theory of Groups (Cambridge, MA: Harvard University Press, 1965).

24 The total of forty-two is reached in the following way: Among the six levels, connections from within can point in both directions, resulting in a total of twelve linkages. Across levels, fifteen combinations are possible; if each can go in either direction, this produces thirty possibilities. Thus the combination of linkage types within and across levels is forty-two.


26 For a more extended treatment of the differences between the classic era of systems analysis and systemism today, see Patrick James, Constitutional Politics in Canada After the Charter: Liberalism, Communitarianism, and Systemism (Vancouver: University of British Columbia Press, 2010), 12-14.

27 Knopf, “The Fourth Wave in Deterrence Research”.


29 Ibid., 2, 5-6.

30 Ibid., 2, 4-5.

31 Ibid., 8.

32 Ibid., 20.


34 Ibid., 227.

35 Ibid., 231.

36 Ibid., 224.

37 For purposes of clarification, systemism is not regarded as suitable for application to general deterrence. It focuses on actions and incorporates thought processes only through inclusion of verbal statements. For an assessment of scenarios involving thought patterns, game theory is the standard and clearly preferred alternative. Thus in the present case and for fur-
ther applications of systemism, the domain is immediate rather than general deterrence.

38 Harvey and James, “Deterrence and Compellence in Iraq,” 249.

39 Ibid., 248.


41 Harvey and James, “Deterrence and Compellence in Iraq,” 246.


43 The preceding points are developed at greater length in Harvey and James, “Deterrence and Compellence in Iraq,” 249.

44 For ease of exposition, each figure in the series depicts the global system rather than Iraq within a system that includes an environment demarcated beyond its boundaries. The only possible outputs or inputs regarding the environment for a global system would have to concern extraterrestrials. By contrast, a regional system, as per the earlier example of the Asian subcontinent, would have the rest of the world as its environment.

45 A summary of critiques regarding deterrence, some of which pertain to proliferation of relevant actors, appears in Paul, “Complex Deterrence: An Introduction,” 1-5.


