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Harvey Starr *Editor*

Bruce M. Russett: Pioneer in the Scientific and Normative Study of War, Peace, and Policy

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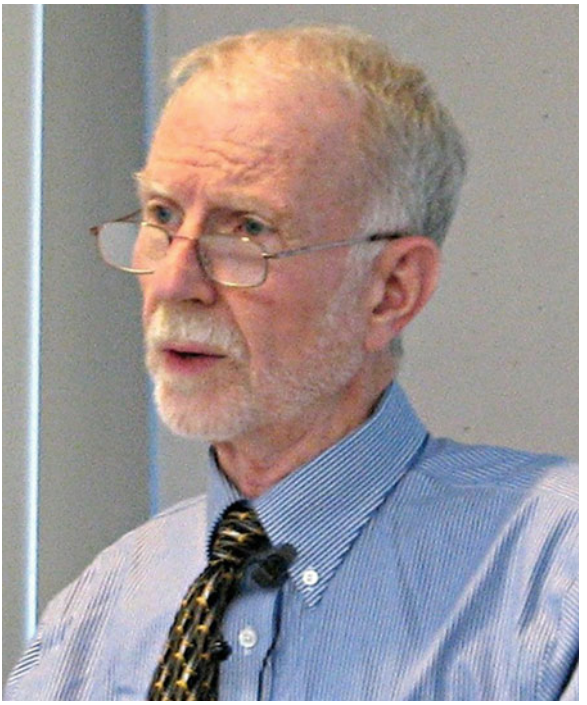

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For the 80th birthday of my
mentor, colleague and friend Bruce Russett

Photo of Prof. Bruce M. Russett with several of his former students at his retirement dinner in New Haven, 2011: from *left* to *right*, Roy Licklider, Bethany Lacinia, Bruce Russett, Fred Chernoff, David Kinsella, and Harvey Starr (editor). *Source* This photo is from the personal photo collection of Bruce M. Russett who granted permission to include it here

Preface

The terms 'pioneer' or 'giant' in a field of study are often tossed about loosely. But in the case of Bruce M. Russett, they barely begin to describe the place and impact he has had in the study of international relations and world politics. Bruce was a founder of, and continues to be a pioneer in, the empirical analytic study of international relations and foreign policy. He has produced pioneering work on methodology, data collection, and the application of economics to the field of international relations—especially in the area of analytical relationships between theory, policy, and normative standards for morality and ethics. His work has clarified and furthered our understanding of peace studies by looking at power and conflict, cooperation, integration, and community, the democratic/Kantian peace, economic development, dependency, and inequality, and the relationships between domestic and foreign politics. His academic achievements and stature derive from bringing these areas together as a coherent entity, based on his eclectic ability to 'cross boundaries' in regard to academic disciplines, sub-disciplines, methods of data gathering and analysis, broad theoretical perspectives as well as basic and applied research—and all within a strong normative perspective. Additionally, through his training of students, his service to various professional associations and especially his stewardship of the *Journal of Conflict Resolution* which he edited from 1973 to 2009, he has influenced almost every corner of international relations scholarship.

I first met Bruce Russett in the Spring semester of 1968, during my first year at Yale for graduate school. I took his graduate seminar in international relations theory. While I had taken two very good undergraduate IR courses at SUNY Buffalo from Glenn Snyder, Bruce's course opened (blew!) my mind to the richness of the subfield—and I was hooked. This was to be my major field, my academic passion, and my career path. What could be a better description of the role and impact of a *mentor*?

As a major figure in the development (and later publication) of my dissertation, Bruce was also the co-author of my very first publication—a chapter in his award-winning book *What Price Vigilance?* (a chapter that was based on one of my comprehensive examination papers, for which Bruce was the advisor). We have co-authored several times since, most notably in the well-received (and, indeed, highly cited) undergraduate textbook, *World Politics: The Menu for Choice* which first

appeared as Russett and Starr in 1981. The 10th edition appeared in 2013 (as Kinsella, Russett and Starr). We have had a number of common interests, which only partially overlap, including the broad study of conflict and cooperation, and more specifically in the democratic peace. Indeed, when asked about what research he was most proud of, Bruce replied that it was the democratic peace and his extension of it into the Kantian peace.[1]

One constant in my academic career, from graduate school at Yale to my present status as Dag Hammarskjöld Professor in International Affairs *Emeritus* at the University of South Carolina, has been Bruce Russett as "teacher, mentor, colleague, friend, and most of all—inspiration…"[2] I have always been humbled that Bruce willingly took on the role of mentor, not just to me, but to generations of international relations scholars. I am honored to be able to repay that debt, at least in part, by presenting an intellectual biographical summary of his long and acclaimed career, and in selecting a handful of articles that reflect some of the main themes of his intellectual journey.

One important note to the reader: this book will look somewhat different from other volumes in the 'Pioneer' series from Springer. Here, I have served as editor as well as the author of the Preface and the essay outlining Bruce Russett's intellectual biography. That essay discusses the general themes of his work, and how the items selected for inclusion reflect and represent these themes. The remainder of the Preface will contain much of the biographical information that in other Pioneer volumes was *auto*biographical, written by the subject of the volume. All of the different aspects of the volume were done with the incredibly generous aid of Bruce, who asked me to take on these tasks. That is why the Preface and Acknowledgments are difficult to separate, as one flows into the other—as the reader will see in the Acknowledgments below.[3]

As I discovered in an earlier book on Henry Kissinger (Starr 1984), any scholarly/intellectual biography (or analysis) must be grounded in a number of basic biographical factors of the individual involved. Fortunately for me, Bruce Russett has left a number of published and unpublished items presenting some key elements of his personal history that includes his life experiences along with his intellectual journey. In particular, a 2011 statement at Williams College after receiving an honorary doctorate from that institution, a 2013 presentation at Yale's

[1]See the March 2014 interview with Bruce by MINDfields—Founding Conflict Scholars Look Back/Forward http://mindfields.weebly.com/. As noted on the MINDfields website: "We as researchers are pretty bad sometimes about understanding the history of the fields that we participate in, and we are not always good about recognizing or celebrating what has been done in the past… MINDfields—Political Conflict/Peace was designed to address this problem within the specific subfield of political conflict and peace research in political science and sociology."

[2]Which is how I described Bruce in the dedication to my 2006 edited *festschrift* volume, *Approaches, Levels and Methods of Analysis in International Politics: Crossing Boundaries* (Starr 2006).

[3]Three of the important intellectual autobiographical pieces I have drawn from are: Russett (1976) in Rosenau's edited volume, *In Search of Global* Patterns; Russett (1989) in the Kruzel and Rosenau edited volume, *Journeys Through World Politics: Autobiographical Reflections of Thirty-four Academic Travelers*; and Russett (2001) in Thomas Landy's edited volume, *As Leaven for the World: Reflections on Faith, Vocation, and the Intellectual Life*.

Henry Koerner Center for Emeritus Faculty, and a 2014 talk at Berkeley, provided important autobiographical details. In the talk at Berkeley, Bruce noted:

"I give an undergrad seminar on the history of international relations theory, starting with Thucydides and Kautilya, proceeding through Machiavelli, Hobbes, Kant, Clausewitz, Lenin, Schumpeter, Schelling… The central theme is that, like the ancients, all of us who study, write, or practice international relations come with our own implicit theories, whether or not we think of them as theories. And we, like our predecessors, write from very particular *personal*, political, and international experiences that shape those theories (emphasis added)."

Bruce Russett was born in 1935, in North Adams, Massachusetts, in the northwestern corner of the state. While currently touted as 'the smallest city in Massachusetts,' it is no longer the small industrial city in which Russett grew up. Bruce recalls that his earliest political memories were about war and peace, with the attack on Pearl Harbor occurring in December 1941. The next year he put together what he jokingly calls his "first book"—a scrapbook of photos and purple prose about the attack. It has since been lost. Along with Pearl Harbor, prominent early memories included air raid drills, and the dropping of the atom bomb on Hiroshima. His more complete discussion of such early experiences helps to explain a lifelong interest in war and peace, deterrence, and indeed, in his words, a "strain of populism and distrust of authority that runs through my work" based on what he came to realize were government actions that hugely exaggerated the immediate threat to North Adams, Massachusetts (see also Russett's MINDfields interview). In sum, Bruce has noted that "World War II was an intense experience" (Russett 2001).

One of the key events in Russett's life was winning a partial scholarship to Williams College, only a few miles from his home. This was to be one of the major formative influences on his life. Bruce had wanted 'to do good' in some area of life, and at Williams decided it would be in politics and international affairs, as a major in political science would help him 'to learn what doing good might mean, and how to do it.' Even as early as high school (as a member of the World Federalists) this concern with policy was evident, and to become a major component of Bruce's scholarly work (along with war and peace, and deterrence). Equally important, he later switched majors to 'the elite hybrid major in political economy,' setting the stage for later graduate work at Cambridge University and for his contributions in bringing the theories and methods of economics to the study of international relations (see especially Russett 1968). Russett acknowledged in his 2011 statement a number of 'fine faculty' at Williams in both political science and economics—"All were men of the world as well as intellectuals, and under their influence I took seriously the possibility of teaching at a college or university." There were also three in particular that encouraged him to see the world and do post-graduate work, putting together a package of small grants that allowed him to do a one year Diploma in Economics (an M.A. equivalent) at King's College, Cambridge. Bruce has said simply of these three individuals: "They changed my life."

The year at Cambridge was important many ways. Bruce notes (Koerner 2013): "Intellectual activity mattered at Kings and in the friendships I made there. I studied economics—especially development economics—in the shadow of John Maynard

Keynes under three distinguished Keynesians, with a little political philosophy thrown in." The time at Cambridge not only continued his education in, and exposure, to economics—and his concern with development and inequality in later work—but permitted him to become 'more worldly' through travel in Britain and across the Continent.

After adding the 1957 Diploma in Economics from King's College to his 1956 B.A. in Political Economy (Highest Honors), magna cum laude, from Williams, Russett entered Yale University to work on a Ph.D. in Political Science. He received his M.A. from Yale in 1958, and his Ph.D. in 1961. But even here, his time at Williams was influential. His Williams roommate advised Bruce in 1955 that to be successful in political science he needed to take higher mathematics. As Bruce relates it, he told the roommate that he 'was crazy'—but it later turned out he was correct. However, Bruce's economics background did give him an advantage at Yale—"which was exactly the right time and place" as intellectual giants such as Robert Dahl and Karl Deutsch "were making the study of politics self-consciously scientific." At Yale, the key formative experience was working with Karl Deutsch, Russett's mentor, and a pioneer in the application of science and systematic empirical research to the study of international relations.[4] Deutsch was also a pioneering figure in the systematic theoretical approach to international integration, the area in which Russett did his dissertation under Deutsch about the development of British-American community [see the published version (Russett 1963)].

After receiving his Ph.D. in 1961, Russett spent 1961–1962 as an Instructor in Political Science, at MIT. He returned to Yale in 1962 as an Assistant Professor, where he again worked closely with Deutsch. Bruce notes (Berkeley 2014) that this assistant professor position had, "what was, for the time, an exceptional package of resources for pursuing my research. My former mentor, Karl Deutsch, had one of the first two NSF grants in international politics. He would buy out half my teaching time, provide summer salary, the financial resources to hire research assistants, a secretary, and computer time… I would have to work on Deutsch's pet project, producing the first big compilation of political, social, and economic data on all countries in the world (the first *World Handbook of Political and Social Indicators* 1964, which was about both data and ways to analyze them)." But, there were also time and resources for Russett's own projects, notably *World Politics in the General Assembly* (1965) with Hayward Alker. Russett's training in economics and his work with Karl Deutsch set the stage for Bruce's own wide ranging contributions to the creation and management of large-N data sets, and the quantitative analysis revolution in the study of international relations.[5] Again, Bruce's upbringing influenced his work and his approach to scholarship: "So while getting tenure in 1968 meant

[4]In fact Russett is editor of another volume in the Pioneer series about Deutsch: Bruce M. Russett, (ed.) *Karl W. Deutsch: Pioneer in the Theory of International Relations* Springer, 2015).

[5]In the 2013 Koerner presentation Bruce noted that his approach to data and the systematic empirical analysis of large-N data sets, "meant a struggle—not just in the usual sense of trying to get tenure at an elite institution, but in the sense that the social scientific revolution in international relations was still being made."

'making it,' it also left me, reinforced by my working-class background, feeling 'in' but not really 'of' the establishment. I found myself adopting the position of establishment critic; that is, using my newly privileged status as an opportunity to take positions critical of established political or scholarly wisdom" (Koerner 2013).

Bruce spent his entire subsequent academic career as a member of the Yale faculty. He was promoted to associate professor in 1966 and to full professor in 1968. He was made the Dean Acheson Professor in 1985, and formally retired in 2011, at that point becoming the Dean Acheson Research Professor. Other positions that he held at Yale both generated subsequent research directions and reflected past or ongoing research areas. From 1962 to 1973 he served as Director of the World Data Analysis Program shepherding the first edition of the *World Handbook of Political and Social Indicators* into existence (Russett et al. 1964). Drawing on his interests in peace and cooperation and international institutions/organizations as central to the *Kantian* peace, he also served as Director of United Nations Studies at Yale from 1993 to 2006. He was Chair of the Political Science Department from 1990 to 1996, but had no larger administrative ambitions.

While being based at Yale, Bruce also held a number of visiting positions both in the United States and internationally—from, for example, Columbia University, the University of Michigan, the University of North Carolina at Chapel Hill, and Harvard, to the Institut d'Etudes Europennes, Universite Libre de Bruxelles, the Richardson Institute for Peace & Conflict Research, London, the Academy of Sciences of the U.S.S.R., the Netherlands Institute for Advanced Study, the Political Science Department, Tel Aviv University, and the University of Tokyo Law School. These and other activities were often accompanied by various grants and fellowships, as well as other professional activities.[6]

As Bruce has noted, there was an even more important consequence to spending a year at Cambridge, and in his subsequent his decision to pursue a Ph.D. at Yale: "The greatest legacy of those years may have been to give me enough of the air of a man of the world to make a good first impression on a history graduate student at Yale, Cynthia Eagle. We clicked, and she was my marvellous wife for 53 years—a soulmate sharing similar interests and values, and fully my intellectual equal—or more" (Berkeley 2014). Bruce Russett and Cynthia Eagle married in 1960, and had four children—Margaret, Mark, Lucia, and Daniel. Even with her familial duties Cynthia completed her Ph.D. in 1964 and taught part-time at Yale for a number of years, before becoming a tenured full professor of History in 1990. In 2001 she became the Larnard Professor of History, the position that had been held by Gaddis Smith—the distinguished historian of American foreign policy and diplomatic history, who retired in 2000.[7] She authored three major books focusing on

[6]See Box 1.1 "Bruce M. Russett: Curriculum Vitae" for a selected list of his visiting appointments. See also Box 1.2 "Bruce M. Russett: Selected Awards, Fellowships, Honors," as well as Box 1.3, "Bruce M. Russett: Selected Professional Activities and Memberships." A complete CV, with full lists of these activities and honors can be found online at: http://afes-press-books.de/html/SpringerBriefs_PSP_Russett.htm.

[7]And, I might add, one of the members of my own dissertation committee!

nineteenth and twentieth century American intellectual life, the best known was her 1989 Harvard University Press book, *Sexual Science: The Victorian Construction of Womanhood.* She was particularly interested in women's history and women in higher education, as well as the impact of science on American culture.

In one of the autobiographical essays (Russett 2001), Bruce noted that his father was raised Catholic but became very disillusioned. Bruce's mother was Protestant. He notes that, "I was raised as a Protestant, but my identity is split" (Russett 2001: 380). In Cynthia he married 'a deeply committed Catholic.' He returned to Catholic instruction, and almost a year after their marriage, Bruce was baptized and confirmed (Russett 2001: 381). This faith has been one central component of the normative concerns that informed so much of his later work—with the treatment of war and peace, deterrence, and foreign policy being influenced by the Christian 'just war' tradition; most famously in his role of drafting the important 1983 National Council of Catholic Bishops' pastoral letter on war and peace in the nuclear age, "The Challenge of Peace." Thus, in complementing earlier personal influences, this long-lasting and central relationship with Cynthia reinforced the place of morality, ethics, and inequality in the normative foundations underlying much of Bruce Russett's scholarship. In turn, during her 13-year struggle with myeloma she called him "my strong right hand (see "Alhambra" on the volume's website)."

The accompanying boxes with lists of Bruce Russett's awards, honors, and professional activities provide some idea of his decades-long stature as a scholar of international relations. He was funded by the most prestigious national and international organizations. In addition to receiving 11 grants from the National Science Foundation, he has been awarded support from such other government related organizations as ARPA, the United States Institute of Peace, the Naval War College, the Department of Energy, and from the Fulbright-Hays program. But he was also been the recipient of multiple grants from private foundations, including Carnegie, Ford, Guggenheim, MacArthur, and Rockefeller. His work was also recognized by support from international organizations such as the United Nations, the World Bank, the German Marshall Fund.

In 1995 he was made a Fellow of the American Academy of Arts and Sciences. A reliable source has told me that he was nominated twice to the Nobel Peace Prize Committee (2006 and 2009) for his work on the liberal peace, which he began in the late 1980s, and was initially punctuated by his 1993 book, *Grasping the Democratic Peace*. This thread of Russett's research agenda picked up steam throughout the 1990s with several co-authors. However, Russett's work with John Oneal was the most important for the extension of the democratic or liberal peace to the Kantian peace. Their 2001 book, *Triangulating Peace: Democracy, Interdependence, and International Organizations* has been perhaps the single-most important contribution to the study of democracy and international conflict. It was the co-winner of the 2010 International Studies Association prize for *best book of the decade,* 2000–2009. During this same time period of work on the democratic/Kantian peace, Russett received the Lifetime Achievement Award by the Conflict Processes Section of the American Political Science Association (in 1997). He also received the quadrennial Founders' Medal for "significant and distinguished life-

long scientific contributions to peace science" by the Peace Science Society (International) in 2009. Previously, Russett was elected President of the Peace Science Society for 1977–1979, and President of the International Studies Association for 1983–1984.

The above material will provide the reader with some of the background necessary for understanding the origins of, and the connections between, the themes and directions of Bruce Russett's scholarly career to be presented in Part I. 'On Bruce Russett.' I will return to a number of points made here in the section below, 'A Scholarly Biography,' as I present and discuss the items selected to represent these themes. I am pleased to have you along on this intellectual journey.

Columbia, SC, USA Harvey Starr
December 2014

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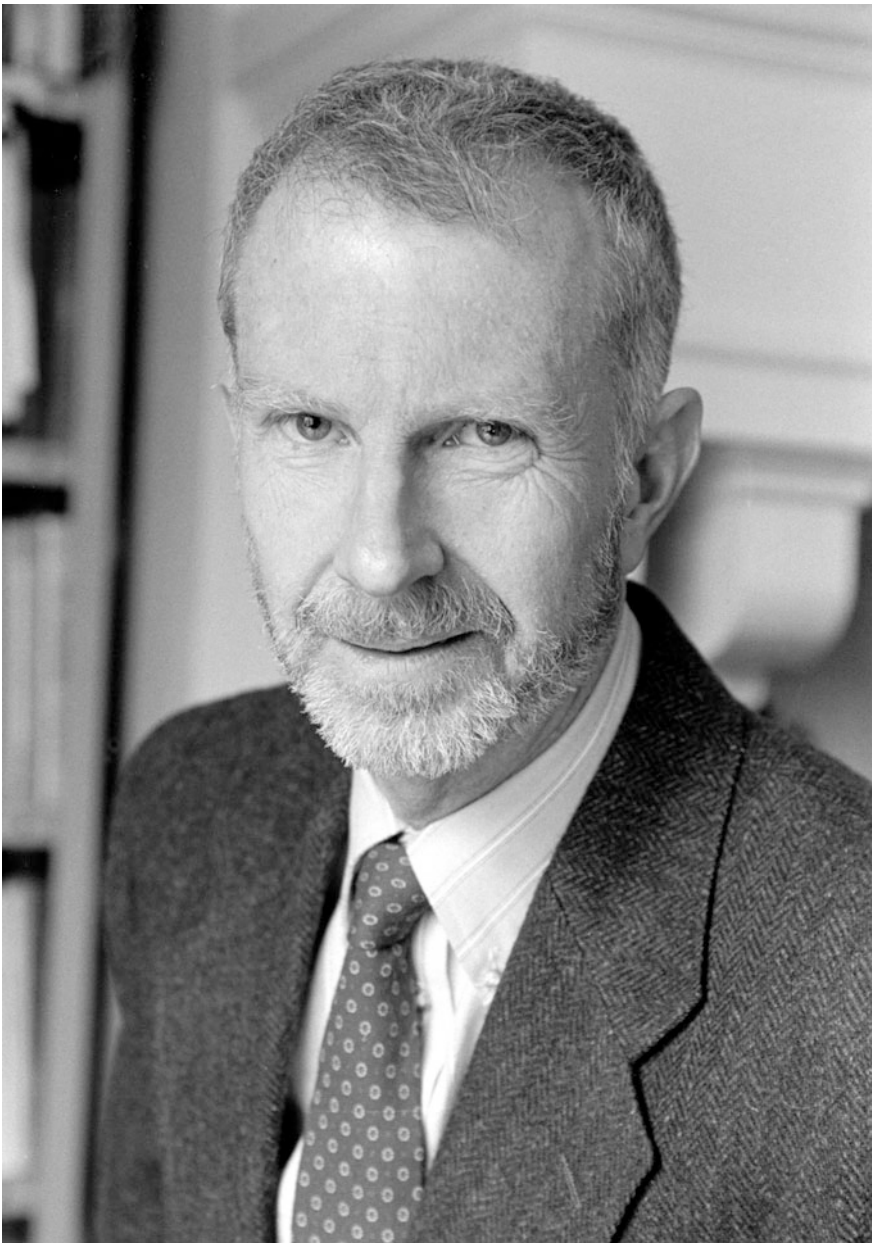

Portrait photo of Bruce Russett from his personal photo collection

Acknowledgments

My career debts are enormous, to mentors from kindergarten through Williams, Cambridge, and Yale, and to the people and institutions who subsequently made it possible. To many institutions—public and private, based in the USA, Europe and Asia—for financial support of often expensive projects that was essential to many of the publications listed in my Vita. Similarly to Yale and those institutions where I have been a short-term guest, and to the people who made me welcome there. My special appreciation goes to all the students, former students, and professional colleagues in the USA, Europe, and Israel, who served as essential co-authors. I especially think of Paul Huth and Dave Kinsella—former students and frequent collaborators over those years. Or of John Oneal, who found me more than two decades ago and shared the academic trench where we together fought and won many struggles expanding and defending what we now call the Kantian Peace in a prize book and more than 20 articles. And of Harvey Starr, who shared a chapter in *What Price Vigilance* 44 years ago, co-author of our textbook *The Menu for Choice* from its first edition to the current tenth, and in recent years the keeper of my academic history—now emerging clearly in the book he has produced here.

Finally, to Cynthia, my cherished wife and full intellectual equal for 53 years, and for the children—Meg, Mark, Lucia, and Dan—who all together made the best family I could possibly have hoped for.

November 2014

Bruce Russett
Department of Political Science
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New Haven, CT, USA

I want to thank Bruce for asking me if I would be willing to take on this task. I almost said 'assignment', but it is neither task nor assignment, but a project I was proud to accept; I hope I have done Bruce's remarkable career justice. I also want to thank Bruce for simplifying this project by writing several important autobiographical articles and chapters across his career, and providing me with additional (unpublished) autobiographical material. All of these have provided a substantial contribution to Part I of this book. These materials have allowed me to write the biographical sections that in many of the 'Pioneer Series' volumes have been *auto*biographical—and also presented by the scholar being honored. While this volume is 'mine' in terms of final content, Bruce has been a welcome and active adviser in all aspects of the book. His assistance on this project has been invaluable, as has his career-long role as mentor and friend.

Just as invaluable, in quite different ways, has been the assistance and guidance of Hans Günter Brauch, editor of the *Pioneers in Science and in Practice* series. From the long (and I assume tedious) task of copyediting the selected articles, to his work regarding permissions, to putting together the many components of this book, Hans Günter has my deepest appreciation and thanks. Thanks also to all of those at Springer who have assisted with this book.

November 2014

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Bruce Russett and Adam Falk, the President of Williams College, 2011, receiving an honorary doctorate from Williams. *Source* This photo is from the personal photo collection of Bruce M. Russett who granted permission to include it here

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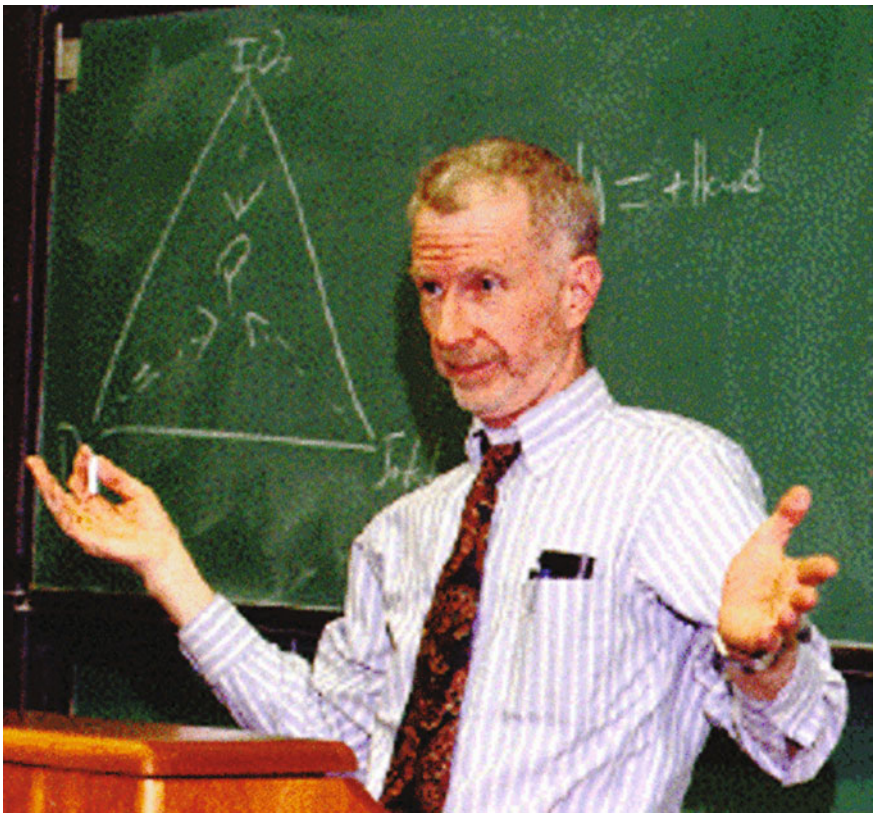
Bruce and Cynthia along with Nils Petter and Uri Gleditsch, Norway, 2009. *Source* This photo is from the personal photo collection of Bruce M. Russett who granted permission to include it here

Part I
On Bruce M. Russett



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Lecture in Athens, 2006. *Source* This photo is from the personal photo collection of Bruce M. Russett who granted permission to include it here

Chapter 1
A Scholarly Biography

Bruce Russett's work has made an impact on the study of international relations. The broad scope of this work, as well as points developed in the biographical material of the Preface, begin to underscore why his contributions to the study of international relations cannot be easily characterized or pigeonholed. To recap, he has produced important and pioneering work in:

- the study of war and peace, conflict and cooperation, and conflict management
- the application of economics to the field of international relations; including dependency, development and inequality, as well as the effects of trade
- international integration theory and processes
- the UN system
- deterrence (extended deterrence; "calculus of deterrence") and arms control
- the domestic influences on foreign and security policy in democratic polities (such as defense spending, business elites, public opinion and foreign policy) focusing on the study of domestic political and economic constraints on foreign and national security policy, based on questions of interest and community
- the democratic peace
- methodology
- data collection

Adding to the difficulty of finding a simple label, is the productivity and longevity of Russett's career: 28 books and over 250 articles and chapters. And, while this array of topics might seem too diverse, a careful study of the development in Russett's scholarship would reveal how each area has roots in a central concern with conflict and cooperation, the consequences of conflict, and the management of conflict. Additionally, all these areas are linked by three connecting threads: a concern with policy to deal with the consequences and management of conflict; relationships across levels of analysis, looking at and linking domestic factors and processes with external forces; and perhaps most important (but also perhaps not as apparent) contextualizing the concern with 'doing good' within an understanding of norms, morality and ethics.

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Wedding of Bruce Russett and Cynthia Eagle Russett (with nephew Kurt Behnke at right), June 18, 1960, Dundalk, MD. *Source* This photo is from the personal photo collection of Bruce M. Russett who granted permission to include it here

It is difficult to characterize or label Russett's work and contributions, not only because of his productivity and the many areas he has dealt with, but because of the thoroughly *eclectic* way he has approached these topics in terms of broad perspectives, theories, and methods (as he notes in the preface to his first volume of collected articles; see Russett 1974: xi). In his first intellectual autobiographical piece 2 years later he notes (1976: 5), "The reason, of course, is that I have not worked, over the 15 years since receiving my Ph.D., within a single paradigm." He has commented at various points during his career that certain interests and approaches regarding strategy and deterrence might place him within a Realist perspective, but one that was always tempered by his concern with decision making (and game theoretical approaches), domestic conditions and morality. He has also been wary of those who call for constructing a single paradigm for IR, being more concerned with the scientific *cumulation* of evidence and theory building (1976: 31; see also Most/Starr 1989).

In regard to methodological eclecticism Russett has also observed (1976: 36) that: "it seems important, even when looking at a particular set of variables or a particular problem, that the discipline remain committed to an eclectic, *multimethod approach*, and also one prepared to work at more than one level of analysis." I have italicized these words to indicate how Russett was crossing methodological boundaries, and urging only thoughtful and appropriate application of scientific and quantitative approaches while foreshadowing the current trend toward multimethod research—but doing so 40 years ago! (see also 1974: ix). In the Preface to his 1974 collection, Russett makes two key points that have characterized his approach to the study of international relations. He notes that "the study of international politics must not be limited to the practitioners of any single, narrow set of methods," and consequently, "It is simply a matter of recognizing that a good carpenter carries a diverse kit of tools, not just a hammer" (Russett 1974: xi).

Box 1.1: Bruce M. Russett: Curriculum Vitae

Dean Acheson Research Professor of International Politics and
Professor of International and Area Studies in the MacMilllan Center, Yale University
Editor, *Journal of Conflict Resolution*, 1973–2009
Born 1935, North Adams, Massachusetts
Married to Cynthia Eagle Russett (Larned Professor of History at Yale), died 2013
Four children, Margaret, Mark, Lucia, Daniel, three grandchildren, Jacob, Zoe, Thea Russett

Degrees:

- B.A., Political Economy (Highest Honors), magna cum laude, Williams College, 1956
- Diploma in Economics, King's College, Cambridge University, 1957
- M.A., Ph.D., Political Science, Yale University, 1958, 1961

Honorary Doctorates:

- Uppsala University, 2002
- Williams College, 2011

Positions:

- Instructor in Political Science, Massachusetts Institute of Technology, 1961–62
- Assistant Professor, Political Science, Yale University, 1962–66; Associate Professor, 1966–68; Professor 1968–85; Dean Acheson Professor 1985; Dean Acheson Research Professor 2011. Director, World Data Analysis Program, 1962–73; Director of Graduate Studies, Political Science, 1970–72; Chair, International Relations Council, 1970–73;

76–77; Director of Graduate Studies, International Relations, 1974–79; Coordinator, International Security and Arms Control Program, 1985–88; Chair, Political Science Dept., 1990–96; Director, United Nations Studies at Yale, 1993–2006

- Visiting Positions at: Columbia University, 1965; Mental Health Research Institute, University of Michigan, 1965–66; Institut d'Etudes Europeennes, Universite Libre de Bruxelles, 1969–70; Visiting Scholar, Richardson Institute for Peace & Conflict Research, London, 1973–74; Academy of Sciences of the U.S.S.R., 1974; Institute of World Affairs, summer 1976; Institute for Research in Social Science, University of North Carolina at Chapel Hill, 1979–80; Netherlands Institute for Advanced Study, 1984; Political Science, Tel Aviv University, 1989; Chair of International Capital Markets Law, University of Tokyo Law School, 1996; Government Department, Harvard University, 2001

The place to begin, as in the list above, is with Russett's overarching concern with war and peace—an interest forged in living through World War II. Much of his writing throughout his career has been about war and conflict—and the ways it can be managed peacefully. This flip side, with Russett looking at stability and cooperation, was acknowledged in the Introduction to his first book of collected essays (Russett 1974: 1), where he notes: "The common theoretical concern that flows throughout most of the following papers addresses the conditions under which nations can act cooperatively." Russett's deep interest in integration theory, especially that of Karl Deutsch which focuses on 'security communities' where states have dropped the option of using military force against one another, was one important pathway used by Russett to investigate the possibility of stability and cooperation in international relations.[1]

Beginning with his dissertation (see Russett 1963), Russett returned again and again to the issues raised by the study of integration: what builds community among people, how group ties are created and maintained, how they can disintegrate, and how they affect conflict and cooperation. The reader can find all these ideas represented by the second article included in Part II, "Transactions, Community, and International Political Integration." Russett's studies of dependency, inequality and development, collective goods, international organizations (including alliances as well as the United Nations), and the democratic peace, are all connected by concepts related to the social integration process.

This forging of positive ties resonates throughout Russett's work on international organization, the United Nations, and cooperative and coordinated solutions to collective action problems in the formally 'anarchic' Westphalian international system. Indeed, Russett was one of the first IR scholars to discuss and utilize the

[1]In Starr (1992, 1997) I demonstrate that the 'democratic peace' is, indeed, explained by the social community/responsiveness theory underlying the creation of Deutschian security communities.

work of economist Mancur Olson, and his models of collective goods and collective action (see Russett 1970; Russett/Sullivan 1971). Thus, working with Deutsch's model of integration both reflected and reinforced Russett's background in economics, and influenced Russett's importance in bringing greater use of economics to the study of international relations.

In many ways Russett's concern with forging positive integrative ties culminates in his work on the democratic peace which is based around one simple proposition: that two developed and recognized democratic states do not go to war against each other (see especially the 1993 book, *Grasping the Democratic Peace*). The strands of Russett's work on democracy, democratic theory and democratic peace, come together with his work on international organizations and the integrative effects of positive economic interactions, in the book that summarizes Russett's groundbreaking project moving the democratic peace to the more expansive Kantian peace: the 2001 book by Russett and Oneal, *Triangulating Peace: Democracy, Interdependence, and International Organizations*.

Box 1.2: Bruce M. Russett: Selected Awards, Fellowships, Honors

- Phi Beta Kappa, 1955
- Social Science Research Council Grant, 1962
- National Science Foundation Grants, 1964, 1965, 1969, 1977, 1979, 1985, 1988, 1989, 1990, 1995, 1998
- ARPA, Behavioral Sciences, Contract, 1967
- Fulbright-Hays Awards (Belgium, 1969–70; Israel, 1989)
- Guggenheim Fellowships, 1969–70; 1977 (declined)
- What Price Vigilance? The Burdens of National Defense, won the 1971 Gladys Kammerer Award from American Political Science Association for best book on U.S. public policy.
- Naval War College, Advanced Research Office Contract, 1973–74
- German Marshall Fund, Common Problems Fellowship, 1977
- U.S. Department of Energy, Office of Solar and Conservation Contract, 1979
- United Nations, Centre for Disarmament Contract, 1979
- World Society Foundation (Switzerland) Grants, 1984, 1990, 1997
- United States Institute of Peace Grants, 1987, 1990
- Carnegie Corporation of New York Grants, 1988, 1994, 1996, 1997
- John D. and Catherine T. MacArthur Foundation Grants 1988 (2), 1991
- International Research and Exchanges Board Grant for Cooperative Research, 1992
- Ford Foundation Grants, 1993, 1994, 1997
- Rockefeller Brothers Fund Grants for conferences, 1994, 1996, 2001
- Fellow, American Academy of Arts and Sciences since 1995
- Distinguished Scholar Award, Foreign Policy Analysis Section, International Studies Association, 1996

- Korea Foundation Grant, 1997
- Lifetime Achievement Award, Conflict Processes Section, American Political Science Association, 1997
- World Bank Grants, 2001, 2002
- Peace Science Society (International), Founders' Medal awarded quadrennially for "significant and distinguished life-long scientific contributions to peace science," 2009
- Triangulating Peace: Democracy, Interdependence, and International Organizations (with John Oneal), co-winner of the 2010 International Studies Association prize for best book of the decade 2000–09
- Consultant, One Earth Foundation, 2012
- Essential Science Indicators most cited armed conflict researcher 1996–2006
- Interview at http://esi-topics.com/armed-conflict/interviews/BruceRussett.html

Crucially, conflict management had another salient dimension in Russett's work—the various processes of deterrence that can work to avoid war or major violent conflict. Many of Russett's early articles were concerned with strategic relations and deterrence, a theme picked up again in his work in the 1980s co-authored with Paul Huth. The first of Russett's articles included in this volume, "The Calculus of Deterrence," originally published in 1963, began a career-long theme linking deterrence theory to deterrence policy, especially in regard to extended, or third party deterrence. Russett investigated under what conditions would major power deterrence work to prevent an overt attack on an ally—under what conditions and policies would such deterrent threats succeed or fail, and how might extended deterrence avoid undesired war. Just as IR scholars came to realize in their earlier work on the balance-of-power, if deterrence (which can be seen as one form of balance-of-power) works then there is peace; if it fails, then war. This agenda has also led him to investigate the ethical dimension of national security and nuclear strategy, particularly in the application of just-war criteria to nuclear situations, as well as the development of his concept of 'counter-combatant deterrence' as an alternative to 'mutual assured destruction.' Almost all of Russett's work on domestic national security and strategy (and their policy implications) either stemmed from, or was directed at, the processes, mechanics, and utility of deterrence, and how these phenomena could be measured and studied.[2] Prominent examples of this work include his famous *American Political*

[2]In a 2008 panel honoring the career of Bruce Russett (Annual Meeting of the American Political Science Association, Chicago), Bruce Bueno de Mesquita commented on this article and how it reflected Russett's strengths as a scholar: "Way back in 1963 Bruce wrote 'The Calculus of Deterrence.' Here was as far as I know the first serious, quantified attempt to figure out when deterrent threats were credible—Bruce used that exact vocabulary back then—and when they were, in modern parlance, cheap talk. He did expected utility calculations and produced some neat

Science Review article, "Who Pays for Defense" (1969), and his award winning book *What Price Vigilance?* (1970).

In sum, for Russett the study of war encompassed the study of peace, cooperation and coordination, and stability. Not only did this entail major theoretical issues, but issues of policy, morality and research design issues as well. It is of great interest to note how Bruce Russett's scholarly career reflects, but also bridges, a great divide in approaching the study and understanding of international relations. World War I, and even more so World War II, brought devastation and instability to Europe. Emigrés from Central and Eastern Europe to the United States included such giants of IR as Hans Morgenthau and John Herz. Morgenthau was born in Coburg, Germany in 1904 and Herz in 1908 in Dusseldorf; Morgenthau came to the United States in 1937 and Herz in 1939. Both men were stout Realists who looked towards the military balance-of-power as the crucial way to maintain order and prevent another catastrophe such as the Second World War. However, the two intellectual giants of the broad, Liberal theories of integration—and thus the study of cooperation and coordination as fundamental to achieving stability and the peaceful management of conflict—were also emigrés: Karl Deutsch, born in Prague in 1912, and Ernst Haas, born in 1924 in Frankfurt. Both emigrated to the United States in 1938. Bruce Russett was born in 1935 and came to political awareness during WWII. Although studying under Deutsch at Yale, Russett, as just discussed, found a way to bridge the two European-based responses to catastrophic war—responses grounded both in Realism and Liberalism.[3]

This ability to '*cross-boundaries*' characterizes almost all of Russett's work, and is one the great strengths that has made his scholarship so influential. I have noted elsewhere that while boundaries can be useful in clarifying limits or simplifying our studies, "boundaries also often loom as *barriers*, which can hinder how we think about phenomena, how we theorize about phenomena, and how we study the world about us" (Starr 2006: 1). Russett's work has crossed boundaries between disciplines (especially with economics), subfields of Political Science (especially across IR and Comparative Politics; see Russett 2003), broad perspectives on IR (noted above), methodologies, 'quantitative' and 'qualitative' distinctions, empirical theory and normative theory, and basic research and applied policy research. As Russett has explicitly stated, "Normative theory, positive theory, and empirical investigation are complementary, not exclusive or conflicting" (2006: 14).

Russett's work has also crossed (and re-crossed) levels of analysis—which include macro- and micro-approaches as well as domestic and foreign/internal and external approaches. Note that Part I of the Russett and Starr textbook, *World*

(Footnote 2 continued)
results. While many saw the ideas behind Schelling's earlier work and wanted to argue with it, Bruce saw not only abstract ideas, but a practical way forward to turn ideas into measurement and measurement perhaps into tools that would lead to better decisions".

[3]Note that it was not only the European context, but all of these figures were Jewish (by blood if not practice), as was Haas' functionalist predecessor David Mitrany, who left Romania for Britain in 1908 and later became a British citizen.

Bruce with Takahiko Kamo his first Japanese Ph.D. student (far *right*) and his wife, in Japan, 1967. *Source* This photo is from the personal photo collection of Bruce M. Russett who granted permission to include it here

Politics: The Menu for Choice, first published in 1981, was consciously organized around levels of analysis—but also addressed each of the other boundary crossing activities presented above. This textbook, now in its 10th edition, is probably the best single work representing the sprawling scholarly range of Bruce Russett, with analysis of the interaction between politics and economic development, the equity of the distribution of economic and political payoffs within and between groups, domestic interests/values/loyalties, democracy, issues of war and peace, and ultimately comparing and contrasting the results of transnational and social integration-based analyses to the predictions of Realist models.

Box 1.3: Bruce M. Russett: Selected Professional Activities and Memberships

- Editor, Journal of Conflict Resolution, 1972–2009
- Editorial/Advisory Boards or Consultancies for: *Commonwealth; Comparative Political Studies; Conflict Management and Peace Studies; Cross Cultural research; Current History; Defense and Peace Economics; Global Governance; The Independent Review: A Journal of Political Economy; International Interactions; International Organization; International Relations of the Asia Pacific; Journal of Conflict Resolution; Journal of Peace Research; Journal of Policy*

Modeling; International Studies Quarterly; Peace Research and European Security Studies; *Review of Politics; Sage Professional Papers in Comparative Politics*; Merriam Series on Analytic Political Research (Lynne Reiner, publishers); Columbia International Affairs Online

- Consultancies for: Bendix Aerospace Division, 1964–72; System Development Corporation, 1965–66; RAND Corporation, 1966–70; General Electric TEMPO, 1966–70; Pacific Sierra Research Corporation, 1980–81; Sparta, Inc., 1993; Centro Alti Studi per la Difesa, Rome, 2006; German Research Foundation (DFG), Bonn, 2007; National Security Innovations, 2011

Other Major Activities in Chronological Order

- Executive Committee, Inter-University Seminar on Armed Forces & Society, 1972–76
- Member, Board of Directors, Human Relations Area Files, 1976–80, 1992–96
- Co-Director, Roper Center, Inc., 1978–79
- Principal Consultant, U.S. Catholic Conference, Pastoral Letter, The Challenge of Peace, 1981–83
- Member, National Science Foundation delegation to establish joint research on international relations with Peoples Republic of China, 1983
- Council member, Data Development for International Relations project, 1986–88
- Member, National Science Foundation, Political Science Advisory Panel, 1988–90
- Member, Disciplinary Advisory Committee, Council for International Exchange of Scholars, 1992–93
- Member, Board of Advisors, International Institute of Contemporary Geopolitics, Jawaharlal Nehru University, New Delhi, 1993–99
- Member, International Academic Advisory Board, BESA Center for Strategic Studies, Bar-Ilan University, Israel, 1993–2006
- Co-Director (with Paul Kennedy), Secretariat, Independent Working Group on the Future of the United Nations, 1993–96; Report, The United Nations in Its Second Half-Century (New York: Ford Foundation, 1995, in English, French, German, Japanese, and Spanish)
- Member, The Global Commission to Fund the United Nations, 1994–98
- Member, Working Advisory Group to the United Nations University on "The United Nations System in the 21st Century," 1995–96
- Member, Council on Foreign Relations Independent Task Force for report, American National Interest and the United Nations, 1996
- Member, UNESCO International Panel on Democracy and Development (Boutros Boutros-Ghali, Chair), 1998–2001
- Peer Review Panel, European Science Foundation, 2010

- Lectures, conference presentations, etc., at over 100 institutions in the United States and over 80 abroad, including lecture series at: Consejo Argentino de Relaciones Internacionales, Buenos Aires; National Institute for Defense Studies, Tokyo; University of Catania; University of Oslo; Uppsala University; Yugoslav Social Science Institute

Memberships:

- American Political Science Association (Council member, 1984–86)
- International Political Science Association (Chair, North American Advisory Council, 1977–80)
- International Studies Association (President, 1983–84)
- Peace Science Society (International) (President, 1977–79; Council member, 1969–75)

The textbook, through its multiple editions, also reflects Russett's admonition that as the questions raised about international relations are constantly changing in importance, they need to be revised and revisited, and especially in terms of levels of analysis (Russett 1974: ix). A review of the bibliography of selected works found in Section I.2 demonstrates that Russett not only recognized the 'causal complexity' of international relations/international politics/world politics decades before this term was used in IR scholarship, but developed the research designs appropriate to investigate the central phenomena and concepts of the field.

One of the key strategies with which to deal with causal complexity is to think about international politics using an agent-structure approach, whereby the decision-making and implementing agents of world politics are seen to act within various environments or environmental structures. This approach was earlier taken in the work of Harold and Margaret Sprout, and their 'ecological triad' of the entity, the environment, and entity-environment relations (e.g. Sprout/Sprout 1965). Russett introduced me to the work of Sprouts in his IR Theory seminar at Yale, and it has been the foundation of my own agent-structure framework of 'opportunity and willingness', which served as part of the organizing framework for *World Politics: The Menu for Choice*. The 'Menu' analogy was Russett's insightful and useful shorthand for the requirement that an agent-structure approach had to cross levels of analysis:

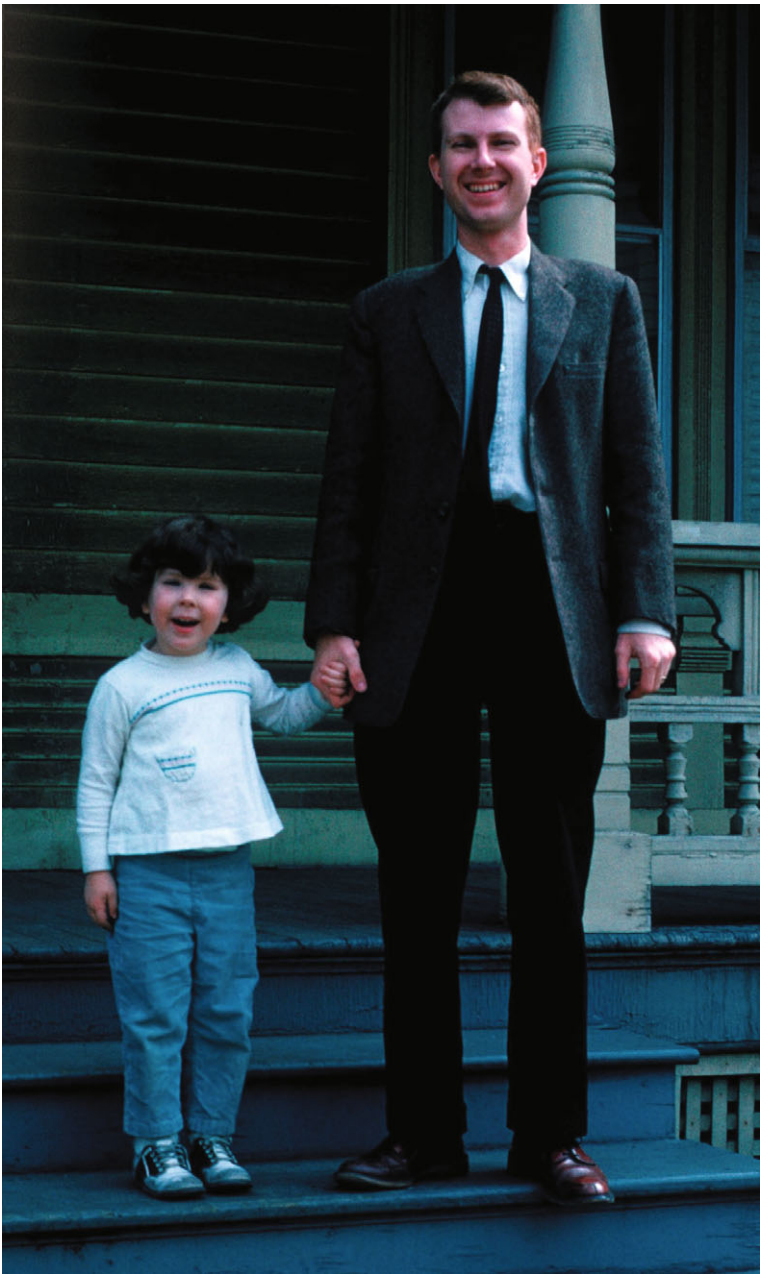
> Opportunity, willingness, and the relationships between the decision-making entity and its environment can be summarized and brought together through the analogy of a menu. The person (entity or actor) who enters a restaurant is confronted by a gastronomical environment—the menu. The menu provides a number of behavioral opportunities, not determining the diner's choice but constraining *what is possible*… The menu also affects *the probability* of the diner's choice through price, portion size, specials, and the restaurant's reputation for certain dishes. In an Italian restaurant whose menu proclaims that it has served pizza since 1910 and offers over fifty varieties at low prices, a diner is most probably going to order a pizza. The restaurant, however, offers other selections as well, and the probabilities they will be ordered are affected by *how a diner sees* those choices. Knowing a patron's palate and resources, as well as the patron's perception of the menu, permits us to

This photo was taken in August 1970 in Belgium and shows Bruce Russett with his wife and their four children (from *left* to *right*): Lucia, Mark, Daniel, Margaret. *Source* This photo is from the personal photo collection of Bruce M. Russett who granted permission to include it here

> analyze and predict his or her choice of entrée. The menu analogy is helpful for understanding that the opportunities presented to international actors are constrained in various ways and that these constraints affect the willingness of decision makers to act (Kinsella et al. 2013: 20; emphasis added).

The way Russett's work addressed war and peace as a mixture of conflict and cooperation necessitated the use of multiple levels of analysis and agent-structure approaches. Much of his initial work was at the macro-level, looking at the effects of the international system on the processes and probabilities of war (see Russett 1972, 1976). As a side note, Russett also returned to these concerns much later in his career, as seen in the 2011 edited volume of his own articles, *Hegemony and Democracy*. While drawing on later work on the democratic peace, this volume returned to macro-concerns of dominance and hegemony, and whether 'democratic hegemony' could possibly be a systemic condition for stability and peace; (but note that this work also neatly pulls together many key themes in Russett's work—war and peace and the systemic impact of having a hegemon, the interaction of economic resources/power and military resources/power as part of conceptualizing hegemony, and policy in the form of American foreign policy).

Returning to research strands beginning earlier in Russett's career, the work on deterrence (and thus arms races, etc.) was also addressed with game theoretic models developed to explore non-zero sum mixed-motive games (or situations) such as the prisoner's dilemma. Thus, deterrence required not only measurements of 'power' and how states stood in relation to one another based on such power, but



This photo shows Bruce Russett with his daughter Margaret. It was taken from the personal photo collection of Bruce M. Russett who granted permission to include it here

This photo of Bruce Russett and his family was taken in 1972: Bruce, and children (from *left* to *right*) Daniel, Lucia, Mark and Margaret; behind are Cynthia, and Bruce's mother, Ruth. *Source* This photo is from the personal photo collection of Bruce M. Russett who granted permission to include it here

also measurements of threat, including the perceptual and psychological aspects of decision makers and decision making. As captured in models of game theory, we see the influence of economics, modeling, and rational choice models on Russett's analyses. In addition, the non-zero sum nature of games such as 'chicken' and the prisoner's dilemma resonated with Russett's concern with 'stability' and how to obtain it in order to avoid war.

Here, as in many other areas, the macro-level was seen as a set of constraints within which decision makers had to make choices. Even in the earliest works on national security, strategy, and policy Russett introduced elements of morality to deterrence and the prisoner's dilemma (1974: 6). As was made clear in the Russett and Starr textbook, decision making 'entities' were embedded in overlapping layers of 'environment'—not just the world or international system, but the state (society, economics, public opinion, etc.), the governmental environment of institutions and practices, but also the roles and idiosyncratic factors which affect every individual. It is also important to understand that the concern with multiple levels of analysis, especially at the societal, governmental and individual levels, constituted a career-long challenge to the foundational principles of Realism, as was his insistence that morality and ethics be part of our analytic structure as well (as opposed to the Realist approach that privileged 'expediency' in foreign policy).

Bruce and family in Istanbul on the occasion of Bruce and Cynthia's 50th anniversary in 2010. *Source* This photo is from the personal photo collection of Bruce M. Russett who granted permission to include it here

Much of Russett's work from the late 1960s to the mid-1970s (five of the eight books published) focused on various elements of the domestic environment that made up "subnational influences on United States national security policy" (Russett 1976: 34), for example: *What Price Vigilance? The Burdens of National Defense* (1970); *Military Force and American Society* (1973); *Interest and Ideology: The Foreign Policy Beliefs of American Businessmen* (1975); as well as the later work, *Controlling the Sword: The Democratic Governance of National Security* (1990). This theme in Russett's scholarly career is captured in the article, "Defense Expenditures and National Well-Being," published in 1982 and reproduced in Part II. Many scholars still consider the study of domestic influences on foreign policy to be Russett's foremost contribution to IR and foreign policy. For example, in his 2008 comments, Bueno de Mesquita praised Russett for his work on defense expenditures: "Here, while almost the entire field was busy worrying about poles and polarity or power balances or imbalances (and sadly, as I see it, they still are), Bruce was pondering the domestic consequences of domestic choices over national security. He was easily a quarter of a century ahead of the field."

One aspect of Russett's scholarship presented in this volume, but often missed in the discussion of his work, is that the substantive and methodological components of Russett's scholarly agenda and output were linked to normative concerns arising from an interest in the conditions and causes of war and peace. His first encounters with international politics as a child, his faith, and later his association with Karl Deutsch at Yale all reinforced his scientific commitment *and* influenced his

This photo was taken in 2006 at Lucia's and John Shelby's wedding and is from the personal photo collection of Bruce M. Russett who granted permission to include it here

concerns with war and peace as well. These normative concerns moved beyond war and peace to issues of *justice and fairness* that, with his background in economics, helped guide his study of development, dependency, and especially inequality. Russett's normative concerns are closely linked to his faith, his Catholicism. He has noted that during the Vietnam war he "discovered the Christian just-war theory and decided that the war was neither in the national interest nor just" (Russett 2001: 382). Russett could not reconcile a strategy based on the destruction of millions of innocent civilian lives—actual or threatened (Russett 2001: 382) with just war theory, and noted, "Realists are not supposed to be bemused by such matters" especially in regard to strategic homeland nuclear deterrence. I think this longish excerpt represents well the relationships between Russett's ethical and normative concerns, real world policy, and his approach to social science (Russett 2001: 383):

> I was (and am) not a pacifist, but as a Catholic (though a leftish one suspicious of authority in the ecclesiastical realm as well) I had to take the just-war tradition seriously at the same time that nuclear deterrence seemed existentially inescapable… So I tried to reconcile just-war principles with *some* form of nuclear deterrence in what I called a 'countercombatant' strategy intended to concentrate on permissible military targets while largely sparing civilians… I acknowledged all those problems at the time and have continued to try to ease them by narrowing the circumstances of, and emphasizing the need for restraints on, any possible use…Like my book on World War II, this work alienated some of my friends on the left (I was challenging their accepted wisdom too)…

In studying deterrence as related to war and peace, we can also see the influence of Deutsch. Russett has written (1989: 333): "Moreover, nuclear deterrence is a

miserable way of avoiding war, and for most of international relations it is irrelevant. People have learned to live peaceably in 'security communities' without the threat of mutual military violence. Karl Deutsch alerted me to that phenomenon, but we still don't properly understand its causes and we must. In this sense idealism—a conviction that we have to be able to change the rules of global behavior as well as to understand what they currently are—drives my research program…"

Note also that the 1989 chapter cited above was titled, "Confessions from the Normative Closet," and in 2001 he wrote a chapter called, "Science, Faith, and World Politics." Many of Russett's substantive concerns, using a range of scholarly methods were explicitly applied to a 2004 co-edited volume titled, *Governance, Accountability, and the Future of the Catholic Church.* A milestone activity, that brought Russett's academic expertise together with both ethical and policy concerns, was his role as the principal adviser to the U.S. Catholic bishops for their 1983 pastoral letter on war and peace: "The Challenge of Peace."

The Letter was directed to the danger that nuclear weapons pose for the entire world—to "human life" and "human civilization." The arguments presented rest fully on the foundations of the just war doctrine. Conclusions about deterrence included, in part: "No use of nuclear weapons which would violate the principles of discrimination or proportionality may be intended in a strategy of deterrence. The moral demands of Catholic teaching require resolute willingness not to intend or to do moral evil even to save our own lives or the lives of those we love… Deterrence is not an adequate strategy as a long-term basis for peace; it is a transitional strategy justifiable only in conjunction with resolute determination to pursue arms control and disarmament."

The ethical and moral components of Russett's analysis of policy dealing with deterrence, war, and arms is represented in this volume by the last article included in Part II, "Ethical Dilemmas of Nuclear Deterrence" (originally published in 1984). Russett has explicitly called this piece "a normative chapter, reflecting on my experience in helping to craft" the 1983 pastoral letter of the U.S. Conference of Catholic Bishops (Russett 2006: 10). The chapter combines 'moral logic' with an understanding of nuclear deterrence based on systematic empirical analysis. As Russett has noted, this chapter, as in the Bishops' letter, "concludes that deliberate strikes against civilian populations… are morally unacceptable. This position derives from just war analyses preceding nuclear weapons, and it continues to apply to conventional weapons as well as weapons of mass destruction" (2006: 9).

Russett (2006: 11) specifically asserts that his thinking on the various issues and phenomena that he has studied across the years did not derive from trying to untangle "pure theoretical puzzles" but from his moral concern about peace and justice in the world, and how to find the best ways—that is, *policy* (!)—to achieve them. But, as noted, Russett's strength lies in bringing together rigorous basic research (theory) and policy, within a coherent normative context. He has also asserted (2001: 388), "To make normative arguments relevant and helpful, there is an essential role for systematic empirical social science, and I did a lot of that."

Russett's boundary crossing studies between political science and economics drew not only from his time at Williams College and King's College, Cambridge, or

from his relationship with Karl Deutsch in terms of both the economic bases to integration or Deutsch's interest in large scale data sets and data analyses which encompassed many economic variables—but from the same normative foundation that influenced his study of war, peace, and justice. Much of Russett's 2006 edited volume *Purpose and Policy in the Global Community* was devoted to his research, and its policy implications, in the area of economic development and economic relations within the global political-economic system.

Some of Russett's earliest articles addressed economic inequality, and the relationships between rich states and poor ones (e.g. Russett 1964). A classic piece on this topic—and one of the articles Russett was most proud of, was the 1978 article, "The Marginal Utility of Income Transfers to the Third World" that appeared in *International Organization*. Along with the project on dependency/dependencia undertaken with a number of his students in the 1980s, much of Russett's work in international political economy reflected his concern with socio-economic global inequalities, the relationship between inequality and domestic instability, and how such internal instability affected *international* stability and peace (Russett 2006: 2). This theme is represented in Part II by the much more recent 2004 article, "The Comparative Political Economy of Human Misery and Well-Being", which looks at quality of life issues—such as health and longevity—and disparities found across states. By looking at the effects of income inequality and poverty, as well as other elements that can be found in much of the contemporary literature on development and failed states, this piece highlights Russett's concern with the human costs of economic and strategic policy—that is, human security.

It strikes me as fitting that the majority of scholars would probably consider Russett's work on democracy and the democratic peace to be the most important and influential of his career (as does he; see the Preface). While part of his continually evolving and expanding research program, it is where questions of war, peace and stability; conflict, cooperation and integration; inequality and human security; and ethics and morality—all meet. It captures the interaction of domestic and foreign policy, crossing levels of analysis as well as pointing out the importance of two-level games, and thus continuing the critique of the key principles of Realism. More crucially, just as with integration, his work conceptualizing, measuring, and empirically investigating the democratic peace revealed patterns of foreign policy behavior that Realists had claimed to be impossible.

Crossing disciplinary boundaries, Russett's work on the democratic peace was co-authored with anthropologists and historians as he looked for additional laboratories in which to conduct quasi-experiments that could support the democratic peace proposition, or reveal its limitations. His work on the democratic peace also demonstrated his eclecticism in using a range of data, with different modes of data collection and data analysis—small-N and large-N studies, rigorous argument from multiple perspectives—and demonstrating how science progresses as each new finding or theoretical twist opened up new sets of implications to be investigated. Thus, the democratic peace research program also reflected Russett's earliest concerns with scientific cumulation (see, Russett/Starr 2000).

And, as discussed earlier, a transformative contribution of Russett's work was the way his scholarship expanded the agenda of the democratic peace both theoretically and empirically, transforming it into the Kantian peace. He does so by bringing together the democratic peace proposition, economic interactions, and the interactions generated by common memberships in international organizations.[4] The Kantian peace project that Russett undertook with John Oneal is represented in Part II of this volume by "The Kantian Peace: The Pacific Benefits of Democracy, Interdependence, and International Organizations, 1885–1992" (1999).

A few concluding comments are in order. A 'pioneer' must have many strengths, and perhaps one of these is usually overlooked—courage—an aspect of Russett's career emphasized in Bueno de Mesquita's 2008 panel remarks. It took courage to be in the forefront of bringing systematic empirical research with large-N data sets to the study of international relations, or in introducing rational choice models to the study of deterrence and arms control. Russett's challenges to deterrence theory as well as accepted Realist assumptions, especially concerning the democratic peace, took courage. As a confirmed social scientist he could challenge those of the left and Liberal positions as well, especially if policy raised issues of morality and ethics. As Bueno de Mesquita observed: "And Bruce has shown monumental courage in his career. In the early 70s he wrote *No Clear and Present Danger*, in which he argued, in essence, that there was no need for the United States to declare war on Japan after Pearl Harbor. You can imagine that this was not a popular view, not even in the days of intense anti-Vietnam War sentiment. I looked up several of the reviews of Bruce's book—they were often downright nasty. But Bruce had an idea and he had evidence that he thought should see the light of day and be debated and he did not hesitate to subject himself to the heat doing so implied."

What Bueno de Mesquita is saying is that courage also entails not shrinking from debate, and that unlike Hans Morgenthau who wrote that he would not stoop so low as to respond to his critics, Russett had the "strength of character and intellectual openness" to do exactly that: "Responding to critics is, of course, not stooping low, it is raising one's head and opening one's eyes to the logic and the evidence behind the debates that advance our understanding of how the world works. Bruce never flinched from doing so" (Bueno de Mesquita 2008 remarks).

That Bruce Russett was always willing to debate critics over theory, method, or policy might most easily be explained by a simple statement of how he perceived his work, his role as a scholar, and the place of scholarly research: "I write occasionally for popular consumption, but mainly leave that activity to those with greater felicity and surer conviction. My chief audience is academic and professional because I believe that principles derived from disciplined inquiry do, in the long run, help shape social reality. Learning and teaching remain fun—and perhaps the best is working with good graduate students. Mostly I do social science because I enjoy it" (1989: 34).

[4]Students of Deutsch's social communications model of integration will recognize that Russett's focus on increased and positive transactions is fundamental to the Kantian peace.

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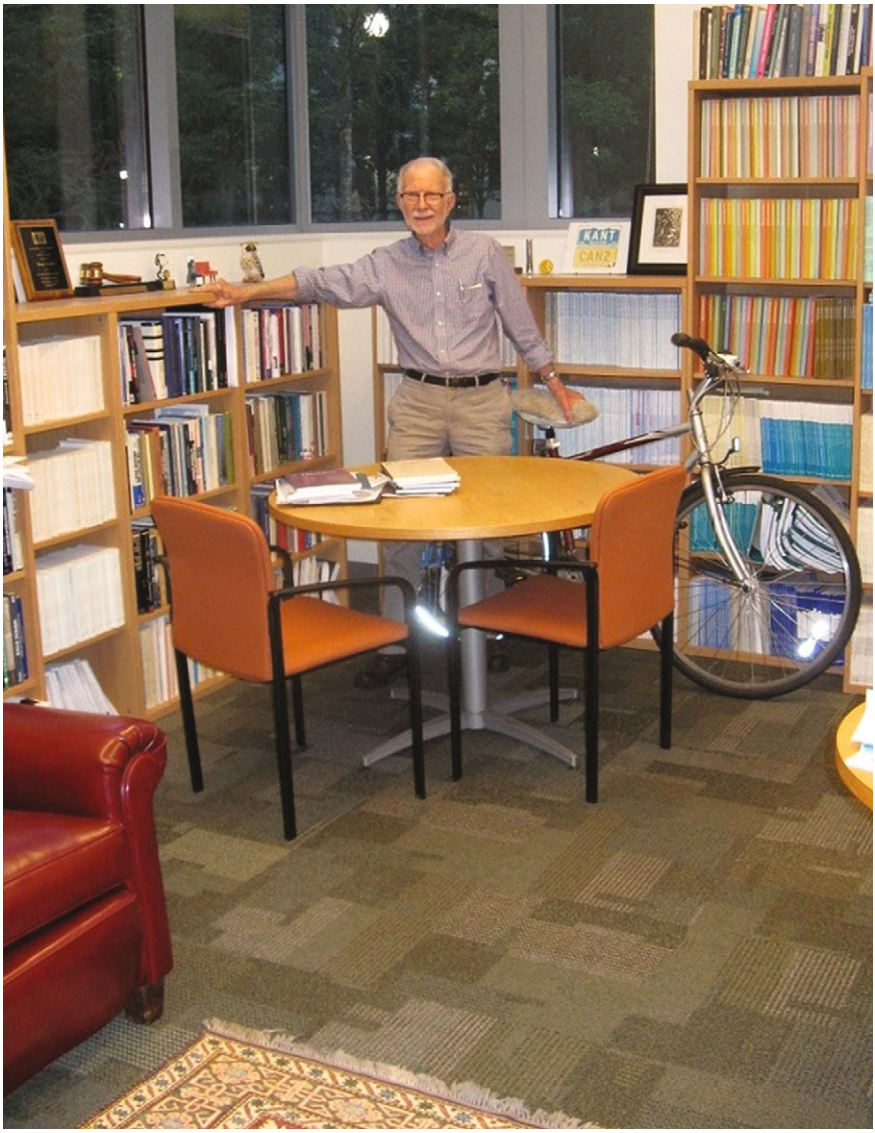

Office at Yale, 2014. *Source* This photo is from the personal photo collection of Bruce M. Russett who granted permission to include it here

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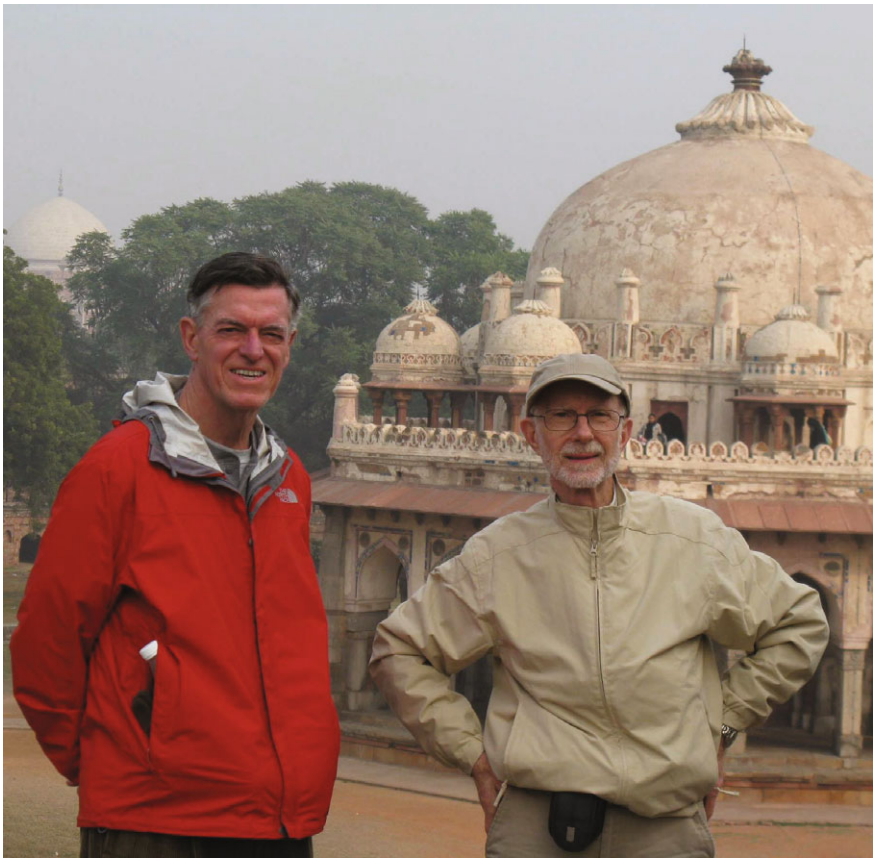

Bruce and co-author John Oneal, India, 2006. *Source* This photo is from the personal photo collection of Bruce M. Russett who granted permission to include it here

Part II
Texts by Bruce M. Russett

Bruce and Cynthia in St. Petersburg, 2005. *Source* This photo is from the personal photo collection of Bruce M. Russett who granted permission to include it here

Chapter 3
The Calculus of Deterrence

3.1 A Comparative Study of Deterrence

A persistent problem for American political and military planners has been the question of how to defend "third areas."[1] How can a major power make credible an intent to defend a smaller ally from attack by another major power? Simply making an explicit promise to defend an ally, whether that promise is embodied in a formal treaty or merely in a unilateral declaration, is not sufficient. There have been too many instances when "solemn oaths" were forgotten in the moment of crisis. On the other hand, more than once a major power has taken up arms to defend a nation with whom it had ties appreciably less binding than a formal commitment.

Some analysts like Herman Kahn maintain that the determining factor is the nature of the overall strategic balance. To make credible a promise to defend third areas the defender must have overall strategic superiority; that is, he must be able to strike the homeland of the attacker without sustaining unacceptable damage to himself in return (Kahn 1960). This analysis implies, of course, a strategy which threatens to retaliate, even for a local attack, directly on the home territory of the major power antagonist. Advocates of a strategy of limited warfare retort that, in the absence of clear strategic superiority, the capacity to wage local war effectively may deter attack.

Other writers, notably Thomas C. Schelling, have suggested that the credibility of one's threat can be considerably enhanced by unilateral actions which would increase the defender's loss if he failed to keep his promise (Schelling 1960). One of the best examples is Chiang Kai-shek's decision in 1958 to station nearly half his troops on Quemoy and Matsu. While the islands were of questionable intrinsic

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importance, the presence of so much of his army there made it virtually impossible for Chiang, or his American ally, to abandon the islands under fire.

All of these explanations tend to stress principally the military elements in what is a highly complex political situation. There are, however, numerous nonmilitary ways in which one can strengthen one's commitment to a particular area. A government can make it a matter of prestige with its electorate. A nation might even deliberately increase its economic dependence upon supplies from a certain area, the better to enhance the credibility of a promise to defend it. W.W. Kaufmann's classic piece identified the elements of credibility as a power's capabilities, the costs it could inflict in using those capabilities, and its intentions as perceived by the enemy. In evaluating the defender's intentions a prospective attacker will look at his past actions, his current pronouncements, and the state of his public opinion (Kaufmann 1956: 12–38).

Kaufmann's formulation is better than simpler ones that stress military factors almost exclusively, but it needs to be expanded and made more detailed. One must particularly examine the potential costs to the defending power if he does not honor his commitments. In addition, propositions about factors which determine the credibility of a given threat need to be tested systematically on a comparative basis. On a number of occasions, for example, an aggressor has ignored the threats of a major power 'defender' to go to war to protect a small nation 'pawn' even though the defender held both strategic superiority and the ability to fight a local war successfully. Hitler's annexation of Austria in 1938 is just this kind of case, and one where the aggressor was correct, moreover.

In this paper we shall examine all the cases during the last three decades where a major power 'attacker' overtly threatened a pawn with military force, and where the defender either had given, prior to the crisis, some indication of an intent to protect the pawn or made a commitment in time to prevent the threatened attack.[2] A threat may be believed or disbelieved; it may be a bluff, or it may be sincere. Often the defender himself may not be sure of his reaction until the crisis actually occurs. We shall explore the question of what makes a threat credible by asking which threats in the past have been believed and which disregarded. Successful deterrence is defined as an instance when an attack on the pawn is prevented or repulsed without conflict between the attacking forces and regular combat units of the major power 'defender.' ("Regular combat units" are defined so as not to include the strictly limited participation of a few military advisers.) With this formulation we must ignore what are perhaps the most successful instances of all—where the attacker is dissuaded from making any overt threat whatever against the pawn. But these cases must be left aside both because they are too numerous to be treated in detail and because it would be too difficult to distinguish the elements in most cases. Who, for example, really was the 'attacker'? Was he dissuaded because of any action by the

[2]These definitions are employed purely in an analytical sense with no intention of conveying moral content. The British-French 'attack' in 1956, for instance, was certainly provoked to a large extent by the Egyptians themselves.

defender, or simply by indifference? Such questions would lead to too much speculation at the expense of the careful analysis of each case in detail.

Deterrence fails when the attacker decides that the defender's threat is not likely to be fulfilled. In this sense it is equally a failure whether the defender really does intend to fight but is unable to communicate that intention to the attacker, or whether he is merely bluffing. Later we shall ask, from the viewpoint of the attacker, which threats ought to be taken seriously. At this stage we shall simply examine past cases of attempted deterrence to discover what elements are usually associated with a threat that is believed (or at least not disbelieved with enough confidence for the attacker to act on his disbelief) and therefore what steps a defender might take to make his threats more credible to his opponent. Table 3.1 lists the cases for consideration.[3]

These cases are not, of course, comparable in every respect. Particularly in the instances of successful deterrence the causes are complex and not easily ascertainable. Nevertheless, a systematic comparison, undertaken cautiously, can provide certain insights that would escape an emphasis on the historical uniqueness of each case.

3.2 Deterrence in Recent Decades

First, we may dismiss as erroneous some frequent contentions about the credibility of deterrence. It is often said that a major power will fight only to protect an 'important' position, and not to defend some area of relatively insignificant size or population. As we shall see below, this is in a nearly tautological sense true—if, by 'important,' we include the enmeshment of the defender's prestige with the fate of the pawn, the symbolic importance the pawn may take on in the eyes of other allies,

[3]Note that we have excluded instances of protracted guerrilla warfare. While preventing and defeating guerrilla war is a major problem, the differences from the matters considered here require that it be treated separately. The current Berlin crisis was not included because, at the time of writing, it was still unresolved. Also excluded are those cases of aggression in the 1930s and 1940s where no particular power had given a previous indication of a readiness to defend the pawn. By "previous indication" we mean either at least an ambiguous official statement suggesting the use of military force, or the provision of military assistance in the form of arms or advisers. The League of Nations Covenant is not considered such an indication because, barring further commitments by a particular nation, it is impossible to identify any one defender or group of defenders. Data on a number of factors are presented, for all of the cases, in the appendix. The current Berlin crisis was not included because, at the time of writing, it was still unresolved. Also excluded are those cases of aggression in the 1930s and 1940s where no particular power had given a previous indication of a readiness to defend the pawn. By "previous indication" we mean either at least an ambiguous official statement suggesting the use of military force, or the provision of military assistance in the form of arms or advisers. The League of Nations Covenant is not considered such an indication because, barring further commitments by a particular nation, it is impossible to identify any one defender or group of defenders. Data on a number of factors are presented, for all of the cases, in the appendix.

Table 3.1 Seventeen cases (1935–1961)

Pawn	Year	Attacker(s)	Defender(s)
Success			
Iran	1946	Soviet Union	United States
			Great Britain—Secondary—Secondary
Turkey	1947	Soviet Union	United States
Berlin	1948	Soviet Union	United States
			Great Britain—Secondary France—Secondary
Egypt	1956	Great Britain France	Soviet Union[a]
Quemoy-Matsu	1954–55, 1958	Communist China	United States
Cuba	1961	United States (support of rebels)	Soviet Union
Failure—pawn lost			
Ethiopia	1935	Italy	Great Britain France
Austria	1938	Germany	Great Britain
			France
			Italy
Czechoslovakia	1938	Germany	Great Britain France
Albania	1939	Italy	Great Britain
Czechoslovakia	1939	Germany	Great Britain France
Rumania	1940	Soviet Union	Great Britain
Guatemala	1954	United States (support of rebels)	Soviet Union
Hungary	1956	Soviet Union	United States
Failure—war not avoided			
Poland[b]	1939	Germany	Great Britain France
South Korea	1950	North Korea (supported by China & Soviet Union)	United States
North Korea	1950	United States	Communist China

Source The author

[a]Possibly the Polish case is not really a failure at all, for Hitler may have expected Britain and France to fight but was nevertheless prepared to take the consequences. A.J.P. Taylor presents an extreme version of the argument that Hitler expected Poland and/or Britain and France to give in (Taylor 1961)

[b]Despite its efforts to restrain the attackers, the United States was not a 'defender' in the Suez affair. It neither supplied arms to the Egyptians before the crisis nor gave any indication that it would employ military force against Britain and France. In fact, the United States government explicitly ruled out the use of military coercion. See *New York Times*, November 7, 1956

Table 3.2 Size (population and gross national product) of pawn in relation to defender(s)

Pawn	Defender(s)	Pawn's population as per cent of defender's population	Pawn's G.N.P. as per cent of defender's G.N.P.
Success			
Iran	United States	12	♦
	Great Britain	34	4
Turkey	United States	13	1.7
Berlin	United States	1.5	♦
	Great Britain	4	3
	France	5	3
Egypt	Soviet Union	12	2
Quemoy-Matsu	United States	*	*
Cuba	Soviet Union	3	1.5
Failure—pawn lost			
Ethiopia	Great Britain	28	1.8
	France	31	2
Austria	Great Britain	14	7
	France	16	8
	Italy	16	17
Czechoslovakia (1938)	Great Britain	30	14
	France	34	16
Albania	Great Britain	2	*
Czechoslovakia (1939)	Great Britain	23	11
	France	26	12
Rumania	United Kingdom	33	11
Guatemala	Soviet Union	1.6	*
Hungary	United States	6	1.0
Failure—war not avoided			
Poland	Great Britain	73	25
	France	82	29
South Korea	United States	14	*
North Korea	Communist China	2	3

Sources Population—United Nations (United Nations 1949: 98–105; 1962: 126–137). G.N.P.—Norton Ginsburg (Ginsburg 1962: 16). G.N.P. data are approximate and sometimes estimated
*Less than 1 %

and particular strategic or political values attached to the pawn. But if one means important in terms of any objectively measurable factor like relative population or Gross National Product, it is not true.

As Table 3.2 shows, in all of our cases of successful deterrence—Iran, Turkey, Berlin, Egypt, Quemoy-Matsu, and Cuba—the pawn's population was well under

15 %, and his G.N.P. less than 5 % of that of the principal defender.[4] (Britain was not Iran's chief protector.) Yet in five of the eleven cases where the attacker was not dissuaded the territory in question represented over 20 % of the defender's population (Ethiopia, Czechoslovakia in the Sudeten crisis and again in 1939, Poland, and Rumania). Poland in 1939 constituted the largest prize of all, yet Hitler may not have been convinced that Britain and France would go to war to save it. Nor can one discover any special strategic or industrial importance of the pawn only in cases of success. Austria and both Czechoslovakian cases met these criteria but were nevertheless overrun, and the United States did not expect Communist China to fight for North Korea, despite its obvious strategic significance.

Clearly too, it is not enough simply for the defender to make a formal promise to protect the pawn. Only in one case of success was there what could be described as a clear and unambiguous commitment prior to the actual crisis (Berlin). In the others the commitment was either ambiguous (Iran, Cuba, Quemoy-Matsu) or not made until the crisis was well under way (Turkey, Egypt). The United States' principal precrisis commitment to Iran was the Big Three communique from Teheran in 1943 (written chiefly by the American delegation) guaranteeing Iranian "independence, sovereignty, and territorial integrity."[5] Britain was allied with Iran, but the Russians recognized that any effective resistance to their plans would have to come from the United States rather than from an exhausted Britain. In July 1960 Khrushchev warned that the Soviet Union would retaliate with missiles if the United States attacked Cuba, but this was later qualified as being "merely symbolic" and the precise content of Soviet retaliation was left undefined. Neither Congress nor the President has ever stated the exact circumstances under which our formal guarantees of Taiwan would apply to the offshore islands.

Yet in at least six cases an attacker has chosen to ignore an explicit and publicly acknowledged commitment binding the defender to protect the pawn. Britain, France, and Italy were committed by treaty to Austria, France by treaty to Czechoslovakia in 1938, France by treaty and Britain by executive agreement to Czechoslovakia in 1939, Britain by executive agreement to Rumania, Britain, and France by treaty with Poland, and China by public declaration to North Korea. In three others there was at least an ambiguous commitment on the 'defenders' part that might have been more rigorously interpreted. By a treaty of 1906 Britain, France, and Italy pledged themselves to "cooperate in maintaining the integrity of Ethiopia," Britain and Italy agreed in 1938 to "preserve the status quo in the Mediterranean" (including Albania), and in the 1950s American officials made references to 'liberating' the satellites that were tragically overrated in Hungary. Of the failures, in fact, only Guatemala and possibly South Korea lacked any verbal indication of their 'protectors' willingness to fight. (In these instances, the defenders

[4]On the other hand one might argue that they were not of sufficient potential value to the attacker for him to run even a relatively slight risk that the defender might actually fight. A complete formulation involving these factors would have to include both the value of the pawn to the attacker and his estimate of the probability that the defender would fight. See below.

[5]See George Kirk on the Iranian case (Kirk 1952: 473).

showed their concern principally by sending arms to the pawns before the attack.) The analyst who limited his examination to the present cases would be forced to conclude that a small nation was as safe without an explicit guarantee as with one. At least such guarantees existed in fewer instances of success (one in six) than in cases of failure (six of eleven).

We must also examine the proposition that deterrence is not credible unless the defender possesses over-all strategic superiority; unless he can inflict far more damage on an aggressor than he would suffer in return. It is true that the successful deterrence of attack is frequently associated with strategic superiority, but the Soviet Union had, at best, strategic equality with the United States at the time of the Bay of Pigs affair. While Russia was clearly superior to Britain and France when it threatened to attack them with rockets in 1956, it just as clearly did not have a credible first strike force for use against their American ally.[6]

Furthermore, in at least five cases where the attacker was not dissuaded, it nevertheless appears that the defender definitely had the ability to win any major conflict that might have developed (in the cases of Ethiopia, Austria, Czechoslovakia in 1938, Albania, and South Korea) and in two others (Czechoslovakia in 1939 and Hungary) the defender had at least a marginal advantage. (Post hoc analysis of the relevant documents indicates this superiority was more often perceived by the attacker, who went ahead and took the chance it would not be used, than by the defender. Hitler consistently recognized his opponents' strength and discounted their will to use it.)

Even less is it necessary for the defender to be able to win a limited local war. Of all the cases of success, only in Egypt could the defender plausibly claim even the ability to fight to a draw on the local level. In the other instances the defender could not hope to achieve equality without a long, sustained effort, and local superiority appeared out of reach. Yet in at least two failures the defenders, perhaps individually and certainly in coalition, had local superiority (Ethiopia and Austria) and in four others (Czechoslovakia in 1938, Albania, and the Korean cases) the defenders seemed to have been more or less on a par with their prospective antagonists.[7]

Yet if these two kinds of capabilities—local and strategic—are analyzed together, it would seem that a defender may not be clearly inferior in both and yet hope to restrain an attacker. Although the Soviet Union could not dream of meeting the United States in a limited war in the Caribbean, at least in 1961 its strategic nuclear capabilities seemed roughly on a par with America's.[8] And although Russia was inferior to Britain-France-United States on the strategic level, Soviet chances of at least matching their efforts in a local war over Egypt seemed a little brighter.

[6]In both of these instances we must recognize that the 'attacker's' failure to persevere to defeat of the pawn was probably due less to Soviet threats than to pressures from the 'attacker's' own allies and world opinion.

[7]On the military situation prevailing in various crises before World War II see Winston Churchill (1948: 177, 270–271, 287, 336–337).

[8]American intelligence reports were, however, far from unanimous. By the end of 1961 it was clear to those with good information that the Soviets' strategic forces were distinctly inferior to America's.

Success requires at least apparent equality on one level or the other—this is hardly surprising—but when we remember that even superiority on both levels has often been associated with failure we have something more significant. *Superiority*, on either level, is not a condition of success. *Equality* on at least one level is a *necessary*, but by no means *sufficient*, condition. The traditionally conceived purely military factors do not alone make threats credible.

Nor, as has sometimes been suggested, does the kind of political system in question seem very important, though it does make some difference. Often, it is said, a dictatorial power can threaten much more convincingly than a democracy because the dictatorship can control its own mass media and present an apparently united front. Democracies, on the other hand, cannot easily suppress dissenting voices declaring that the pawn is "not worth the bones of a single grenadier." This argument must not be overstated—four of our successful cases of deterrence involved a democracy defending against a dictatorship. Yet in all of these cases the democracy possessed strategic superiority, whereas the other two successes, by a dictatorship, were at best under conditions of strategic equality for the defender. And in all but two (North Korea and Guatemala) of the eleven failures the defender was a democracy. Thus a totalitarian power's control over its citizens' expression of opinion may give it some advantage, if not a decisive one—particularly under conditions when the defender's strategic position is relatively weak.

3.2.1 Interdependence and Credibility

With some of these hypotheses discarded we may now examine another line of argument: the credibility of deterrence depends upon the economic, political, and military interdependence of pawn and defender. Where visible ties of commerce, past or present political integration, or military cooperation exist, an attacker will be much more likely to bow before the defender's threats—or if he does not bow, he will very probably find himself at war with the defender.

3.3 Military Cooperation

In every instance of success die defender supported the pawn with military assistance in the form of arms and advisers. In one of these cases, of course (Berlin) the defenders actually had troops stationed on the pawn's territory. The military link with Iran was somewhat tenuous, for Teheran received no shipments of American military equipment until after the 1946 crisis was past. Yet an American military mission was stationed in the country at the time, and 30,000 American troops had been on Iranian soil until the end of 1945 (Kirk 1952: 150). America had given a tangible, though modest, indication of her interest in Iran. But in only five of the eleven failures were there significant shipments of arms to the pawn. France

extended large military credits to Poland, and the British gave a small credit ($20 million) to Rumania. The Americans and the Chinese sent both arms and advisers to their Korean protégés. The Soviets sent small arms to Guatemala but no advisers, and they did not give any explicit indication of an intent to intervene in any American move against the Guatemalan government. A French military mission was stationed in Prague before and during the two Czechoslovakian crises, but no substantial amount of French equipment was sent (in part because of the high quality of the Czechoslovakian armament industry). In none of the other failures was there any tangible military interdependence. Some degree of military cooperation may not always be sufficient for successful deterrence, but it is virtually essential.

3.4 Political Interdependence

This is a helpful if not essential condition. Four of the instances of successful deterrence include some kind of current or recent political tie in addition to any current alliance. Western troops were stationed in Berlin and the three Western powers participated in the government of the city by international agreement. America and Nationalist China had been allies in a recent war. Turkey became allied with the Big Three toward the end of World War II. Iran had been occupied by British troops until early 1946 and American troops until the end of 1945. In the case of failures only four of eleven pawns had any significant former tie with a defender. Britain and Rumania were allies in World War I, as were the U.S.S.R. and Guatemala in World War II. Obviously, neither of these ties was at all close. The other two, however, were marked by rather close ties. United States forces occupied South Korea after World War II, and the R.O.K. government was an American protégé. The Communist Chinese had close party and ideological ties with the North Korean regime, and not too many decades previously Korea had been under Chinese sovereignty.

3.5 Economic Interdependence

We shall work with a crude but simple and objective measure of economic interdependence. In 1954 all countries of the world, other than the United States, imported a total of $65 billion of goods, of which 16 % came from the United States. South Korea, however, took 35 % of its total imports from the United States, a figure well above the world average. This will be our measure: does the pawn take a larger than average proportion of its imports from the defender or, vice versa, does the defender take a larger than average proportion of its imports from the pawn? To repeat, this is a crude measure. It does not tell, for example, whether the defender is dependent upon the pawn for a supply of a crucial raw material. But there are few

areas of vital economic significance in this sense—almost every commodity can be obtained from more than one country, though not always at the same price—and attention to overall commercial ties gives a broad measure of a country's general economic stake in another.[9] In none of the cases where this test does not show general economic interdependence is there evidence that the defender relied heavily on the pawn for a particular product.

In five of the six cases of successful deterrence either the pawn took an abnormally high proportion of its imports from the defender or vice versa. In the remaining case, the Iranian economy was closely tied to Britain if not to the United States, but in only three of the eleven failures was there interdependence between pawn and defender. A higher than average proportion of Austria's trade was with Italy, though not with France and Britain, the other two parties bound by treaty to preserve her integrity. Both Korean regimes also traded heavily with their defenders. Economic interdependence may be virtually essential to successful deterrence.

3.5.1 Divining Intentions

Briefly we may also examine the question from the viewpoint of the attacker. If the defender's threat is not challenged, one may never know whether it truly expresses an intention to fight or whether it is merely a bluff. Perhaps the defender himself would not know until the circumstances actually arose. But we can examine the eleven cases where deterrence was not sufficiently credible to prevent attack. Previously we asked what differentiated the instances when the attacker pressed on from those in which he restrained his ambitions. Now, what distinguishes the cases where the defender actually went to war from those where he did not?[10]

'Size,' as defined earlier, again is not crucial. Poland, for which Britain and France went to war, was a very large prize but neither North nor South Korea represented a significant proportion of its defender's population or G.N.P. Of the eight instances where the defender's bluff was successfully called, four of the pawns (Ethiopia, Czechoslovakia on both occasions, and Rumania) represented

[9]In the cases of Berlin and Quemoy-Matsu we must rely on trade figures for a larger unit (West Germany and Taiwan). West Germany conducted an above-average proportion of her trade with the United States and France in this period, but her trade with Britain was below average. Yet as Allied resolve in the Berlin crisis clearly depended upon American initiative it seems correct to include Berlin in the class of economically interdependent pawns.

[10]Remember that we have been dealing only with those cases in which deterrence was visibly in danger of failing, and not with instances where it was fully successful; i.e., where the attacker was dissuaded from ever making a serious explicit threat. As noted earlier the latter cases are extremely difficult to identify; nevertheless it seems likely that analysis would show similar results to those above. American protection of Western Europe is an excellent example. The political, economic, and military interdependence of Europe and the United States is great enough to make America's threat highly credible (though perhaps not as credible as we might sometimes wish).

over 20 % of the defender's population and four (Austria, Czechoslovakia both times, and Rumania) over 5 % of its G.N.P. Proportionately 'large' pawns were more often the subject of 'bluffs' than of serious intentions. Nor is there necessarily a formal, explicit commitment in cases which result in war. There were such commitments over Poland and North Korea, but South Korea is an obvious exception. And there was such a commitment in the case of half the 'bluffs' (Austria, Czechoslovakia twice, and Rumania), and a vague, ambiguous one in three other cases (Ethiopia, Albania, Hungary).

The state of the military balance does not seem to have much effect either. In at least four 'bluffs' (Ethiopia, Austria, Czechoslovakia in 1938, and Albania) the defenders were clearly superior *over-all* and in two other cases (Czechoslovakia in 1939 and Hungary) they were at least marginally so. Yet despite their bad military position Britain and France fought for Poland in 1939. And although the Chinese made some bold "paper tiger" talk they really could have had few illusions about their position should the United States counter their move into North Korea with its full conventional and nuclear might. In no instance where a defender fought did he have the ability to win a quick and relatively costless *local* victory. But in the two cases where the defender probably did have this ability (Ethiopia and Austria) he did not employ it. Neither does the defenders political system appear to matter much. The Chinese fought to defend North Korea, but dictatorships did nothing to protect Austria and Guatemala.

Yet bonds of interdependence—economic, political, and military—do turn out to be highly relevant. In every case where the defender went to war he had previously sent military advisers and arms to the pawn. Only four of the eight 'bluffs' were marked by either of these activities, and none by a significant level of both. The two Koreas both had important prior political ties to their eventual defenders, but only two of the instances of 'bluff' (Rumania and Guatemala) were marked by even very weak ties of previous alliance. The two Korean states also were closely tied economically to their defenders, but of all the seven instances of bluff, only Italy-Austria show a bond of similar strength. Again it is the nature of the defender-pawn relationship, rather than the attributes of either party separately, that seem most telling in the event.

We must be perfectly clear about the nature of these ties. Certainly no one but the most inveterate Marxist would assert that the United States entered the Korean War to protect its investments and economic interests. The United States went to war to protect a state with which it had become closely identified. It was rather heavily involved economically in Korea, and its prestige as a government was deeply involved. It had occupied the territory and restored order after the Japanese collapse; it had installed and supported an at least quasi-democratic government; and it had trained, organized, and equipped the army. Not to defend this country in the face of overt attack would have been highly detrimental to American prestige and to the confidence governments elsewhere had in American support. Even though it had made no promises to defend Korea (and even had said it would not

defend it in a general East-West war) the American government could not disengage itself from the fate of the Korean peninsula. Despite the lack of American promises, the American 'presence' virtually guaranteed American protection.

3.5.2 Making Deterrence Credible

It is now apparent why deterrence does not depend in any simple way merely upon the public declaration of a "solemn oath," nor merely on the physical means to fight a war, either limited or general. A defender's decision whether to pursue a 'firm' policy that risks war will depend upon his calculation of the value and probability of various outcomes. If he is to be firm the prospective gains from a successful policy of firmness must be greater, when weighted by the probability of success and discounted by the cost and probability of war, than the losses from retreat.[11] The attacker in turn will determine whether to press his attack in large part on his estimate of the defender's calculation. If he thinks the chances that the defender will fight are substantial he will attack only if the prospective gains from doing so are great.[12]

The physical means of combat available to both sides are far from irrelevant, for upon them depend the positions of each side should war occur. A defender's commitment is unlikely to be believed if his military situation is markedly inferior to his enemy's. Yet even clear superiority provides no guarantee that his antagonist will be dissuaded if the defender appears to have relatively little to lose from 'appeasement.' At the time of the Austrian crisis Neville Chamberlain could tell himself not only that appeasement was likely to succeed, but that prospective losses even from its possible failure were not overwhelming. In particular, he failed to consider the effects appeasement would have on Britain's other promises to defend small nations. By autumn 1939, however, it was clear that further appeasement

[11]Formally, the defender will pursue a firm policy only if, in his calculation:
$V_f \cdot 5 + V_w \cdot (1 - s) > V_r$ where
V_f = the value of successful firmness (deterrence without war)
$V_w \sim$ the value (usually negative) of the failure of firmness (war)
V_r = the value (usually negative) of retreat
s = the probability that firmness will be successful.
Daniel Ellsberg presents a related formulation (Ellsberg 1960).

[12]Precisely, he will press the attack only if: $V_a \cdot 5 + V, * (1 - 5) > V_o$ where
V_a = the value of a successful attack (no war)
V_w = the value (usually negative) of an attack which is countered (war)
V_o = the value of doing nothing in this instance (no attack, no war)
s = the probability of a successful attack.

would only encourage Hitler to continue to disregard British threats to fight, as British inaction over Austria in fact had done.

Under these circumstances the effectiveness of the defender's threat is heavily dependent on the tangible and intangible bonds between him and the pawn. If other factors are equal, an attacker will regard a military response by the defender as more probable the greater the number of military, political, and economic ties between pawn and defender. No aggressor is likely to measure these bonds, as commercial ties, in just the way we have sketched them here, but he is most unlikely to be insensitive to their existence.

Strengthening these bonds is, in effect, a strategy of raising the credibility of deterrence by increasing the loss one would suffer by not fulfilling a pledge. It illustrates in part why the American promise to defend Western Europe, with nuclear weapons if necessary, is so credible even in the absence of overwhelming American strategic superiority. Western Europe is certainly extremely important because of its large, skilled population and industrial capacity. Yet it is particularly important to the United States because of the high degree of political and military integration that has taken place in the North Atlantic Area. The United States, in losing Western Europe to the Communists, would lose population and industry, and the credibility of its pledges elsewhere. To put the case another way, America has vowed to defend both Japan and France from external attack, and there is much that is convincing about both promises. But the latter promise is somewhat more credible than the former, even were one to assume that in terms of industrial capacity, resources, strategic significance, etc., both countries were of equal importance. The real, if not wholly tangible, ties of the United States with France make it so.[13]

Interdependence, of course, provides no guarantee that the defenders threat will be believed. There have been a few cases where an attacker chose to ignore a threat even when relatively close interdependence existed. But if one really does want to protect an area it is very hard to make that intention credible *without* bonds between defender and pawn. If the United States wishes to shield a country it will be wise to 'show,' and even to increase, its stake in that country's independence. Because the strength of international ties is to some degree controllable, certain policy choices, not immediately relevant to this problem, in fact take on special urgency. Implementation of the Trade Expansion Act, allowing the American government to eliminate tariffs on much of United States trade with Western Europe, will have more than an economic significance. By increasing America's apparent, and actual, economic dependence on Europe it will make more credible America's promise to defend it from attack.

The particular indices of economic, military, and political integration employed here are less important in themselves than as indicators of a broader kind of political

[13]This point is further illustrated by the 1962 Cuban crisis. The American government took great pains to indicate that it was reacting to the threat of Soviet missiles on the island, and only demanded their removal, not the overthrow of the Castro regime. To have directly threatened the existence of a Communist government in which the Soviets had such a heavy military and economic investment would have carried a much greater risk of Soviet military retaliation.

and cultural integration, of what K.W. Deutsch refers to as mutual sympathy and loyalties, 'we-feeling,' trust, and mutual consideration (Deutsch 1954: 33–64). These bonds of mutual identification both encourage and are encouraged by bonds of communication and attention. Mutual attention in the mass media, exchanges of persons (migrants, tourists, students, etc.), and commercial activities all make a contribution. Mutual contact in some of these areas, such as exchange of persons, tends to promote contacts of other sorts, and often produces mutual sympathies and concern for each other's welfare.[14] This process does not work unerringly, but it does work frequently nevertheless. And these mutual sympathies often are essential for the growth of a high level of commercial exchange, especially between economically developed nations rather than nations in an essentially colonial relationship with each other.[15]

In addition to the loss of prestige and of tangible assets, there is yet another way in which a defender may lose if he fails to honor his pledge. New Yorkers would sacrifice their own self-esteem if they failed to defend Californians from external attack; some of the same feeling applies, in lesser degree, to New Yorkers' attitudes toward Britishers. Though broad and intangible, this kind of relationship is nonetheless very real, and knowledge of it sometimes restrains an attacker.

Communication and attention both produce and are produced by, in a mutually reinforcing process, political and cultural integration. The appendix to this paper demonstrates the degree to which economic, military, and political interdependence are correlated. All this raises the "chicken and egg" kind of question as to which comes first. In such a 'feedback' situation there is no simple answer; sometimes trade follows the flag, sometimes the flag follows trade (Russett 1963: Chap. 4). Yet these are also to some extent independent, and the correlation is hardly perfect. From the data available one cannot identify any single factor as essential to deterrence. But as more are present the stronger mutual interdependence becomes, and the greater is the attacker's risk in pressing onward.

[14]The theoretical and empirical literature on this point is voluminous and cannot be discussed in more detail here. I have presented elsewhere a general theoretical examination of these problems and their application to Anglo-American relations (Russett 1963).

[15]Few markets are perfectly analogous to the model of perfect competition, as the products of two sellers are seldom identical, at least in the mind of the buyer. Customs, habits, traditions, and 'myths' about the goods or the seller differentiate two seemingly identical products. A seller who speaks the language and understands the mores of his customers has a great advantage over one who does not. Past habits can affect current prices through credit terms. Goods coming across a previously established trade route can be shipped more cheaply than those across one which has not yet developed much traffic.

Appendix

Presence or absence of various factors alleged to make deterrent threats credible

	Attacker presses on																
	Attacker holds back						Defender does not fight								Defender fight		
	Iran	Turkey	Berlin	Egypt	Quemoy-Matsu	Cuba	Ethiopia	Austria	Czechoslovakia (1938)	Albania	Czechoslovakia (1989)	Rumania	Guatemala	Hungary	Poland	South Korea	North Korea
Pawn 20 % + of defender's population	*						X		X		X	X			X		
Pawn 5 % + of defender's G.N.P.								X	X		X	X			X		
Formal commitment prior to crisis	?		X		?	?	?	X	X	?	X	X		?	X		X
Defender has strategic superiority	X	X	X		X		X	X	X	X	?			?		X	
Defender has local superiority							X	X	?	?						?	?
Defender is dictatorship				X		X		*					X				X
Pawn-defender military cooperation	X	X	X	X	X	X			X		X	X	X		X	X	X
Pawn-defender political interdependence	X	X	X		X							X	X			X	X
Pawn-defender economic interdependence	*	X	X	X	X	X		*								X	X

Key x Factor present
? Ambiguous or doubtful
* Factor present for one defender

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Chapter 4
Transactions, Community, and International Political Integration

4.1 Definitions of Political Integration

One of the most confused issues in the theory of international political integration[1] remains that of the role of transactions—whether community bonds among people can be used as indicators or predictors of political integration.[2] The proponents of transaction analysis are perhaps as much to blame for the confusion as are the approach's critics; it seems to me that someone basically sympathetic to transaction analysis ought to make the attempt to clear away some of the confusion. Although I have largely ceased to write on integration theory, a year in Brussels, where it is impossible not to be interested in political integration, convinced me that I should try. I do so here, and in the process suggest some new directions for research and theory. We will try to integrate some of the integration literature.

The beginning of any discussion of this issue must be with a clarification of various meanings attached to the term 'political integration', since much of the difficulty stems simply from a failure to be precise on that matter. At least four basic

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[2]This paper is part of the research of the Yale University World Data Analysis Program, supported by grant No. GS-2365 from the National Science Foundation and contract No. N-0014-67-A-0097-0007 from ARPA Behavioral Sciences, monitored by the Office of Naval Research. Earlier versions were delivered at the College of Europe in Bruges and the University of Geneva while I was in Europe on Guggenheim and Fulbright awards. I am grateful to Peter Busch, Karl Deutsch, Ernest Flàas, and David Handley for comments. Of course *no* person or agency is responsible for what is expressed here.

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and quite different meanings can be distinguished among the principal theorists. First there is the 'classical' concern for political unification through the construction of supranational *institutions*, on the assumption that with a bare minimum of cultural and political homogeneity among the peoples concerned, institutionalization offered a feasible and effective means for maintaining unity. There was little concern for the matter of common loyalties, assuming rather that these would more or less autonomously grow up once the institutions were established. Most of the advocates of Atlantic Union, and more extremely of World Federalism, could fairly reasonably be classed among these institutionalists.

A second group owes its most influential work to the very innovative thought of Ernst Haas. Perhaps Haas's greatest contribution has been to focus attention on the political process of transferring *loyalties to new institutions*, rather than simply on institution-building per se. Two quotations from his classic study *The Uniting of Europe* make this clear: 'Political community, therefore, is a condition in which specific groups and individuals show more loyalty to their central political institutions than to any other political authority.' Political integration is defined as a process leading to the above condition. 'The scheme here used by contrast [to Deutsch, see below] makes the existence of political institutions capable of translating ideologies into law the cornerstone of the definition.[3] This focus on loyalties, nevertheless, is limited to a concern with elite attitudes and behavior; Haas explicitly rejects much attention to popular attitudes because of mass ignorance about, and lack of sustained interest in, matters of political integration and other aspects of foreign affairs.[4] Furthermore, the concern remains with loyalties to institutions. For Haas the 'ideal-type' condition of political integration toward which members presumably strive is that of unification, possibly confederation but more probably federation. Much the same position can be attributed to Amitai Etzioni, who looks for a 'center of decision-making that is able to affect the allocation of resources and rewards throughout the community'.[5] Leon Lindberg also requires 'central institutions and central policies must develop', though he does not postulate as centralized an ideal-type as does Haas.[6]

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[3]Stanford: Stanford University Press, 1958, pp. 4, 7. By citing this early work I do not mean to imply that Haas's thought has not evolved further. In fact it has, and in directions that tend toward convergence with that of less institutionally oriented theorists to be cited below. The enormous influence of this particular book, however, requires us to treat it as a critical point of reference.

[4]Ibid., pp. 17–18.

[5]'A Paradigm for the Study of Political Unification', *World Politics, 1*,1 (1962), p. 45.

[6]*The Political Dynamics of European Integration* (Stanford: Stanford University Press, 1963), pp. 7–9. See also Lindberg's recent statement, 'The essence of political integration is the emergence or creation over time of collective decision-making processes; i.e., *political institutions* to which governments delegate decision-making authority and/or through which they decide jointly via more familiar inter-governmental negotiation.' In 'Political Integration as a Multi-Dimensional Phenomenon Requiring Multi-Variate Measurement', *International Organization, 24, 4* (Autumn 1970) (italics mine).

The perspective of Karl Deutsch is quite different. Probably his most important contribution to integration theory was to shift the focus of attention to institutions, even loyalties to institutions, from that of an end to a means. Deutsch's goal, as a theoretical dependent variable and for policy, is *the avoidance of war under conditions of continued voluntary association.* The basic set of definitions at the beginning of *Political Community and the North Atlantic Area* reads:

> A security community is a group of people which has become 'integrated'. By Integration we mean the attainment, within a territory, of a 'sense of community' and of institutions and practices strong enough and widespread enough to assure. … dependable expectations of 'peaceful change' among its population. By sense of community we mean a belief… that common social problems must and can be resolved by process of 'peaceful change'.[7]

'Peace' maintained largely by repression or deterrence would not fit these requirements.

For Deutsch and his colleagues institutions are merely a possible means to the end of war avoidance without coercion; whether and when strong central institutions help in the achievement of a security community becomes a prime candidate for empirical investigation, not a priori assumption. Therefore they distinguish between amalgamation, involving a formal merger of previously independent units, and pluralistic security-communities where the legal independence of the separate governments is maintained. Even here there may be some, perhaps very loose, institutionalization, but the emphasis is elsewhere. The point is that amalgamation—whether voluntary or imposed—may lead to formation or consolidation of a security-community, but may also lead to empire or to provoking new strains and in fact the breakdown of a pre-existing security-community. The insight represents a fundamental break with earlier institution-oriented theories of integration.

Equally important as a distinctive feature of the Deutsch approach is the emphasis on people-to-people loyalties:

> The kind of sense of community that is relevant for integration… turned out to be rather a matter of mutual sympathy and loyalties; of 'we-feeling', trust, and mutual consideration; of partial identification in terms of self-images and interests; of mutually successful predictions of behavior… in short, a matter of a perpetual dynamic process of mutual attention, communication, perception of needs, and responsiveness in the process of decision-making.[8]

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[7]K.W. Deutsch, et al., *Political Community and the North Atlantic Area* (Princeton: Princeton University Press, 1957), p. 5.

[8]Ibid., p. 36. Because of these two features it seems appropriate to regard Deutsch's approach as an essentially new paradigm, addressed to questions unanswered and even unasked previously. The difficulty in relating it to previous efforts is therefore understandable. See Thomas F. Kuhn, *The Structure of Scientific Revolutions* (Chicago: University of Chicago Press, 1962).

For Deutsch, these loyalties are relevant not just among the elites, but for all the 'politically relevant strata'. Not only does he not rule out mass attitudes as irrelevant, 'it is important to note that the enlisting of popular participation was one of the most successful methods used to promote successfully a movement for amalgamation'.[9] This stress on ties between the two communities is complemented by his declaration of the need for community ties on the vertical dimension, between the elite and masses of each nation. Without such bonds the two elites may be integrated but the masses alienated both from them and from their counterparts in the other nation. It becomes an empirical question as to how long, and under what circumstances, elites can ignore contrary popular preferences. It would appear that the development of community ties at the mass level is a longer and slower process than the elite transfer of loyalties that interests Haas; Deutsch would perhaps add that once achieved it is more secure.

It is useful to consider Deutsch's perspective as an essentially sociological one, on creating the bonds of community that must underlie continued peaceful interaction. In the grand sociological tradition, it is an emphasis on *gemeinschaft:* kinship, common loyalties and values, a feeling of belonging together, as contrasted with the *gesellschaft* focus on society as competitiveness and contract.[10] As Donald Puchala expresses it, community bonds 'dampen international conflict by relieving domestic pressures for adamance, consequently defusing questions of 'face' and making compromise and accommodation feasible'.[11] Psychological-sociological community building must be attended to because institutions alone are (a) inadequate; (b) dangerous because they may provoke strains among people not yet ready to submit to coercion; (c) dangerous because if the community is lacking the union, if sustained, will be held together by force; and (d) largely irrelevant for modern political integration anyway, since the days of empires, or of *blut und boden* German unification, are substantially over. To quote Puchala again, 'The initiative toward amalgamation remains an act of elite or governmental will, probably influenced by certainly not determined by community ties between peoples'.[12] I would state the case more strongly: social community is a necessary, though not sufficient, condition for voluntary amalgamation. I do not dispute the analytical distinction between political community and social community, for example as used

[9]Ibid., p. 93. Etzioni, in *Political Unification* (New York: Holt Rinehart & Winston, 1965) also distinguishes between elitist and egalitarian unions and notes the advantages of the latter.

[10]I owe this distinction to Paul Taylor, 'The Concept of Community and the European Integration Progress', *Journal of Common Market Studies,* 7, 2 (December 1968), pp. 83–101.

[11]'Integration and Disintegration in Franco-German Relations, 1954–1965', *International Organization,* 24, 2 (Spring 1970), p. 199.

[12]Ibid., p. 200.

by Lindberg derived from David Easton[13]; However, I do propose, as a hypothesis that has been partially tested, that in non-coercive political communities social community must develop first or simultaneously. Note that community, as used here, is not to be equated with love.

One further meaning of integration for our inventory is that used by this author, the notion of *responsiveness*, or the probability that requests emanating from one state to the other will be met favorably.[14] Responsiveness in turn is the behavioral consequence of a ratio of capabilities to loads or burdens in a relationship, and the process of integration may be considered the process of building capabilities for responsiveness relative to the loads put on the capabilities. The degree of integration at any one time would be the current ratio of capabilities to loads. Thus we are concerned with behavior, and with the community ties underlying behavior. Integration may therefore be identified either in terms of behavior (responsiveness) or by the underlying capabilities/loads ratio; it is presumed that the two aspects would be extremely highly correlated, though there are very difficult measurement problems with both—see below—and *firm* proof of their close correlation is not yet available. At the moment the formulation is analytically akin to that which postulates a link between a ratio of achievement to aspiration and aggressive behavior, recognizing in each case that a complete inventory of the numerator and denominator of the ratio will not be easy, and that anyway there is probably another element (presumably small) in the determination of behavior that may best be termed a random element.

Whatever its difficulties, the purpose and supposed virtue of this formulation is to extend interest beyond the 'mere' question of war-avoidance (obviously I do not mean to deprecate concern with the war problem or the contribution that its solution would make to mankind's welfare) to a much broader spectrum of cooperative behavior. The concern becomes one of mutual problem solving, seeking a 'higher' level of integration and a level that, with nations who are closely involved in one another's affairs, demands tighter and more numerous community bonds. War-avoidance is a necessary but elementary aspect of responsiveness. Two nations, for example the United States and Great Britain, long ago achieved a security-community. Depending on how one reads the evidence, and how slight an expectation of war one requires for the application of the security-community term, the two powers' achievement of that state can probably be dated from the turn of this century, and certainly from the Washington Naval Conference of 1922. Yet within the no-war expectation one can point to various quite drastic ups and downs in relations between them. At times they have cooperated very closely to reach

[13]See Leon N. Lindberg, 'The European Community as a Political System', *Journal of Common Market Studies,* 5, 4 (June 1967) pp. 344–87.

[14]Bruce M. Russett, *Community and Contention: Britain and America in the Twentieth Century* (Cambridge: M.I.T. Press, 1963), esp. Chap. 2, and *International Regions and the International System* (Chicago: Rand McNally, 1967), pp. 94–8.

important goals, even at the cost of serious sacrifices by one or the other in the interest of maintaining the basic relationship. At other times, most dramatically in recent years the Suez crisis of 1956, they have worked at cross-purposes to each other's severe deprivation.

> Responsiveness of course implies a *mutual* relationship, it… does not insist that for a state to be considered 'responsive' it must always give into the demands of the other. If so, the demanding state would be acting in a manner highly unresponsive to the needs of its jelly-fish partner. Between nations as between individuals in primary groups interests will not always coincide, and the interaction of the partners will insure that some conflicts of interest become salient. When this happens there must be explicit or tacit negotiation, resulting perhaps in compromise, an exchange of concessions on one issue for some on another, or an 'upgrading of common interests' to a new solution. Sometimes two governments' interests will be nearly identical, sometimes they will merely converge on the same goal for different reasons. But very often they will indeed conflict, and it is a relationship or pattern of behavior, the ability to work out that conflict with a minimum of violence and without one party always making the important concessions, that marks the condition of successful political integration.[15]

Again, responsiveness is the probability with which requests will be met favorably; any *particular* request may be met sympathetically or not. And in so far as we are concerned with *political* integration we are interested in the responsiveness of governments, of individual members of the political elite, of private individuals' attitudes toward the policy of their governments. Purely private acts (such as earthquake assistance provided by a private relief agency) are not part of the dependent variable of political integration, though they may well contribute to a growth in capabilities. As with Deutsch, I consider institutionalization per se not the focus of attention, though it may be a highly relevant independent variable affecting responsiveness.

> Where serious conflicts of interest exist between nations that can affect each others' destinies, some institutional structures must exist to facilitate negotiation, compromise, and coordination to produce common or compatible policies. Institutions provide important capabilities for attention and communication. An institution can be described as essentially a set of channels for processing information, solving problems, and transmitting communications. Along with less formal channels, they are vital capabilities in any effort to produce a high level of responsiveness between political units, even though by themselves they cannot guarantee the non-violent resolution of conflict.[16]

There are also some important latent effects of institutions in changing the perspectives of those who participate in them.[17] Nevertheless, institutions alone are

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[15]Russett, *International Regions,* p. 96.

[16]Ibid., p. 98.

[17]See Lindberg, *Political Dynamics,* p. 19, and Chadwick Alger, 'Non-Resolution Consequences of the United Nations and Their Effect on International Conflict', *Journal of Conflict Resolution,* 5 (1961), pp. 128–4.5, and 'Personal Contact in Intergovernmental Organizations', in Herbert C. Kelman, ed., *International Behavior: A Social-Psychological Analysis* (New York: Holt, Rinehart & Winston, 1965).

not enough, and may even put great strains on the relationship. In any particular case it may be difficult to know how to evaluate institutionalization; the best general statement is probably that if other capabilities are high, institutions also are likely to serve that function, but if other capabilities are low, institutions may belong on the burdens side of the ratio in aggravating the situation. Non-governmental and intergovernmental organizations are less likely to be seen as burdens than are supranational ones; they also are much more limited in their potential effectiveness.

By capabilities I mean facilities for attention, communication, and mutual identification. The first two are essential but clearly insufficient. One may keep close watch on an enemy and even maintain frequent communication with him. One the other hand, one cannot repeatedly respond favorably to another's requests without some current means of knowing those requests and their basis, without a large continuous exchange of information. Essential bonds of the social fabric between groups or especially nations are such ties as trade, migration, tourism, communication facilities like mail and telephone, and cultural and educational exchange. These ties serve as channels of communication whereby the needs and perspectives of one group of people are made known to others; they serve to strengthen the sense of mutual identification within the entire collectivity, and to promote a readiness to respond sympathetically to the needs of others within the collectivity. They contribute to mutual *predictability* of behavior and the accurate communication of wishes, without which cooperative efforts are hazardous. I have discussed the evidence for this in detail elsewhere and will not repeat most of it here, but to illustrate the general proposition I will cite once again two pieces of evidence about the relation of trade to politics. In a study of French businessmen's attitudes toward the European Defense Community (EDC) in 1954, Daniel Lemer found that businessmen who engage in no foreign trade whatever tended to favor establishment of EDC by a margin of 2 to 1, but that individuals whose firms did at least half their business in foreign trade favored EDC 6 to 1. Similarly, in my own work on British and American legislators I found that American Senators with personal ties or constituency economic ties to Britain were twice as likely to take a 'pro-British' position on political issues than were Senators with no known ties. Correspondingly, British M.P.s with ties to the United States were twice as likely to be pro-American than were those who lacked discernible ties; those with two or more ties were three times as likely to be responsive as were those with none.[18]

[18]Lemer, 'French Business Leaders Look at EDC', *Public Opinion Quarterly,* XX, I (1956), p. 220, and Russett, *Community and Contention,* Chap. 9. The evidence on other kinds of ties is considered at length in ibid., Chaps. 3, 6, 7. Similarly, see the view of J.S. Nye, 'Comparative Regional Integration: Concept and Measurement', *International Organization,* 22, 4 (Autumn 1968), p. 863, of transactions as indicators of *social* integration.

In both these studies the issues at stake were broad and diverse, going well beyond anything that can be labelled a direct economic interest of the individuals involved. All these contacts become general channels of communication, opening individuals up to information and viewpoints they would not otherwise receive. In reviewing the literature on international exchange and attitude change Herbert Kelman concluded,

> These are not necessarily changes in general favorableness toward the host country, but rather changes in the cognitive structure—for example in the complexity and differentiation of images of the host country. Such changes are probably more meaningful in the long run than total approval of the country would be; they indicate a greater richness and refinement of images and a greater understanding of the other society in its own terms.[19]

Puchala ties the argument to learning theory: 'Learning during regional integration is a direct result of mutually rewarding actions among regional partners.'[20]

Of course, trade, tourism, migration, and the rest *can* serve as irritants, though on the average they seem to bind nations or social groups together. The most important qualification—and that is a serious one—is that the exchanges must be *mutual* and on a basis of *relative equality.* Ties perceived as exploitative or 'colonial', however strong, do not seem to have this beneficial quality. Contacts that are for one party involuntary (an extreme case being the payment of reparations) would not fit, nor would highly status-conscious relations such as those between employer and employee be good candidates. Contacts between highly disparate cultures are also very likely to carry conflict as much as to serve as capabilities. Tourists from 'northern' to 'southern' countries, for instance, may create animosities among their hosts and distress in their own minds. Thus the nature of the contacts must be examined for the particular case before any firm conclusions about their capability value can be preferred. A theory that ignored this necessity might be simpler, but would surely be misleading. Fortunately some very general observations can be made, indicating that ties between nations that are already culturally rather similar, and perhaps geographically proximate, carry a certain presumption of capability. Again, the presence of the ties themselves does not *prove* anything, but as Lijphart notes about relationships within a common government, a high level of political contacts requires a high level of social contacts for the relationship to be mutually rewarding.[21] In my emphasis on responsiveness and the ability to solve mutual problems I typically demand a higher level of capabilities than would Deutsch's concern with establishing a security-community, but less than the successful functioning of Haas's institutional ideal-type would require.

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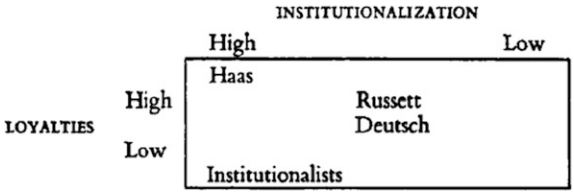
[19]Kelman, ed., *International Behavior* (New York: Holt, Rinehart & Winston, 1965), p. 573.

[20]'The Pattern of Contemporary Regional Integration', *International Studies Quarterly, 22,* 1 (March 1958), p. 51.

[21]Arend Lijphart, 'Consociational Democracy', *World Politics 21*, 2 (January 1969), pp. 207–2$.

Table 4.1 Some definitions of political integration



We can summarize this section with a simple fourfold table (Table 4.1) placing various schools or authors according to the importance their definitions of political integration assign to institutionalization and the establishment of loyalties.

4.2 Why Measure Transaction Flows

Carrying on from the preceding discussion we can further clarify the role of communication and transaction measures as related to political integration. Much of the literature on the topic, even as written by some of the principal theorists, is confused and confusing. Part of the difficulty is in a lack of precision about the definition of political integration being employed, and part stems from a failure to state precisely what the function of the transaction data is supposed to be. Often the question is 'Why measure transactions instead of measuring integration directly?' Even where there is a specifiable role for transactions data, a failure to define the function of transaction data clearly has led to confusion as to which of several possible indices is appropriate. This point too needs elaboration, since the choice of indices is by no means self-evident even where the relevance of transactions in general is clear.

An analyst may have several roles for transaction data in mind. First, he may hope to use data on transaction flows to *describe* the state of political integration at any one time, or changes over time. According to Hayward Alker and Donald Puchala, the level of trade between nations 'can serve as a reliable indicator of their degree of political integration'[22]; Haas, on the other hand, flatly asserts that trade is not equal to political integration. A second question is whether transactions indicators can be used to *predict to* political integration, in a sense to

[22]'Trends in Economic Partnership: The North Atlantic Area, 1928–1963,' inj. David Singer ed. *Quantitative International Politics: Insights and Evidence* (New York: Free Press, 1968), p. 288. Puchala at least has since retreated from this position.

Table 4.2 Transactions as relevant to meanings of political integration

Transactions	Institutions (loyalties aside)	Security-community (institutions aside)	Responsiveness
Describe integration?	No (except at extremes). Much better to measure directly	Yes. For long-term, measure directly	Yes. Maybe easier than measuring directly
Predict to integration?	No (except at extremes)	Yes	Yes
Make possible integration?	Probably not	Yes	Yes
Cause integration?	Perhaps, at high levels	Probably, at least at high levels	Yes

describe, with a high probability of accuracy, the future. Yet another is whether they are in effect necessary conditions without which there can be no integration —or, properly speaking, without which the probability of successful integration is 'very low' since we do not want to be deterministic. Finally, can we say that in some sense heavy transaction flows '*cause*' political integration in the sense that they are sufficient conditions, or nearly so, bringing a 'very high' probability of integration?

In turn, these must be related to various meanings of 'political integration'. We shall deal with the definitions of institutions without concern for the transfer of loyalties, of a security-community as in Deutsch's work (leaving institutionalization aside), and my own concern with responsiveness. In so doing we omit Haas's interest in transfer of loyalties to institutions, largely because of Haas's own insistence that popular attitudes are relatively unimportant. While transaction flows are certainly not irrelevant to elite attitudes, few of the usual transaction data directly concern high politics at the governmental elite level and the case for their relevance to that variety of 'political integration' is probably the least convincing.[23]

A summary of the answers is given in Table 4.2: many of the items, especially all the 'yeses', however, need careful qualification and will be subject to discussion below. The answers, it is important to note, are often tentative, *hypotheses* about what would appear given much more very careful research than now exists.

First we shall review the entire table, and then list the qualifications for the final two columns systematically. Clearly transaction data do not serve for *describing* the degree of institutionalization achieved between two states. If one wants to know about institutionalization it is much better to measure it directly, according to the

[23]However, some of the typical indicators refer to elite transactions, and others could doubtless be devised should the theoretical basis warrant it.

number, powers, functional area covered, etc., of various institutions. Transaction flows are not sufficiently relevant to institutionalization alone—again remember that we are *not* in this first column concerned with the attachment of popular loyalties to these institutions—that it makes any sense to use transaction data as substitutes for direct measurement. There may be enough correlation at the very high and low extremes of transaction flows (if transactions are very high some institutionalization is almost certain to be present, and extremely unlikely if transactions are nil) but for most interesting cases the correlations are not likely to be strong enough to use the transaction data for descriptive purposes.

For the creation of a security-community, however, the relationship may be a good deal stronger, subject to the qualifications to be listed. By definition, when transaction levels are very low nations are not relevant to each other (e.g., Burma and Bolivia) so although peace is of course expected 'peaceful change' is not at issue and it seems inappropriate to think in terms of a security-community. On the other hand, there is good reason, in part from Deutsch's own work on the North Atlantic area, to think that security-communities will evidence a high level of exchange in transactions (note the affirmative responses in the rows directly below). Nevertheless, the correlation may not be extremely high, and for areas where one thinks the security-community has been established for some time here too it is best to measure the presence or absence of violence, expectations of peaceful change, and the absence of preparations for war directly. For areas where one may suspect the very recent establishment of a security-community, however, transactions flows may provide a valuable descriptive assist if the direct measurements are ambiguous.

As for integration defined as responsiveness, the reasoning and evidence discussed in the preceding section seem strong enough for us to believe that transaction flows may indeed provide a quite serviceable descriptive measure, in so far as they constitute capabilities. This is particularly so because of some very serious difficulties in efforts to measure responsiveness directly that have become apparent. Responsiveness may be sufficiently harder to measure than institutionalization or establishment of a security-community that here the case for a surrogate transactions measure may be quite strong. We shall discuss some of these problems below. Even so, the need to establish qualifications to deal with the loads aspects of the relations must be considered, and will be dealt with. Research is badly needed to tell us how often, and with what qualifications, transaction data will do as a surrogate.

Transactions data do not *predict* to institutionalization any better than they describe it, except again at the extremes. If transactions flows are now nil, institutionalization in the 'near' future is most unlikely; if they are very high, future de-institutionalization is also unlikely; but in the great middle range there is less to be said. On the other hand, transactions flows probably will predict to the other two varieties of political integration. Observed *changes* in transaction levels give a pretty good idea of the trends of war-expectations and responsiveness, and in any case international transaction levels change at quite a slow, even glacial, pace. There is good evidence that barring unusual and drastic political change the

year-to-year or even decade-to-decade transaction changes will be small.[24] Hence, if one has current data, especially on whatever trend does exist, one can make some reasonably confident mid-term predictions about political integration.

Transactions do not seem to make institutionalization *possible* as a necessary condition, either, though here it seems desirable to hedge the answer just a little. Even coercive institutionalization requires some flow of transactions to carry intelligence to the rulers.[25] For the other two varieties of integration, however, the answer is quite a flat yes; neither security-community nor responsiveness seems possible without 'substantial' transaction flows.

Finally, do transaction flows in any sense *cause* political integration, in the sense of being a sufficient condition? The notion of cause is an ambiguous one, carrying much philosophical baggage, and perhaps it would be just as well to avoid it. And it would not be right to say that institutionalization must occur if transactions are high. But it may not be very inaccurate to say that institutionalization must occur if transactions *remain* at a high level, or at least that a high level of transactions, in the absence of institutionalization, will very quickly force a hard decision either in favor of institutionalization or of cutting back the transaction level. This seems to be what has recently happened among the nations of the European Economic Community concerning political integration in the financial domain. Trade, and to a lesser degree investment flows, have become so high among the Six that their economies are highly interdependent; all members are extremely sensitive to exchange rate fluctuations, price changes, and interest rate changes in each other's national economy. The resulting sensitivities appear to be so great as to impel them toward financial integration—initially mutual access to a community stabilization fund, but ultimately leading to a common currency. This seems to be the meaning of the decisions reached at and immediately following the Hague conference in

[24]Russett, *International Regions,* and Russett "'Regiona' Trading Patterns, 1938–1963", *International Studies Quarterly,* 12, 4 (December 1968), pp. 360–79. Note that the relationship between transactions and war-expectation may be curvilinear: starting at the zero level, increased transactions may lead to increased conflict, with the relationship reversing at high levels. At any rate a complex interaction with other variables is at issue. See below, and *International Regions,* pp. 196–202.

[25]It should also be noted that according to Donald Puchala, 'Mutual attentiveness, responsiveness, relevance, and the like, predate the launching of the EEC by nearly a decade. These transactional phenomena predate strong and widespread support for political federation by almost a decade and a half.' ('Patterns in West European Integration', paper presented to the annual meeting of the American Political Science Association, Los Angeles, September 1970, p. 41. Also, Lindberg, 'Political Integration as a Multi-Dimensional Phenomenon', does recognize that 'the development of horizontal, identitive, ties among elites, and perhaps mass publics, is likely to be an important political resource, especially if the system is to handle stressful issues' He looks at survey and trade data, and his category of 'resources of collective decision-makers' includes many of what I call capabilities. I suspect further that my capabilities/loads ratio is in fact close to what Lindberg urges with his plea for attention to 'stress response capability'. Neither of these authors, however, goes so far as to regard these particular items as necessary for institutionalization.

autumn 1969.[26] Without such integration purely national steps to deal with the instabilities, steps intended to diminish the economic interdependence of the members, would seem required. Something on this same order, of a less drastic nature, also may be occurring more generally among the OECD nations.[27]

Transactions, at least if carried on at high levels, may also be considered a cause of security-community, in so far as they provide capabilities. To say that they cause integration, however, does not excuse us also from asking what may cause transaction flows to be high—they certainly are not a 'prime cause'. Similarly we may expect that high levels of transactions will virtually always result in substantial responsiveness, though in neither case do we ignore some fundamental qualifications.

4.3 Conditions for Transactions as Capabilities

What are these qualifications that have been attached to all the affirmative answers in the second and third columns? 'Yes' always depends upon the following conditions being met:

1. The level of transactions must be high *relative to transactions within each subsystem.* The problem at issue is essentially one of competition for the attention of busy individuals often suffering from information overload. This is especially true at the elite level, but to a lesser degree also among the attentive public and even the mass. There are only 24 h in the day; a man can read only so much, have so many briefings, make so many decisions. Various administrative and technical procedures may be devised to condense information or delegate responsibility, but there are limits to their value. Multiplying levels of information processing means increasing the probability of willful or inadvertent information distortion as it

[26]In a personal communication, Ernst Haas made it clear that he sees this phenomenon as a manifestation of spill-over—evidence that there is indeed a good deal of convergence in our theoretical conceptions. For economists' views that economic integration does not *necessarily* bring political institutionalization see, among others, Lawrence B. Krause, *European Integration and the United States* (Washington: Brookings Institution, 1967), Bela Balassa, *The Theory of Economic Integration* (Homewood, 111.: Dorsey, 1961), and Roger D. Hansen, 'Regional Integration: Reflections on a Decade of Theoretical Efforts', *World Politics,* 21, 2 (January 1969), pp. 242–71. It seems to me, however, that these views essentially deal with situations of lower levels of transaction flows than are now emerging in the EEC. For support of my argument see Hans Schmitt, 'Capital Markets and the Unification of Europe', *World Politics, 20,* 1 (January 1968), pp. 228–44.

[27]See Richard N. Cooper, *The Economics of Interdependence* (New York: McGraw-Hill, 1968). Interestingly, Cooper sees other capabilities within the wider OECD area as too slight to support successful voluntary institutionalization, so he in fact advocates certain very careful and limited national steps to limit the destabilizing effect of financial movements. In 'The Politics of Interdependence', *International Organization, 23, 2* (Spring 1969), pp. 311–36, Edward Morse cites Cooper's findings about increasing international financial interdependence, but, I think, misses Cooper's point about the strains this interdependence imposes.

comes up the chain.[28] Ultimately, and particularly for busy elites, the *ratio* of messages from one source to the number of messages from all sources is a more important determinant of attention and understanding than is the total *number* of messages from any particular source.[29] Operationally, we may measure this with a ratio of messages originating externally to those originating within the domestic system, or for the relations of two particular nations, the number of messages originating in the partner to all other messages, external and domestic combined. The result gives a measure of the *weight* of the partner in decision-making processes. A typical empirical index, for example is $XJ\ GNP_t$, where x is exports, GNP is gross national product, *i* a subscript for the exporting country, and *j* for the importing country.

It is essential to note that this index should be fairly high for *both* partners. If it is high for one and not the other, then instead of interdependence there is a case of dependence one on the other. One country exerts important weight on the system of the other, but not vice versa. This is always a risk in the relation between a very large and very small country, or one where the economic system of one is very much more developed than that of the other. The danger is that the relationship will be, or will be perceived as being, exploitative or colonial. Even with the best of intentions the big country will, though inadvertently, exert great influence on the small one but it may be very hard for the little one to make itself felt in the big one to evoke responsiveness even if the predispositions in the big one are favorable.

2. The level of transactions must be high *relative specifically to other systems,* they must show a level that is appreciably greater than would be expected by random probability. To measure this Deutsch devised his well-known index of relative advantage (RA) to control for size and measure the degree to which observed exchanges differ from random expectation. This becomes an index of one nation's *preference* for another. Like the weight index it is important, though perhaps less so, that the preferences be reciprocated. The preference index is certainly not a substitute for the weight index; empirically they are only moderately correlated in the world, they have different political effects, and each is essential to effective capabilities. Good evidence on their relative importance to political integration is lacking at the moment. This is very serious, and when the two indices point in different directions it is hard to draw convincing conclusions. In his more recent study of European integration Deutsch noted that the RA's among the Common Market countries, though generally positive, had risen but little since the mid-1950s. From this he drew his well-known conclusion about a plateau in European integration. On the other hand, I have noted

[28] See Anthony Downs, *Inside Bureaucracy* (Boston: Little Brown, 1967).

[29] I have developed this point in more detail in *Community and Contention,* pp. 28–9.

approximately a doubling in the T/GNP ratios for the same nations, and suggested that this pointed toward continued progress in political integration.[30] Part of the difficulty stems from the typicality of this as a situation where indicators conflict or are ambiguous; another part stems from the lack of evidence on past cases of integration as to which is the more relevant measure. Still another source of confusion stems from our apparent different usages of 'political integration'. My conclusions were meant to apply to capabilities for responsiveness. Deutsch, despite his earlier interest in security-communities, seems in the more recent study to have focused on institution-building or perhaps on the transfer of loyalties to institutions, since the achievement of a security-community seems clear. One tentative hypothesis is that the preference index may be the more relevant to institution-building or the creation of a security-community, but the weight index more relevant to responsiveness.

It must be admitted that there is a certain zero-sum flavor to this emphasis on *relative* transactions. If transactions between two nations are high relative to domestic ones, and to transactions with other nations, somewhere the relative level of transactions has to be low. In short, one must give up capabilities in one geographic area to build them in others. I suspect this is a somewhat extreme formulation, and that by careful and knowledgeable acts the total supply of capabilities can be expanded. But there are limits to the rate and extent of that expansion, just as there are limits to a nation's ability to expand its economy. Moderate new demands on the economy or a national budget can be financed out of annual economic growth, but great demands will require the sacrifice of one or more former activities. This is unfortunate, but part of the human dilemma. We always have to make difficult choices, and at best we only can hope to sacrifice what is least important to achieve something more valuable. In making decisions that will affect the allocation of their capabilities for dealing with other nations, and with their own system, leaders must decide where the greatest burdens lie and try to direct their capabilities accordingly. It may not be

[30]Karl W. Deutsch et al., *France, Germany, and the Western Alliance* (New York: Scribners, 1967) 1 Chap. 13, and Russett, *Trends in World Politics* (New York: Macmillan, 1965), pp. 36–7; later data in my 'Interdependence and Capabilities for European Cooperation', *Journal of Common Market Studies,* 1970. Incidentally, this is extremely relevant to the criticism many have made of the recent Deutsch book, that it shows an alleged plateau in European integration when some specifically political indicators suggest continued progress. (For example, William E. Fisher, 'An Analysis of the Deutsch Sociocausal Paradigm of Political Integration', *International Organization,* 23, 2 (Spring 1969), pp. 254–90.) From this, those who see continued political progress often conclude that transaction measurement should be discarded. Perhaps it means only that Deutsch's transaction data should have been interpreted from a slightly different theoretical viewpoint, and hence different indices formed of the same data. This is a theoretical rather than a methodological distinction. The point may be, to use a much over-worked expression, that the very promising baby of transaction analysis should not be thrown out even if one does regard Deutsch analysis as bathwater. (The Fisher critique's utility is compromised still further because his methods for measuring institutional decision-making are so poorly described that his interpretation of political trends is equally questionable.).

possible to have the entire world integrated at once, by anyone's definition of integration. But political actors can attempt to build integration among nations where the potential rewards are greatest or to avert the most serious dangers.

3. The transactions must be *balanced,* truly an exchange. This is already suggested by the above statements that both preferences and weight should be mutual. Deutsch refers to the importance of 'role reversal'. It is surely not necessary that every particular class of transaction be in balance, but only that some overall balance among all major transaction categories be achieved. A flow of persons through migration, for example, may be balanced by flows of money or goods. Some cultural products may emanate from a new metropolitan center but be balanced by a flow of ideological or religious symbols from an older center. The important factor is that there be some sort of balance, especially in the perceptions of the citizens themselves.[31]
4. Finally, transactions, as capabilities, must be high *relative to loads or burdens.* Only with reference to the level of burdens can one make any statement about how many capabilities are required to produce a desired level of responsiveness. In large part this point has already been made, with the insistence that transactions must be (1) high relative to intrasystemic transactions for both parties, (2) high relative to transactions with other systems for both parties, and (3) balanced. Imbalance is itself a serious burden on the relationship. Also, one must be aware of the particular political demands posed by other relationships. In the late nineteenth century, for example, there was substantial migration both from Great Britain and from Ireland to the United States. In both cases the immigrants already spoke English, came in at higher levels in the social order than did many immigrants from other countries, and could have been expected to contribute to capabilities in the relationship of the United States with the United Kingdom. However, this coincided with the Irish struggle for freedom from Britain. As a result, the Irish immigration made it substantially harder for the American government to establish good relations with the British government until Irish independence was achieved in 1923. Had the same level of Irish immigration come instead from almost any other country, it would have been, instead of a burden on the American-British relationship, essentially irrelevant. Similarly, heavy British exports to North America at the same time, which in principle should have served overwhelmingly as a capability, happened to be concentrated especially in certain products (woolen textiles, band and hoop iron, tin plate) whose American manufacturers were demanding heavy tariff protection. This coincidence of trade with domestic anti-trade political pressures made the transactions into substantial carriers of burdens as well as capabilities, as they would not have been had British exports been of some product not made in America. An analogous problem exists with present-day United States imports from Japan.

[31]To some degree the balance may be achieved by political processes—coalition formation, bargaining, and side payments.

A final example is from contemporary international politics. In a major triangular relationship with the Soviet Union, both English speaking countries still see most of their contacts with the Soviet Union as threatening and burdensome. Given the hostility on both legs of the triangle connected with the Soviet Union, cognitive dissonance theory would lead us to expect that each of the other two countries would tend to perceive its relationship with the other in the most favorable possible light.[32] Also, coalition and alliance theory would lead us to expect them to make special efforts to emphasize the capabilities and suppress or resolve the burdens in their mutual relationship. And considering just the American-Soviet pair alone, clearly whatever transactions are carried on between them carry the special burden of inevitable strains between the two greatest world powers in a bipolar system. Transactions must certainly be interpreted in light of the structure of the international system in which they occur.

Thus, transaction flows can never be counted mechanically and simply automatically assigned to capabilities. One must look for balance, for their relationship to level of transactions with others, and for special political burdens. These points have been made often in print before, but apparently they cannot be made often enough. While one may reasonably make certain presumptions about the capability of transaction flows in many circumstances, one must do so consciously and be alert for particular evidence which would contradict or reinforce the initial assumption.

4.4 Next Steps in the Development of Integration Theory

It is clear that much remains to be done in refining theory about political integration. These efforts must attend both to deductive theory-building and to empirical testing; neither so far has been remotely adequate. There still are relatively few cases that have been subjected to intensive empirical analysis, and for many of those the theory employed was either insufficiently precise, or insufficiently comparable with other scholars' work, that the cumulative value of work so far is not great. More seriously, however, are some intrinsic limits to the quantity of empirical research on specifically international integration that can be done. If we are concerned with responsiveness between pairs of countries, then for recent international politics with approximately 130 nations there are more than 8000 pair-wise relationships. Even leaving out relationships between countries that are essentially irrelevant to each other, we have potentially more than a thousand cases for

[32]An interesting application of this to Sino-Soviet-American relations is P. Terrence Hopmann, 'International Conflict and Cohesion in The Communist System', *International Studies Quarterly,* II, 3 (September 1967), pp. 212–36.

examination. Perhaps much the same is true if the establishment of security-communities is our concern.

If the creation of supra-national institutions, and the transfer of loyalties to those institutions, is the phenomenon of most interest, the problem is much more difficult. There are few cases available for examination during recent decades, particularly if we restrict ourselves to cases of integration between states that are reasonably economically developed. And while we cannot yet be sure, there seems to be fairly good reason to suspect that the integrative process is very different for developed states; Nye has noted that in East Africa one may readily concentrate on elite perceptions and behavior while almost ignoring those of the general populace, but that cannot be done in Western Europe with anywhere near such confidence.[33] If we insist on a strong criterion of institution-building—political union—there are at most only two cases of previously separate economically developed national entities uniting in this century: Canada-Newfoundland, and Yugoslavia after 1918. In the latter case, furthermore, we have to stretch our definition of economic development. Even if we lower the institutional criterion to include such half-cases as the Belgian-Luxembourg Economic Union and the European Community, the available universe is not large. Extending it back into the nineteenth century might get us a few more cases—Sweden-Norway, Germany, Italy—but at the cost of losing control of some important political variables in systems where mass participation was much more limited than it is now. There are enough cases to sharpen our insights, refine existing hypotheses, generate new ones, and discard some old ones, but hardly enough for proper hypothesis-testing. Hence, the case some writers make for a 'configurational' approach to integration.

There are various ways in which the universe of cases for analysis might be expanded, but each exacts a price. I have already mentioned the use of historical material from previous eras. A great deal of information may be available in studies of subnational integration—the unification of metropolitan areas, or provinces or regional units of government, or the transfer of functions and loyalties from provincial to national institutions. There is much to be said for studies at the *very* subnational level, that is controlled laboratory experiments with small groups, perhaps somewhat on the order of the Harold Guetzkow's Inter-Nation Simulation. But analytical and theoretical problems are certainly not avoided there either; one must worry greatly about all the inevitably uncontrolled variables and the confidence with which small-group findings can be extended to the international level.

The need for analytical refinement of existing theory is just as great and as demanding as is empirical work. I consider my own focus on responsiveness to be substantively and theoretically very important, but fraught with difficulties that may make the effort sometimes seem of questionable worth. There are serious questions as to the degree it can be made rigorously operational. One is looking essentially for

[33]See J.S. Nye, *Pan-Africanism and East African Integration* (Cambridge: Harvard University Press, 1965).

the probability of favorable response within the time desired by the party making the request (e.g. American blacks: 'We can't wait another 100 years.'). In my book on Anglo-American relations I attempted to measure these through a combination of relatively 'soft' analysis using the more or less traditional materials of diplomatic history with harder, more quantitative counts of treaty-signature and content analysis of elite communications. Basically, this is, I think, the approach that must be continued, but I feel my results there were only moderately successful and the intrinsic difficulties are great. For example, how about the *scope* of responsiveness? A party may be reasonably responsive to the other in certain areas of concern, such as trade and economic relations, but terribly dense and unmoving on security or cultural matters. If this is the case, how does one *weight* responsiveness in one area against unresponsiveness in the other to create any kind of overall index?[34] Or how weigh responsiveness to elites rather than to mass demands, or to one interest group rather than another? Or what does one do about the problem of anticipated response; where a 'responsive' act is taken before the request is even made overtly? Such a case might be the ultimate in responsiveness but might utterly elude our data-gathering net. In short, we are likely to have here most of the problems of 'national interest' theory, and even more so those of the analysis and measurement of power. The relation to power theory is especially striking because in fact what we may have in responsiveness is mutual power, power over *each other.* As the problems with power theory are formidable, so are those with responsiveness.

Some help, especially at the international level, can and must come from efforts to develop refined measures of specifically political integration and community directly, as for example in the recent work of Lindberg and Scheingold, and Nye.[35] These efforts, however—notably the Lindberg scheme—often are extremely complex and empirically forbidding. For many purposes survey research on mass attitudes is very important.[36] It will be useful to know attitudes on directly political questions, such as readiness to delegate authority to institutions or, on responsiveness, approval of specific policies. Furthermore, survey data provide a direct measure of mutual identification. We must of course recognize the difference between elite and popular attitudes, since for the latter matters of integration are far less salient. In the end, neither direct measurement of political acts nor survey research will solve all our problems, given the difficulties mentioned above.

[34]In this case I tend to agree with the argument of Lindberg, 'Political Integration as a MultiDimensional Phenomenon', rather than with Ernst Haas in 'The Study of Regional Integration: Reflections on the Joy and Anguish of Pre-Theorizing', *International Organization,* 24, 4 (Autumn 1970) on the difficulties of aggregating integrative processes across properties and issue-areas, and the multi-dimensionality of most.

[35]M Leon N. Lindberg and Stuart A. Scheingold, *Europe's Would-Be Polity* (Englewood Cliffs, N. J.: Prentice-Hall, 1970), and J.S. Nye, 'Comparative Regional Integration: Concept and Measurement', *International Organization 22,* 4 (Autumn 1968), pp. 855–80.

[36]See particularly the work of Ronald Inglehart and David Handley.

Instead, it may be worthwhile to contemplate adding yet another definition to our compendium of meanings for 'political integration'. I hesitate to suggest such a step given the level of confusion that already exists over the term, but I think there is substantial potential utility in a definition of political integration as *unity of action in relation to the external system.* We thus treat the relevant international or supranational organization as a subsystem of the superordinate global system, itself composed of national subsystems. We would look at various political acts by those national governments within the allegedly 'integrating' system to see the degree to which they adopted a common policy. Various kinds of political acts in international politics are readily measurable and would be appropriate: signing trade agreements and customs unions, voting behavior in the United Nations, conclusion of military alliances, co-belligerency in war, comembership in international organizations. Clearly there are problems with this approach too; for example it is most useful for subsystems and thus it is not easily applicable to universal or quasi-universal integration.

Also, it requires clearly identifiable political subsystems within the integrating unit, and hence might not prove valuable in those cases where 'integration' had gone so far as to erase the demarcation lines around political subsystems.

The problem of scope remains also, since we might have to balance close cooperation in one policy area (e.g. trade) against serious divergence in another (military alignment). There is the possibility, nevertheless, that this handicap may not be so serious as it sounds, and there is some evidence that nations' policies in the international arena are in fact scalable. That is, one could predict with high if not perfect confidence that if several nations pursued a common policy on one matter that they also would be pursuing a common policy on certain other matters. For example there are no current cases of nations forming a common market without also being militarily allied. If this is approximately true over several different items the set of items together is said to form a Guttman scale; such scales are common in many areas of political research, including national behavior in international organizations. If with some regularity expansion of common action into a particular new functional area implies a higher level of integration, the scope problem is much alleviated.[37]

A perhaps more serious difficulty is how to control for apparent coercion; this is, how to deal with a case where a set of nations maintain a common policy toward the external world but where this common policy is *imposed* by one member on the rest, rather than freely chosen. Specifically in the contemporary world, how do we treat the apparent circumstances of Eastern Europe? The common action criterion

[37]The evidence that many national actions of this sort are in fact scalable is contained in Robert A. Bernstein, *International Integration* (Ithaca, N.Y.: Cornell University Press, 1971). I am fundamentally indebted to Bernstein's study for suggesting common action as an operational definition of integration.

might call those highly integrated, but that does too much violence (literally) to our other meanings of integration.[38] Of course we can define integration any way we wish, but this seems not to be a very useful or intuitively satisfying result.

One possible way of dealing with this might be to insist that the group of nations in question *also* meet all the transaction criteria, for level and balance. This would re-establish the requirements for voluntarism and mutual reward, while still leaving us with a measurable and important political output. If both dimensions, of transaction and common action, are required, Eastern Europe's level of integration comes out much lower, and we perhaps have a definition that is intuitively satisfying but empirically workable. It is not empirically easy, because some of the measurement demands, when we check the transactions in depth to ascertain their capability content, are difficult. Nor is it intuitively perfect, for we still would be interested in institutionalization, transfer of loyalties, security-communities, and responsiveness—all of which essentially deal with actions or perceptions internal in the 'integrating' system. But it just might be a way to break out of some other shackles that at present threaten seriously to slow progress in the development and application of political integration theory.

[38]Actually this may not be as serious a problem as it appears, since in Bernstein's coding on a six-point scale the satellites alone rank only 4 and the communist system as a whole ranks 3.

Yale University dinner, Fall 2000, at the home of the Yale University President. From *left* to *right*, Crown Princess Victoria of Sweden, Bruce, Jean Krasnow, and James Sutterlin. *Source* This photo is from the personal collection of Bruce M. Russett who granted permission to include it here

Chapter 5
The Kantian Peace: The Pacific Benefits of Democracy, Interdependence, and International Organizations, 1885–1992

John R. Oneal and Bruce M. Russett

Just over 200 years ago Immanuel Kant suggested that "republican constitutions,"[1] a "commercial spirit" of international trade, and a federation of interdependent republics would provide the basis for perpetual peace. The alternative, even starker in the nuclear era than in 1795, would be peace of a different sort: "a vast grave where all the horrors of violence and those responsible for them would be buried."[2] Consequently, Kant declared, we have a duty to work for peaceful international relations. Though he emphasized the absolute character of this moral imperative, he was no idealist; rather, he believed that natural processes based on self-interest impelled individuals to act in ways that would eventually produce a lasting and just peace. Kant was also realistic. He acknowledged that war was inherent in the anarchic international system and therefore cautioned that nations must act prudently until the federation of interdependent republics was established. But he also knew that the mechanisms of power politics produce only temporary respite from conflict, not lasting solutions.

Over the past half century much of the world has been at peace. Understanding that phenomenon, its causes and trajectory, is the fundamental challenge for international relations scholars today. We seek to show that Kant's realistic statement of liberal theory provides useful guidance for this task. Most political scientists now agree that

[1]We thank the Carnegie Corporation of New York, the Ford Foundation, and the National Science Foundation for financial support; Zeev Maoz for comments; and Jennifer Beam, Margit Bussmann, Soo Yeon Kim, Yury Omelchenko, Brian Radigan, and Jacob Sullivan for data collection and management.

[2]Kant, *Perpetual Peace: A Philosophical Sketch,* in *Kant's Political Writings*, ed. Hans Reiss (Cambridge: Cambridge University Press, 1970), 105. See also James Bohman and Matthias Lutz-Bachmann, eds., *Perpetual Peace: Essays on Kant's Cosmopolitan Ideal* (Cambridge: MIT Press, 1997).

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the contemporary peacefulness can be traced in part to the so-called democratic peace, wherein established democratic states have fought no international wars with one another and the use or threat of force among them, even at low levels, has been rare.[3] This view is incomplete, however, because it fails to recognize the pacific benefits of the other liberal elements of Kant's program for peace. Moreover, the term hides the vigorous theoretical controversy about the processes underlying this separate peace—over whether democracy is really even its cause and over the degree to which the empirical phenomenon existed in other eras.

These theoretical and empirical concerns are linked. If, for example, peaceful relations among democracies during the cold war era were simply a consequence of their shared security interests vis-à-vis the opposing alliance system in a bipolar world, then their peacefulness would be spuriously related to the character of their regimes. The same conclusion would result if the democratic peace could be attributed to the hegemonic power of the United States to suppress conflict among its allies or to East-West differences in preferences unrelated to underlying differences in regimes.[4] One would not then expect to find a separate peace among democratic states in other periods evincing different patterns of interstate relations. We address these questions by reporting analyses covering 1885–1992, to show that peaceful relations among democracies existed throughout the twentieth century.[5] Extending the historical domain also allows

[3]By convention in the social science literature, war is defined as a conflict between two recognized sovereign members of the international system that results in at least one thousand battle deaths. The most complete data on militarized international disputes (MIDs), compiled by Stuart Bremer and his colleagues, are available at http://pss.la.psu.edu/MID_DATA.HTM. The democracy data we employ were compiled by Keith Jaggers and Ted Robert Gurr, "Tracking Democracy's Third Wave with the Polity III Data," *Journal of Peace Research* 32, no. 4 (1995), available at http://www.systemicpeace.org/polityproject.html. Both data sets are produced independently from the democratic peace research program, and the initial codings, from the 1980s, precede it. Reviews of the program include Steve Chan, "In Search of Democratic Peace: Problems and Promise," *Mershon International Studies Review* 41, no. 1 (1997); James Lee Ray, "Does Democracy Cause *Peace?*" *Annual Review of Political Science* 1 (1997); and Bruce Russett and Harvey Starr, "From Democratic Peace to Kantian Peace: Democracy and Conflict in the International System," in Manus Midlarsky, ed., *Handbook of War Studies,* 2d ed. (Ann Arbor: University of Michigan Press, 2000).

[4]Henry Farber and Joanne Gowa, "Common Interests or Common Polities" *Journal of Politics 57,* no. 2 (1997); Gowa, *Ballots and Bullets: The Elusive Democratic Peace* (Princeton: Princeton University Press, 1999); Douglas Lemke and William Reed, "Regime Types and Status Quo Evaluations," *International Interactions* 22, no. 2 (1996); Erik Gartzke, "Kant We All Just Get Along? Opportunity, Willingness and the Origins of the Democratic *Peace,*" *American Journal of Political Science* 42, no. 1 (1998).

[5]The MIDs data (fn. 2) are unavailable after 1992, and data on dyadic trade are sparse and unreliable before 1885. In any event the further back one goes into the nineteenth century, the rarer are instances of democracy, intergovernmental organizations, and high levels of economic interdependence. The MIDs data include only disputes between recognized states and not, for example, extra systemic (i.e., colonial) actions, covert operations, or domestic military interventions in support of a recognized government.

us to assess the effect of the changing character of the international system on interstate relations.[6]

In keeping with the Kantian perspective, we expand our analysis beyond the democratic peace, incorporating the influence of economically important trade and joint memberships in international organizations. The classical liberals of the eighteenth and nineteenth centuries expected interdependence as well as popular control of government to have important pacific benefits. Commercial relations draw states into a web of mutual self-interest that constrains them from using force against one another. Thus interdependence and democracy contribute to what we have called the "liberal peace." Kant emphasized, in addition, the benefits of international law and organization. Our previous analyses of the cold war era indicate that, during those years at least, trade and networks of intergovernmental organizations did reduce the number of militarized interstate disputes; these effects were on top of the benefits of democracy.[7] We show here that they also operated in earlier and later years.

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[6]We will not here offer a new theory on why democracy produces peaceful relations. A recent statement is Bruce Bueno de Mesquita et al., "An Institutional Explanation of the Democratic Peace," *American Political Science Review* 93, no. 4 (1999).

[7]John R. Oneal and Bruce Russett, "The Classical Liberals Were Right: Democracy, Interdependence, and Conflict, 1950–1985," *International Studies Quarterly* 40, no. 2 (1997); Russett, Oneal, and David R. Davis, "The Third Leg of the Kantian Tripod: International Organizations and Militarized Disputes, 1950–85," *International Organization 52,* no. 3 (1998); Oneal and Russett, "Assessing the Liberal Peace with Alternative Specifications: Trade Still Reduces Conflict *Journal of Peace Research* 36, no. 4 (1999). Here we extend this line of research in three ways: (1) providing a conceptual synthesis of Kantian and realist theories that treats conflict as inherent but subject to important constraints; (2) extending the temporal domain for trade and IGOs into the nineteenth century; and (3) assessing realist theories regarding the role of the hegemon and Kantian theories about systemic influences in a way that addresses, among others, constructivist and evolutionary perspectives on the international system. Note that the Kantian influences may be mutually reinforcing in a dynamic system of feedback loops, as suggested by Wade Huntley, "Kant's Third Image: Systemic Sources of the Liberal Peace," *International Studies Quarterly* 40, no. 4 (1996); and Russett, "A Neo-Kantian Perspective: Democracy, Interdependence, and International Organizations in Building Security Communities," in Emanuel Adler and Michael Barnett, eds., *Security Communities in Comparative Perspective* (New York: Cambridge University Press, 1998).

We and others have begun to address some of these links, such as greater trade between democracies, the possibility that trade is diminished between conflicting states, the effect of democracy, trade, and peace in increasing membership in international organizations, and the effect of conflict on democracy. On the first, see Harry Bliss and Russett, "Democratic Trading Partners: The Liberal Connection," *Journal of Politics* 58, no. 4 (1998), and James Morrow, Randolph Siverson, and Tessa Tabares, "The Political Determinants of International Trade: The Major Powers, 1907–90," *American Political Science Review* 92, no. 3 (1998); on the second, see Soo Yeon Kim, "Ties That Bind: The Role of Trade in International Conflict Processes" (Ph.D. diss., Yale University, 1998); on the third, see Russett, Oneal, and Davis (this fn.); and on the last, see Oneal and Russett, "Why An Identified Systemic Model of the Democratic Peace Nexus' Does Not Persuade," *Defence and Peace Economics* 11, no. 2 (2000).

5.1 Our Objectives and Method

Although the liberal and realist perspectives are often considered antithetical, in keeping with Kant's philosophical analysis we conduct our tests of the Kantian peace while taking into account important realist influences. We believe, as Kant did, that both perspectives matter, as both consider conflict and the threat of violence to be inherent in an anarchic world of sovereign states. The Hobbesian element of this understanding is central to realist theory, but it is also deeply embedded in the liberal tradition. Kant accepted Hobbes's description of a state of war among nations and believed that a balance of power could prevent war; but history has shown all too clearly, as most realists acknowledge, that this 'peace' is tenuous. Kant, however, was convinced that a genuine, positive peace could be developed within a 'federation' of liberal republics that rested more on the three Kantian supports—democracy, interdependence, and international law and organizations—than on power politics. The pacific federation envisioned by Kant is not a world state but a federation whose members remain sovereign, linked only by confederational or collective security arrangements. Liberalism, that is, sees democratic governance, economic interdependence, and international law as the means by which to supersede the security dilemma rooted in the anarchy of the international system. For states not much linked by these ties, however, the threat of violence remains. In addition, liberal states must fear those illiberal states that remain outside the Kantian confederation.[8]

Thus we begin by assuming that the international system is anarchic and power is important. Yet despite the inherent possibility of violence, states do not fight all others or at all times even where realist principles dominate. Rather, they are constrained by power, alliances, and distance. States must be concerned with the balance of power and the coincidence of national interests expressed in alliances. Many states, moreover, are irrelevant to these calculations: in general, the farther apart two states are, the fewer are the issues over which to fight and the less the threat they pose to one another. Ultimately therefore realists are concerned only with states that have the opportunity and incentive to engage in conflict.[9] Accordingly because these constraints provide a baseline against which to assess the additional impact of the Kantian influences, we incorporate them as central features of our theoretical model. To the realist variables we add measures for the three Kantian constraints, hypothesizing that (1) democracies will use force less frequently, especially against other democracies; (2) economically important trade creates incentives for the maintenance of peaceful relations; and (3) international

[8]Michael W. Doyle, *Ways of War and Peace* (New York: W.W. Norton, 1997), Chap. 8; David Lake, "Powerful Pacifists: Democratic States and War," *American Political Science Review* 86, no. 4 (1992).

[9]Birger Heldt, "Inherency, Contingency, and Theories of Conflict and Peace" (Manuscript, Yale University, 1998); Benjamin Most and Harvey Starr, *Inquiry, Logic, and International Politics* (Columbia: University of South Carolina Press, 1989), Chap. 2.

organizations constrain decision makers by promoting peace in a variety of ways. Since the modern international system is far from a pacific federation of democratic states, we expect both realist and Kantian factors to affect interstate relations. We explicitly consider how realist and liberal influences at both the dyadic and the systemic level have altered the functioning of the international system, addressing the role of the leading state and the influence of the changing Kantian variables over time

Evidence for the pacific benefits of economic interdependence and membership in intergovernmental organizations (iGOs) is less widely accepted than is that for the democratic peace, and it has been subjected to less extensive critical scrutiny. We alone have assessed the effect of IGOs on conflict at the dyadic level of analysis. Moreover, theoretical expectations regarding the impact of trade and IGOs are more diverse than those concerning democracy. No one hypothesizes that democracies are *more* likely to fight each other than are other polities; but the liberal view of the pacific effects of trade is contradicted by those who expect conflict over the division of the gains from trade and by the dependency school and its intellectual predecessors and descendants, who expect conflict between large and small states.[10] As for IGOs, a plausible view might be that states form or join international organizations to manage—albeit often without success—disputes with their adversaries, the UN being an example. More commonly, realists regard international institutions as nearly irrelevant to the security issues at the heart of high politics, with no effect independent of existing power relations.[11] Even among those who hold that trade or IGOs play a positive role in promoting peace, the reasons advanced vary. Rational choice theorists emphasize political actors' complementary economic interests in maintaining peaceful interstate relations—interests that are reflected in the decisions of national leaders. Fearful of the domestic political consequences of losing the benefits of trade, policymakers avoid the use of force against states with which they engage in economically important trade. But one can also devise constructivist explanations about how the communication associated with trade builds cross-national sentiments of shared identity.[12]

Even realists acknowledge that international institutions like NATO help to preserve peace among their members by supplementing the deterrent effect of sheer military power. Liberals emphasize the potential of institutions for communicating

[10]A useful review is Susan McMillan, "Interdependence and Conflict," *Mershon International Studies Review* 41, no. 1 (1997).

[11]John Mearsheimer, "The False Promise of International Institutions," *International Security* 19 (Winter 1994–95).

[12]Emanuel Adler and Michael Barnett, "Security Communities in Theoretical Perspective," in Adler and Barnett (fn. 6); Alexander Wendt, *Social Theory of International Politics* (New York: Cambridge University Press, 1999). For microlevel evidence that trading contacts expand elites' views of their self-interest, see Daniel Lemer, "French Business Leaders Look at EDC," *Public Opinion Quarterly* 24, no. 1 (1956); and Bruce Russett, *Community and Contention: Britain and America in the Twentieth Century* (Cambridge: MIT Press, 1963), Chap. 9.

information and facilitating bargaining,[13] while constructivists see institutions as instruments for expanding peoples conceptions of identity, relatedness, and self-interest. Because IGOs vary widely in their functions and capabilities, any or all of these explanations may be correct in a particular instance.[14] As with the consequences of democratic institutions, we do not attempt to resolve these theoretical debates here. Instead we seek to offer an empirical assessment of the effect of the Kantian influences on interstate relations.

In expanding the historical domain of the Kantian peace, one encounters hurdles (and opportunities) that arise from marked changes in the nature of political regimes, the importance of international trade, and the role of international organizations. As measured by the standard data on political regimes, Polity III,[15] the average level of democracy in the international system has risen since the early 1800s, in a pattern that is sporadic and wavelike.[16] Similarly, the mean level of economic interdependence as measured by the ratio of bilateral trade to gross domestic product fell after World War I but rose again in subsequent years. Most clear is the growth in the number of IGOs, though those associated with the creation and sustenance of a truly global economy largely emerge only after World War II. These trends for the 1885–1992 period are shown in Figure l.[17] Higher levels of democracy, interdependence, and IGO membership should, of course, reduce conflict for the pairs of countries affected; but we also expect that as the number of democracies increases, trade grows, and IGOs proliferate, there will be important systemic influences on other pairs of states as well. The effect of the Kantian influences should, we hypothesize, be apparent over time as well as cross-nationally.

Our statistical method—pooled cross-sectional time-series regression analysis of data regarding pairs of states (dyads) observed annually—is well suited to the purposes at hand. It considers variance in states' involvement in militarized disputes across dyads in each year and in dyadic relations through time. Consequently we can determine the likelihood of conflict as a function of differences across thousands of pairs of states annually and of changes in dyadic relations or in the international system from year to year over a period of more than 100 years. By measuring change in the Kantian variables through time, we can begin to disentangle their systemic effects from their strictly dyadic influences.

Changes over time in the average level of democracy, interdependence, and IGO involvement capture important elements of the norms and institutions of the international system. Wendt, for instance, contends that world politics has slowly

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[13]Robert O. Keohane and Lisa Martin, "The Promise of Institutionalist Theory," *International Security* 20, no. 1 (1995); Lisa Martin and Beth Simmons, "Theories and Empirical Studies of International Institutions," *International Organization* 52, no. 4 (1998).

[14]For a review of some relevant hypotheses and findings, see Russett, Oneal, and Davis (fn. 6).

[15]Jaggers and Gurr (fn. 2).

[16]Samuel P. Huntington, *The Third Wave: Democratization in the Late Twentieth Century* (Norman: University of Oklahoma Press, 1991).

[17]For graphing purposes the scale for bilateral trade/GDP has been increased by two orders of magnitude and that for IGO membership has been reduced by one order of magnitude.

evolved from Hobbesian anarchy to a Lockean system wherein the security dilemma is ameliorated by norms recognizing the right of sovereign states to exist; these, in turn effectively limit the use of force.[18] Thus, states are no longer subject to elimination: whereas twenty-two internationally recognized states were forcibly occupied or absorbed during the first half of the twentieth century, no state has lost its formal sovereignty through conquest since World War II.[19] The emergence of a Kantian subsystem of states, within which the unprovoked use of force is illegitimate, may have contributed directly to this evolutionary development and affected the probability that force will be used primarily by states that are not particularly democratic, interdependent, or involved in international organizations.

If democracies are more likely than are autocracies to win their wars, then the latter will have to be concerned about the security implications of weakening themselves in war, whether with democracies or other autocracies, especially as the number of democracies in the international system grows.[20] If most great powers are democratic, their peaceful relations should reduce the incentive for war for all states across their spheres of influence. If globalization increases and stimulates economic growth among interdependent states, nonliberal states will have to be concerned lest they be punished by global markets and trading states for instigating international violence that disrupts trade and investment; even antagonistic dyads with little mutual trade may find it prudent to avoid conflict.[21] If international norms and institutions for resolving disputes grow, even nonliberal states may be impelled to use regional or international organizations to help settle their disputes rather than

[18]Wendt (fn. 11). On some systemic effects of a high proportion of democracies, see Hundey (fn. 6); Nils Petter Gleditsch and Havard Hegre, "Peace and Democracy: Three Levels of Analysis," *Journal of Conflict Resolution* 41, no. 2 (1997); Sara McLaughlin Mitchell, Scott Gates, and Havard Hegre, "Evolution in Democracy-War Dynamics," *Journal of Conflict Resolution* 43, no. 6 (1999); and Lars-Erik Cederman, "Back to Kant: Reinterpreting the Democratic Peace as a Collective Learning Process" (Manuscript, Political Science Department, University of California at Los Angeles, December 1998).

[19]For dates of independence, see Bruce Russett, J. David Singer, and Melvin Small, "National Political Units in the Twentieth Century: A Standardized List," *American Political Science Review* 62, no. 3 (1968). Germany and Japan temporarily lost sovereignty after World War II, but soon regained it (Germany as two states). Kuwait was briefly occupied in 1990–91; but a large, diverse coalition of states under the aegis of the United Nations forced Iraq to withdraw in order to protect the sovereignty of established states. South Vietnam is an exception to this generalization if one regards its unification with North Vietnam in 1976 as the result of external conquest rather than of an internationalized civil war. Whereas state extinction as a consequence of international war has become rare, the ideology of ethnic self-determination has led to the breakup of many states and empires.

[20]A counter hypothesis would be that as democracies become more numerous and more confident in their individual and collective strength, they may become emboldened to pursue coercive relationships with those autocracies that remain. For evidence that democracies do win most of their wars, see Bruce Bueno de Mesquita, Randolph Siverson, and Gary Woller, "War and the Fate of Regimes: A Comparative Analysis," *American Political Science Review* 86, no. 3 (1992); Lake (fn. 7); and Allan C. Stam III, *Win Lose or Draw* (Ann Arbor: University of Michigan Press, 1996).

[21]Thomas L. Friedman, *The Lexus and the Olive Tree* (New York: Farrar, Straus, and Giroux, 1999); and Stephen G. Brooks, "The Globalization of Production and International Security" (Ph.D. diss., Yale University, 2001).

accept the political, military, and economic costs imposed by the liberal community as penalties for using military force. Thus increases in the Kantian influences at the system level may have beneficial effects on the behavior of dyads that are not particularly democratic, economically interdependent, or involved in international organizations.

This is not an ecological fallacy.[22] We do not make inferences about dyadic conflict from information about conflict at the systemic level. In all our analyses we address the incidence of militarized disputes among pairs of states. We investigate the consequences of purely dyadic characteristics for dyadic behavior, but we also do consider the effects of evolutionary changes in the international system. To capture the effects of such systemic changes, we use the annual mean scores of democracy, bilateral trade as a proportion of gross domestic product (**GDP**), and joint memberships in **IGOs** graphed in Fig. 5.1. They effectively gauge the pervasiveness of changes in international norms and institutions and document the example of the success of liberal states in the competition among nations. We also consider the influence of the leading state, the hegemon, on interstate relations. We investigate this aspect of leading realist theories with measures of the relative power of the hegemon, states' satisfaction with the status quo, and the hegemon's sense of its own security.

5.2 Historical Domain, Key Variables, and Sources of Data

As our analysis spans the years 1885–1992, it enables us to examine the effects of democracy, economic interdependence, and international organizations over a long period before the cold war and for a few years after. Realists often contrast the dynamics of bipolar and multipolar systems, though there is disagreement over their consequences for interstate relations. By Waltz's criteria, the international system was multipolar for the centuries preceding 1945 but bipolar during the cold war.[23]

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[22]Identified by W.S. Robinson, "Ecological Correlations and the Behavior of Individuals," *American Sociological Review* 15, no. 3 (1950). On how some inferences can be made, see Gary King, *A Solution to the Ecological Inference Problem* (Princeton: Princeton University Press, 1997).

[23]Kenneth Waltz says that it is the power of the units (states) themselves that defines polarity and not the number or power of the alliances they lead; see Waltz, *Theory of International Politics* (Reading, Mass.: Addison-Wesley, 1979), 98–99. Thus the formation of two opposing alliance systems prior to World War I did not change the structure of the multipolar system. Waltz's emphasis on the systemic effects of nuclear weapons would also imply a break between 1945 and all previous years of modern history. Dating the end of the bipolar cold war system is more problematic. Waltz's definition would argue for a break at the end of 1991, when the Soviet Union was dissolved. But William Dixon and Stephen Gaarder show a decisive shift in the pattern of Soviet-American conflict in 1988; see Dixon and Gaarder, "Presidential Succession and the Cold War: An Analysis of Soviet-American Relations, 1948–1992? *Journal of Politics* 54, no. 1 (1992).

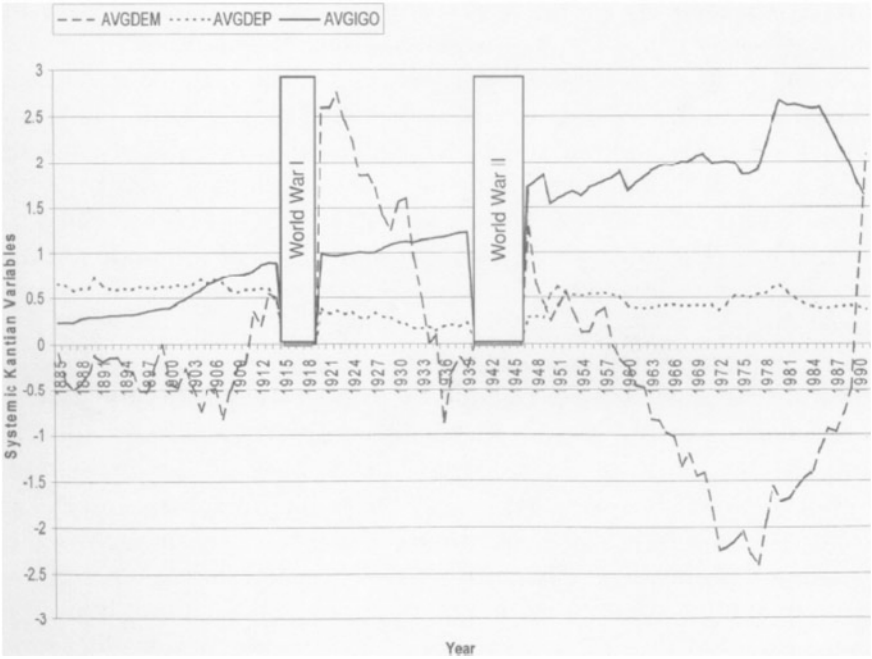

Fig. 5.1 Kantian variables

And the current, post-Soviet world is neither bipolar nor multipolar but perhaps is best understood as unipolar, at least as measured by the relative power of the United States (in its capabilities if not in its will to control or shape events). These theoretically based distinctions require us to consider the effects of the Kantian variables within different international structures, though evaluation of the post—cold war era necessarily remains tentative.

We omit from our analyses all but the first year of both World War I and World War II, because bilateral trade data for those years are fragmentary, as they are for the immediate postwar years, 1919–20 and 1946–49. Omitting all but the first year of the world wars, which consisted of conflicts between democracies and autocracies or between two autocracies, biases our results against finding evidence of the democratic peace, but it also provides assurance that our results are not determined by these dramatic but atypical events.[24] Most of our variables and data are discussed in previous publications. Here we concentrate on what is new.

[24]Farber and Gowa (fn. 3) express this concern.

5.2.1 Dependent Variable: Involvement in Militarized Disputes

We use the Correlates of War (cow) data on interstate disputes (MIDS). We code each year that a dyad was involved in a dispute in which one or both states threatened to use force, made a demonstration of force, or actually used military force against the other. The variable *dispute* equals 1 if a dispute was ongoing and 0 if not. Some researchers urge that only the initial year of a dispute be noted since a dispute in one year increases the chances that the dyad will experience a dispute in subsequent years.[25] This procedure eases some problems but raises others. If leaders are rational, as all our theories assume, they will frequently reevaluate their positions, whether to escalate, deescalate, or maintain the existing strategy. We agree with Blainey: "The beginning of wars, the prolonging of wars and the prolonging or shortening of periods of peace all share the same causal framework. The same explanatory framework and the same factors are vital in understanding each state in the sequel of war and peace."[26] Moreover, we investigated 166 multiyear disputes during the post-World War II era and found that more than half involved a change in the level of force employed over the course of the dispute or that a new dispute arose as the first was concluding. Thus we report analyses of states' involvement in disputes rather than of just their onset; but as in earlier studies of the cold war era,[27] we reestimated key analyses using only the first year of disputes without finding material differences from those reported below.

5.2.2 Dyadic Independent Variables

We lag all independent variables by 1 year to ensure that they were not affected by a dispute to be explained. For some explanatory variables this precaution is clearly important; for example, conflict may limit trade just as trade may constrain conflict. A similar reciprocal relationship can be imagined for international organizations and conflict, as many **IGOs**—though hardly all—are formed among states that maintain peaceful relations. For other variables such considerations are irrelevant. Geographically proximate countries are prone to conflict, but the frequency of their

[25]Stuart A. Bremer, "Dangerous Dyads: Conditions Affecting the Likelihood of Interstate War," *Journal of Conflict Resolution* 36, no. 1 (1993); Katherine Barbieri, "International Trade and Conflict: The Debatable Relationship" (Paper presented at the annual meeting of the International Studies Association, Minneapolis, Minn., February 1998); Nathaniel Beck, Jonathan Katz, and Richard Tucker, "Taking Time Seriously in Binary Time-Series-Cross-Section Analysis," *American Journal of Political Science* 42, no. 4 (1998). See, however, our comment in fn. 49 below.

[26]Geoffrey Blainey, *The Causes of War,* 3d ed. (New York: Free Press, 1988).

[27]Oneal and Russett (fn. 6, 1999).

disputes does not affect their proximity. To be consistent, however, we lag all the independent variables. This precaution does not put to rest all questions about the direction of causality, but it is a reasonable step at this time.[28] All the variables are listed by their acronyms in the appendix.

5.2.2.1 Democracy

We use the Polity III data to compute a summary measure of the political character of regimes, subtracting every country's score on the autocracy scale from its score on the democracy scale. The resulting variable (*Dem.*) ranges from –10 for an extreme autocracy to +10 for the most democratic states. Because a dispute can result from the actions of a single state, the likelihood of conflict is primarily a function of the degree of constraint experienced by the less constrained state in each dyad. As that state is the weak link in the chain of peaceful relations,[29] we expect that the less democratic state (DEM_L) in a dyad is the stronger determinant of interstate violence. Conversely, the more democratic that state, the more constrained it will be from engaging in a dispute and the more peaceful the dyad. In previous analyses we found, as Kant had expected, that the *difference* between states' political regimes also affects the likelihood of conflict. Democratic-autocratic dyads were the most conflict-prone in the cold war era; two autocracies were less likely to fight, and two democracies were the most peaceful. We reconsider these findings below.

The Polity III regime scores exhibit some problems of comparability over time. Until 1918 about 40 % of British males (disproportionately working class) were disfranchised by residence requirements; female suffrage was granted partially in 1918 and hilly only in 1928.[30] In the United States women obtained the vote only in 1920, and blacks were systematically excluded until the 1960s. Swiss women achieved the franchise only in 1971. Some of these changes are reflected in the Polity data and hence in rising levels of democracy in the international system. For example, the United Kingdom goes from 6 to 7 on the democracy scale in 1880, to 8 in 1902, and jumps to 10 only in 1922. But Switzerland is coded at 10 from 1848, as is the United States from 1871. The consequences of these restrictions on political participation for foreign policy may not be trivial. In the contemporary

[28]Kim (fn. 6), using a simultaneous equation model, finds that the effect of trade on conflict is much stronger than the reciprocal one. Russett, Oneal, and Davis (fn. 6) construct a model for predicting IGO membership that includes, among other factors, the absence of conflict. There is an effect, but it is weaker than the influence of IGOs on conflict.

[29]William J. Dixon, "Democracy and the Peaceful Settlement of International Conflict," *American Political Science Review* 88, no. 1 (1994).

[30]Trevor Wilson, *The Myriad Faces of War: Britain and the Great War, 1914–1918* (Cambridge, England: Polity Press, 1986), 660–61; Kenneth MacKenzie, *The English Parliament* (Harmondsworth: Penguin, 1950), 106.

United States, for example, women are significantly more averse to the use of military force than are men and vote in part on this basis.[31] Thus the exclusion of women from the franchise in earlier periods could have profoundly reduced the tendency of even the most 'democratic' states to avoid conflict.

5.2.2.2 Economic Interdependence

For most of the post-World War II era the measurement of this Kantian variable is straightforward, because the International Monetary Fund reports statistics regarding bilateral trade. Since trade is expected to influence dyadic relations only if it is economically important, we divide the sum of a country's exports and imports with its partner by its GDP, as reported in the standard references for the years after 1950.[32] As with the influence of democratic institutions, we expect the likelihood of a dispute to be primarily a function of the freedom of the less constrained state to use force, that is, the bilateral trade-to-GDP measure of the state less dependent economically on trade with its dyadic partner ($Depend_L$). We also report tests for a positive effect of asymmetric dependence on conflict, as proposed by dependency theorists.

When we move back to the years before World War II, however, national economic data become more problematic. During the years 1920–38 the League of

[31]Carole Kennedy Chaney, R. Michael Alvarez, and Jonathan Nagler, "Explaining the Gender Gap in U.S. Presidential Elections," *Political Research Quarterly* 51, no. 2 (1998). To take such changes into account, Zeev Maoz uses an adjusted threshold of democracy for all countries that shifts upward in 1870 (for general male suffrage) and 1920 (female suffrage); see Maoz, *Domestic Sources of Global Change* (Ann Arbor: University of Michigan Press, 1996), 54. Our use of unadjusted democracy scores thus leans against our hypothesis of democratic peace before World War I. Kristian Gleditsch and Michael Ward note that our continuous measure, Democracy minus Autocracy score, has the virtues of being symmetric and transitive; but the relative importance of its components is unstable over time; see Gleditsch and Ward, "Double Take: A Re-examination of Democracy and Autocracy in Modern Polities? *Journal of Conflict Resolution* 41, no. 3 (1997). For the period 1880–1969 this aggregated measure is largely influenced by the degree of competition for executive recruitment; subsequently constraints on the executive are the main determinant. Fortunately the relatively stable earlier period covers all the pre-cold war years we add here. As no analysis of the democratic peace after World War II has yet addressed the 1969 break, we too leave that for later investigation.

[32]International Monetary Fund, *Direction of Trade* (*ICPSR 7623*) (Washington, D.C.: IMF, 1993; distributed by Ann Arbor, Mich.: Inter-University Consortium for Political and Social Research). Robert Summers et al., *The Penn World Table (Mark 5.6a)* (Cambridge, Mass.: National Bureau of Economic Research, 1995). Due to missing data for trade and/or GDP, the great majority of dyads involved in the Korean and Vietnam Wars are omitted, as are most Arab-Israeli dyads. Since most of those are conflicting democratic-autocratic dyads with no trade, our analysis is likely to be biased against the liberal hypotheses. Because these conflicts spanned several years, excluding these cases mitigates the problem of temporal dependence in the time series, as does omitting all but the first year of the world wars. Also omitted are roughly 2,500 communist dyad-years: non-IMF members. These states traded among themselves but did not report it to the IMF and generally had little conflict. Had we been able to include them, the post-1950 sample would have been increased by only about 2 %.

Nations compiled contemporary data on bilateral trade in current values, along with exchange rates.[33,34] While the accuracy and the comparability of these data are undoubtedly less than in the later IMF reports, they are the best available. There are no institutional compilations of trade data for the years of the two world wars, nor for the period before 1914. Before World War I the annual editions of *The Statesman's Yearbook* offer the closest approximations, but these data are less standardized, the appropriate exchange rates for converting the data to a common unit are less certain, and more data are missing.[35]

Because of these difficulties we collected alternative estimates for bilateral trade in the 1885–1949 period, compared them with the data from *The Statesman's Yearbook* and the League of Nations, and adjusted the data from our principal sources as appropriate.[36]

Information on dyadic trade, the numerator of the dependence measure, is only half of the problem for the pre-1950 era, however. To calculate the economic importance of trade we need estimates of nations' gross domestic products. No comprehensive collection of GDP data exists, but Maddison provides estimates in constant dollars for fifty-six countries in all regions of the world for 1870–1992.[37] We used these in a two-step procedure to estimate the GDPs in current dollars for a large number of countries. First, we regressed Maddison's constant dollar GDP estimates on states' total annual energy consumption, the region where they were

[33]League of Nations, *International Trade Statistics* (Geneva: League of Nations, annual volumes).

[34]Martin Epstein, ed., *The Statesmans Yearbook*, *1913* (London: Macmillan, 1913), and earlier annual editions by other editors.

[35]We took several steps to minimize missing trade data in this period. We used information regarding one state's exports to another to infer its partner's imports; we interpolated between known values of trade and used the average value of a dyad's trade to extrapolate; and we assumed, for those states for which we had data, that there was no trade between any two if neither reported any exports or imports with the other. As a result we have trade data for 61 % of the dyads 1885–1913 and 1920–38. We conducted several tests to see if these methods might have biased our results. First we dropped all zero values of trade, and then we dropped all interpolations and extrapolations. Analyses with the remaining "real" data, 1885–1940, revealed little change in the results. We also determined that the sample of dyads for which we have trade data is unlikely to be biased. To do this, we created a variable (*missing*) that equaled 1 if $Depend_L$ was missing and 0 otherwise and then changed all missing values of $Depend_L$ to zero. We then estimated Eq. 5.1 below with the variable *missing* added. It was not statistically significant, indicating that the incidence of disputes among the dyads for which trade (or GDP) data are missing does not differ from that for the dyads for which data are available.

[36]These include volumes by Brian R. Mitchell for each region of the world and for the United Kingdom (Cambridge: Cambridge University Press, various years); U.S. Department of Commerce, *Historical Statistics of the United States: Colonial Times to 1970* (New York: Basic Books, 1976); and Katherine Barbieri's data posted at http://pss.la.psu.edu/TRD_DATA.htm. Exchange rates come from U.S. Federal Reserve Bank sources, *The Statesmans Yearbook*.

[37]Angus Maddison, *Monitoring the World Economy, 1820–1992* (Paris: Organization for Economic Cooperation and Development, 1995). His U.S. dollar GDP deflator is found in Maddison, "A Long Run Perspective on Saving" (Manuscript, Institute of Economic Research, University of Groningen, October 1991).

located, the year, and various interactive terms. Annual energy consumption, collected by the Correlates of War (cow) project, is a good correlate of the size of national economies, as Morgenstern, Knorr, and Heiss noted 25 years ago.[38] More than 93 % of the variance in Maddison's GDPs was explained. Based on the coefficients in this analysis, we were able to estimate the constant dollar GDPs for a large number of other countries. Second, we converted these constant dollar estimates to current dollars, using Maddison's U.S. dollar GDP deflator.

5.2.2.3 Joint IGO Memberships

The influence of international organizations on interstate conflict, the last Kantian variable, is assessed by the number of IGOs in which both states in a dyad share membership, as reported by the *Yearbook of International Organizations*,[39] Simply counting joint memberships (ranging from 0 to over 130 for some dyads in recent years) is far from an ideal measure of the importance and effectiveness of international organizations. It includes organizations that are weak and strong, regional and global, functional and multipurpose. Ideally the total should be broken down and some organizations given special weight, but this is hard to do as a practical matter and there is little theory to guide the attempt. For now we use the simple count of joint memberships in intergovernmental organizations; this variable is labeled IGO.

5.2.2.4 Capability Ratio

The first of the realist constraints on states' use of military force is relative power, specifically the balance of power within a dyad. The idea that an equal balance of power may deter conflict has deep historical roots, as does the idea that a preponderance of capabilities is more likely to preserve the peace by reducing uncertainty as to which side would win a contest of arms. Recent empirical work suggests, however, that it is preponderance that deters military action.[40] Our index of relative power

[38]Oskar Morgenstern, Klaus Knorr, and Klaus P. Heiss, *Long Term Projections of Power: Political, Economic, and Military Forecasting* (Cambridge, Mass.: Ballinger, 1973); and also John R. Oneal, "Measuring the Material Base of the East-West Balance of Power, *International Interactions* 15, no. 2 (1989).

[39]We extended the data from the sources in Russett, Oneal, and Davis (fn. 6).

[40]Bremer (fn. 24); Jacek Kugler and Douglas Lemke, eds., *Parity and War: Evaluations and Extensions of the War Ledger* (Ann Arbor: University of Michigan Press, 1996). Waltz (fn. 22), 117–23, reviews the balance of power literature and states his own version.

(CAPRATIO) is the natural logarithm of the ratio of the stronger state s military capability index to that of the weaker member in each dyad. We make these calculations using the COW data on population, industry, and military forces.[41]

5.2.2.5 Allies

Allies are generally thought to fight each other less than other states because they share common security interests. They often share other political and economic interests as well. We control for this influence using a variable (*Allies*) that equals 1 if the members of a dyad were linked by a mutual defense treaty, neutrality pact, or entente; it equals 0 otherwise.[42]

5.2.2.6 Contiguity and Distance

The potential for interstate violence exists when at least one member of a dyad can reach the other with effective military force. For most states the ability to do so is determined foremost by geographic proximity, especially as one goes farther back in history. Furthermore, neighbors are likely to have the most reasons to fight—over territorial boundaries, natural resources, the grievances of cross-border ethnic groups, and so on. Thus the constraint of distance reduces the capability to fight and most of the incentives to do so as well; this finding is extremely strong in previous research.

Accordingly, we include two different terms in our regression analyses to capture this effect as fully as possible. DISTANCE is the natural logarithm of the great circle distance in miles between the capitals of the two states (or between the major ports for the largest countries); using the logarithm acknowledges a declining marginal effect. Additionally we include NONCONTIG, a measure that equals 1 if two states are not directly or indirectly contiguous (via colonies or other dependencies). It equals 0 if they share a land boundary or are separated by less than 150 miles of water. Because of the widespread nature of colonial empires, these two measures are not highly correlated ($r^2 = 0.21$), especially up to World War II. The effect of distance in constraining conflict, however, is less for the great powers: those with the land, sea, or (in the last half-century) air capability to deliver substantial forces or destructive power globally. The COW project has identified these major powers on the basis of a consensus of historians. To give full consideration to realists' concerns, we add a third variable, MINORPWRS, coded 1 if a dyad is composed of minor powers and 0 for those that include at least one great power.

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[41]Data are from J. David Singer and Melvin Small, *National Military Capabilities Data* (Ann Arbor: University of Michigan, Correlates of War Project, 1995); the date of final modification of the data was December 28, 1994.

[42]We updated J. David Singer, *Alliances, 1816–1984* (Ann Arbor: University of Michigan, Correlates of War Project, 1995), with material from N.J. Rengger, with John Campbell, *Treaties and Alliances of the World*, 6th ed. (New York: Stockton, 1995).

(To be consistent with our view that conflict is endemic but subject to constraints, we reverse the terminology and coding of the last two variables from those in previous research reports where we used CONTIG and MAJOR. This has no effect on our statistical analyses, other than to reverse the sign of the coefficients. Note that some contiguous dyads also include one or two major powers.)

In most of the analyses below, we include all possible pairs of states for which information is available, using COW data regarding membership in the international system to generate these cases. Thus we do not limit our study to the politically relevant dyads, identified as contiguous states and dyads containing at least one major power. We continue to believe that such a restriction makes good theoretical sense, however. These dyads are much more likely to engage in military disputes. Politically relevant dyads constitute just 22 % of all the dyads for which we have data; nevertheless they account for 87 % of all the disputes. In other words, the politically relevant dyads are twenty-four times more likely to experience a militarized dispute than are those we have deemed to be 'irrelevant.' And some disputes among these other dyads are contagion effects of being drawn into conflicts through alliance commitments. We include all dyads in most of the analyses reported below to be sure we are not ignoring the causes of these other disputes,[43] but we also explore the consequences of including the nonrelevant pairs.

5.2.3 Systemic Independent Variables

5.2.3.1 Kantian Systemic and Relative Dyadic Measures

To clarify the influence of the international system on the likelihood of dyadic conflict, we create three system-level Kantian variables and three realist variables, the latter designed to capture the hegemons effect on interstate relations. The three Kantian variables are straightforward derivations of our basic measures: we simply computed the means of *Dem*, *Depend*, and *IGO* for each year. These are the measures (omitting the years of the world wars) graphed in Fig. 5.1. In the analyses below, they are identified as *AVGDEM*, *AVGDEPEND*, and *AVGIGO*. We hypothesize that the greater these systemic measures, the more the global system will reflect the normative and institutional constraints associated with democracy, interdependence, and the rule of law. It is also possible to assess the standing of each dyad in each year relative to our three annual Kantian averages. Thus we calculated three relative dyadic measures: $RELDEM_L$ = (DEM_L – *AVGDEM*)/the standard deviation of *Dem*; $Reldepend_L$ = ($Depend_L$ – *AVGDEPEND*)/the standard deviation of *Depend*; and *RELIGO* = (*IGO* – *AVGIGO*)/the standard deviation of

[43]As recommended by William Reed, "The Relevance of Politically Relevant Dyads" (Paper presented at the annual meeting of the Peace Science Society [International], New Brunswick, N.J., October 1998).

IGO. These measures identify the dyads that were most democratic, interdependent, and involved in intergovernmental organizations at each point in time. By dividing by the standard deviations, we can directly compare these estimated coefficients. Combining systemic and relative measures in a single equation allows us to compare the effect of changing values of the Kantian variables through time versus the standing of dyads cross-sectionally relative to the annual means. We expect the systemic and relative variables to make independent contributions to the frequency of dyadic disputes.

5.2.3.2 Realist Systemic Measures

Hegemony. We also create three systemic variables associated with prominent realist theories regarding the hegemons influence on international relations. Hegemonic-stability theory postulates that the most powerful state in the system, the hegemon, has the ability to constrain weaker states from resorting to violence.[44] This power to keep the peace might be manifested as dominance within the hegemons sphere of influence and the ability to deter adversaries from using military force in a way detrimental to its interests. A crude but reasonable measure of the power of the leading state is its share of all the major powers' capabilities in each year. As before, we use COW data to make this calculation.

Identification of the hegemon is not obvious in all cases. Through much of recent history it is not clear whether any state was truly hegemonic.[45] It is generally agreed that in the 30 years before World War I the United Kingdom was closer than any other country to being hegemonic, although its power relative to both Germany and the United States was declining. During the interwar era the United States clearly had greater economic strength and military potential than the United Kingdom; but its actual military power was only about equal. Moreover, its geographic position and isolationist policy limited its involvement in the Central European system. Consequently, we accept Organski and Kugler's judgment that Britain was the hegemon in the interwar period as well.[46] In the post-World War II years, if any state can be said to have been hegemonic, it is the United States. Hence we use the proportion of capabilities held by the United Kingdom as the measure of the hegemon's power in the first 60 years analyzed and that of the U.S. after 1945. Our systemic indicator (HEGPOWER) has reasonable face validity, declining from 33 % in 1885 to 14 % in 1913, and dropping under 11 % by 1938. America's hegemony is manifest immediately following World War II, when it controlled

[44]Robert Gilpin, *War and Change in World Politics* (Cambridge: Cambridge University Press, 1981).

[45]Bruce Russett, "The Mysterious Decline of American Hegemony, or, Is Mark Twain Really Dead" *International Organization* 32, no. 2 (1985).

[46]A.E.K. Organski and Jacek Kugler, *The War Ledger* (Chicago: University of Chicago Press, 1980). On measurement, see David Sacko, "Measures of Hegemony" (Paper presented at the annual meeting of the Peace Science Society [International], New Brunswick, N.J., October 1998).

52 % of the major powers' capabilities. This declined to 26 % by the early 1980s but rose to 29 % with the collapse of the Soviet Union.

Satisfaction with the status quo. The power-transition theory originally advanced by Organski consists of propositions not only about the constraining influence of an imbalance of power but also about the role played by states' satisfaction with the status quo. States rising in power will challenge a hegemon only if they are dissatisfied with the international system it dominates. Lemke and Reed extend this rationale in an effort to subsume the democratic peace within power-transition theory.[47] They contend that democracies have fought less historically because the hegemon has been democratic since the end of the Napoleonic Wars. First Britain and then the United States, it is argued, used its power to construct an international system that provided benefits to itself and its mostly democratic allies. Thus democracies' satisfaction with the status quo created by the most powerful democratic state and reinforced by its system of alliances accounts for the peace among democratic dyads. Like Lemke and Reed, we assess this view by computing a measure of each state's satisfaction with the status quo based on the correspondence between its portfolio of alliances and that of the hegemon, as indicated by the tau-b measure of statistical association. Then we multiply the scores of the two states in a dyad to create a measure of joint satisfaction (*Satisfied*).[48] This measure indicates the degree to which each dyad is content with the distribution of benefits achieved under the leadership of the dominant state.

Hegemonic tensions. Both hegemonic-stability theory and power transition theory hold that the international system will be more peaceful when the hegemon is strong relative to its principal rivals. The hegemon may also affect the system by transmitting concerns for its own security to other states. International tensions involving the hegemonic power are likely to have consequences for its allies, its rivals, its rivals' allies, and even neutral states. "When elephants fight, the grass gets trampled," as the adage goes. It is also possible, to extend the metaphor, that when small animals fight, big ones will be drawn in. Large states may intervene in ongoing conflicts because they see an opportunity to achieve gains or avoid losses. Either way, international tensions may be contagious. To assess this view, we created a measure of the hegemons sense of its own security, calculating its defense spending as a share of its GDP (*HEGDEF*).[49] We hypothesize that the global

[47]Lemke and Reed (fn. 3).

[48]We added 1 to each state s tau-b score to make it positive. The tau-b index of the similarity of alliance portfolios was introduced by Bruce Bueno de Mesquita, "Measuring Systemic Polarity" *Journal of Conflict Resolution* 19, no. 2 (1975). It was adapted as a dyadic measure of satisfaction by Woosang Kim, "Alliance Transitions and Great Power War," *American Journal of Political Science* 35 (1991), and subsequently used by Lemke and Reed (fn. 3).

[49]Military expenditure is a component of the COW index of militarily relevant capabilities. On the validity of our measure, see John R. Oneal and Hugh Carter Whadey, "The Effect of Alliance Membership on National Defense Burdens, 1953–88," *International Interactions* 22, no. 2 (1996). Changes in this index for the hegemons military burden correlate highly with changes in the average military burden for all the major powers.

system will experience more numerous disputes when the hegemon is committing more of its resources to the military. In such times, the hegemon presumably perceives greater threats to its interests. To assess the scope of contagion, we consider whether involvement in disputes rises mostly for the hegemon itself, for the hegemon and its allies, or for unallied states.

5.2.3.3 Results

We evaluate the Kantian peace, 1885–1992, employing logistic regression analysis. First we assess the effects of democracy, interdependence, and IGOs using a simple dyadic specification. In this view the likelihood of conflict is primarily determined by the state less constrained economically or politically. We also consider the degree to which the political and economic characteristics of the other member of a dyad affect the likelihood of a militarized dispute. Next we disentangle the systemic and cross-sectional influences of the Kantian variables on dyadic conflict. We consider the effects of trends in the underlying variables and each dyad's degree of democracy, interdependence, and involvement in IGOs relative to these annual systemic averages. Finally we investigate central realist tenets regarding the role of the leading state in the international system.

We examine the involvement in militarized interstate disputes of nearly 6,000 pairs of states observed annually, for a total of almost 150,000 observations. Because of the lagged variables the analysis begins with disputes in the year 1886 that are explained by reference to conditions in 1885. As noted earlier, we do not consider the two world wars after the first year of conflict or the immediate postwar years; that is, we exclude disputes for 1915–20 and 1940–46.

Unless otherwise indicated, we estimate the coefficients in our regression equations using the general estimating equation (GEE) method. We adjust for first-order autoregression (ARl) and estimate statistical significance using robust standard errors that take into account the clustering of our data by dyads. Thus we respond to the concerns raised by Beck, Katz, and Tucker. We rely on GEE rather than on their recommended solution for temporal dependence because of doubts about its appropriateness, especially given the strong, theoretically specified relation between trade and the time elapsed since a dyad's last dispute.[50] We have, however, reestimated our key equations using their method as a check on our

[50]On GEE, see Peter J. Diggle, Kung-Yee Liang, and Scott L. Zeger, *Analysis of Longitudinal Data* (Oxford: Clarendon Press, 1994). We used the computing algorithms in StataCorp, *Stata Statistical Software*, Release 5.0 (College Station, Tex.: Stata Corporation, 1997). For Beck, Katz, and Tucker's methods, see fn. 24. We express our doubts that the effects of the theoretical variables and of time are separable, as Beck, Katz, and Tuckers method requires, in Oneal and Russett (fn. 6, 1999). GEE allows for temporal dependence in the time series but gives the theoretical variables primacy in accounting for interstate disputes. Beck, Katz, and Tucker introduce the PEACEYRS variables into the estimation process as coequals of the theoretical variables. See also D. Scott Bennett, "Parametric Methods, Duration Dependence, and Time-Varying Data Revisited," *American Journal of Political Science* 43, no. 1 (1999).

findings. Because our hypotheses are directional and we have corrected for these violations in the assumptions underlying regression analysis, we report one-tailed tests of statistical significance.

5.3 Evaluating the Kantian Peace Using the Weak-Link Specification

Our first test is the simplest. We expect the likelihood of conflict to be primarily a function of the degree to which the less constrained state along each of several dimensions is free to use military force. This is the weak-link assumption that this state is more likely to precipitate a break in the peace: the less the political or economic constraints on that state's use of force, the greater the likelihood of violence. Consequently we include the lower democracy score and the lower bilateral trade-to-GDP ratio. The number of joint memberships in international organizations is inherently a dyadic measure; it completes the Kantian specification. We include in the regression equation a measure of the dyadic balance of power and an indicator of whether the members of a dyad are allied. We also control for the distance separating the two states, whether or not they are contiguous, and whether both are minor powers.[51] Our first equation then takes the form:

$$\begin{aligned}\text{DISPUTE} = {} & \text{DEM}_{\text{L}} + \text{DEPEND}_{\text{L}} + \text{IGO} + \text{ALLIES} + \text{CAPRATIO} \\ & + \text{NONCONTIG} + \text{DISTANCE} + \text{MINORPWRS} \qquad (5.1)\end{aligned}$$

The results of estimating Eq. 5.1, found in the first column of Table 5.1, provide strong support for the pacifying influence of democracy and trade: the more democratic the less democratic state in a dyad and the more economically important is trade, the greater is the likelihood of peace. The lower democracy and dependence measures are both significant at the 0.001 level. The number of joint memberships in IGOs, however, does not have a statistically significant effect on conflict in this specification ($p < 0.40$). This is a consequence of two things: the inclusion of all possible dyads in the analysis (not just those thought to be politically relevant) and the rapid growth in the number of international organizations over time. The realist variables perform generally as expected, though the indicator of alliance is only significant at the 0.07 level: (1) a preponderance of power rather than a balance deters conflict; (2) contiguous states are prone to fight, as are those whose homelands are geographically proximate; and (3) major powers are involved

[51]Our recent specifications are found in Oneal and Russett (1997); and Russett, Oneal, and Davis (fn. 6). The controls, from Oneal and Russett (fn. 6, 1999), draw on Barbieri (fn. 24).

in disputes more than are smaller states. All these variables are significant at the 0.001 level.[52] Using the onset (or first year only) of a dispute as the dependent variable produced nearly identical results.

Column 2 of Table 5.1 shows the results of estimating Eq. 5.1 using Beck et al.'s correction for temporal dependence in the time series. The coefficients and significance levels are usually similar. The most notable exception involves the variable IGO. Its coefficient is now not only positive but nearly four times its standard error.[53]

To see if the pacific benefits of the Kantian variables are limited to the cold war era, we first reestimated Eq. 5.1 for just the early years, 1886–1914 and 1921–39 using GEE. The results appear in column 3. Comparing them with column 1 shows much the same pattern as the analysis for all years. Both the lower democracy score ($p < 0.001$) and the smaller bilateral trade-to-GDP ratio ($p < 0.004$) are highly significant.

Democracy and interdependence had strong peace-inducing effects during the multipolar period after 1885 and before the cold war. The benefits of democracy are strongest in the interwar years, but, as Gowa[54] also reports, by the decade leading to World War I democracies had become less likely to engage in militarized disputes with each other—an important shift that is obscured by using the years 1886–1914 as the period of analysis. In light of this evidence, the absence of democratic peace in the nineteenth century—not its presence in the cold war era—becomes the anomaly to be explained. The answer may lie more in the lower inclusiveness of democratic politics in that century than in characteristics of the international system.

Our measure of joint memberships in IGOs is insignificant for the period 1885–1939. The other coefficients in Eq. 5.1 are reasonably similar for the early years and the entire period. The effect of alliances before 1940 is even weaker ($p < 0.19$) than when all years are considered.

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[52]To test the robustness of these results, we estimated separate regressions for each theoretically interesting variable with just the controls for distance, contiguity, and major-power status. The signs and significance levels were consistent with those in the multivariate regressions, with one exception. Joint IGO memberships significantly ($p < 0.001$) reduced conflict in the restricted analysis. We also reestimated Eq. 5.1 after dropping the measure of economic interdependence because this variable has the most missing values. The pacific benefits of democracy remained strong ($p < 0.001$). Joint membership in IGOs, too, was significantly associated with a reduction in conflict ($p < 0.02$) when $DEPEND_L$ was omitted. Not surprisingly, interdependent states share memberships in international organizations.

[53]We suppress coefficients for the four spline segments to save space. All are significant ($p < 0.001$). In this equation, and others presented subsequently, the coefficients for IGOs are the only ones not robust to the different methods for adjusting for temporal dependence. As our results suggest, joint membership in IGOs is most correlated of the three Kantian variables with the years of peace since a dyad's last dispute. Our methodological preference for GEE preceded our work on IGOs. We also estimated Eq. 5.1 using conditional or fixed effects logistic regression. Greater democracy ($p < 0.001$) and interdependence ($p < 0.05$) continued to be associated with peaceful dyadic relations, as was the existence of an alliance. Joint membership in IGOs and a greater capability ratio increased the prospects of conflict. These results are based on the 20,289 observations for dyads that experienced at least one dispute; 129,092 cases were dropped because the dependent variable always equaled zero.

[54]Gowa (fn. 3), 98–100.

Table 5.1 Models of the Kantian peace, 1886–1992: predicting involvement in militarized disputes

Variable	1. 1886–1992 simplest, all dyads	2. 1886–1992 peace years correction	3. 1886–1939 all dyads	4. 1886–1992, politically relevant dyads
Lower democracy	–0.0658***	–0.0628***	–0.0568***	–0.0595***
(DEM_L)	(0.0106)	(0.0093)	(0.0106)	(0.0106)
Trade/GDP	–57.8650***	–31.0726**	–43.2490**	–35.2394**
($DEPEND_L$)	(15.4901)	(10.6036)	(16.2861)	(12.3044)
International organizations	–0.0010	0.0160#	0.0068	–0.0068*
(IGO)	(0.0379)	(0.0042)	(0.0068)	(0.0039)
Capability ratio	–0.2337***	–0.1913***	–0.3638***	–0.2747***
(CAPRATIO)	(0.0502)	(0.0401)	(0.0664)	(0.0516)
Alliances	–0.2511	–0.3691**	–0.1727	–0.2822*
(ALLIANCES)	(0.1659)	(0.1574)	(0.1905)	(0.1677)
Noncontiguity	–2.0038***	–1.5864***	–1.3357***	–1.118***
(NONCONTIG)	(0.1836)	(0.1532)	(0.1844)	(0.1724)
Log distance	–0.4647***	–0.3615***	–0.3536***	–0.2610***
(DISTANCE)	(0.0571)	(0.0498)	(0.0620)	(0.0605)
Only minor powers	–1.8392***	–1.7208***	–1.8342***	–0.6754***
(MINORPWRS)	(0.1706)	(0.1351)	(0.1904)	(0.2082)
Constant	–1.9349***	–1.6174***	–2.2235***	–1.5765***
	(0.4731)	(0.4060)	(0.5316)	(0.4992)
Chi^2	1354.80	1920.45	494.98	193.43
P of Chi^2	0.0000	0.0000	0.0000	0.0000
Log likelihood		–5732.4260		
Pseudo R^2		0.284		
N	149,373	149,404	33,346	33,334

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$, one-tailed tests; #$p < 0.001$, one-tailed test but wrong sign

We also estimated Eq. 5.1 after creating an indicator for the 1989–92 post-cold war years and forming interactive terms with each of the three Kantian variables. The results indicate that the influence of democracy has not changed in this short span of time and the benefits of interdependence have been reduced, but IGOs are more important constraints on the threat or use of force.

In the past we limited our analyses to the politically relevant states, in the belief that the relations of most other dyads are not importantly influenced by the political and economic influences we have modeled. To see how including all possible pairs of states affects our results, we reestimate Eq. 5.1 using just the contiguous pairs of states and those that contain at least one major power—the politically relevant dyads—for all years, 1885–1992. This excludes dyads that in the great majority of

cases had no reasonable opportunity to engage in armed conflict because the states were too far apart and had few issues over which to fight.

The last column of Table 5.1 provides strong support for the pacific benefits of all three elements of the Kantian peace. For the dyads most prone to conflict, joint membership in international organizations does reduce the likelihood of conflict ($p < 0.04$). The benefits of democracy ($p < 0.001$) and interdependence ($p < 0.002$) remain apparent. These results for the extended period, 1886–1992, are consistent with those in Russett, Oneal, and Davis, where only the years 1950–85 were considered; and they are more significant statistically.[55]

Our tests with all possible pairs understate the pacific benefits of IGOs because most of these dyads do not have significant political military relations. The probability that a nonrelevant dyad will become involved in a dispute is only 1/18 that of a major-power pair; it is 1/44 that of a contiguous dyad. Democracy, interdependence, and involvement in IGOs constrain states from using force; but if there is no realistic possibility of two states engaging in conflict, then the absence of these constraints will not increase the incidence of violence. With all dyads included a large number of false negatives obscures the hypothesized relationship. The theoretically interesting variables in Eq. 5.1 are simply irrelevant in explaining the state of relations, such as they are, between Burma and Ecuador, for example. Including numerous irrelevant dyads can bias the results, as we have recently shown with regard to trade.[56]

With logistic regression, the easiest way to show the substantive effects of the variables is to estimate the probability of a militarized dispute for various illustrative dyads. The same procedure is often used in epidemiological studies. For example, epidemiologists report the effect of various risk factors on the probability that an individual will contract lung cancer. As in our analyses, some of their independent variables are not subject to intervention (for example, age, heredity, gender; and for us distance and contiguity), while others are amenable to some degree of 'policy' control (for example, diet, exercise, smoking; and for us alliances, democracy, interdependence, and IGOs). By statistical inference they, and

[55]Oneal, Russett, and Davis (fn. 6). Farber and Gowa (fn. 3), 409, analyze lower-level MIDs for 1816–1976 and find that democracy significantly affects the likelihood of conflict only after 1919.

[56]However, using interactive terms for years, we find evidence of democratic peace by 1900. Earlier than that even the most democratic states were not democratic by contemporary standards. As democracy developed, the common interests of democracies and their antagonisms with authoritarian states may have become more substantial. Support for the benefits of democracy in Farber and Gowas analyses is weakened by their decision to exclude consideration of all years of the world wars. Due to possible simultaneity problems, they do not control for alliances. Since alliances show little impact in our analyses, this may not matter. For results for trade that agree with ours, see Christopher Way, "Manchester Revisited: A Theoretical and Empirical Evaluation of Commercial Liberalism" (Ph.D. diss., Stanford University, 1997). For results that differ from ours, see Barbieri (fn. 24); and idem, "Economic Interdependence: A Path to Peace or a Source of Interstate Conflict?" *Journal of Peace Research* 33, no. 1 (1996). Our analyses to date indicate that this is primarily due to our different measures of interdependence: Barbieri does not weight trade by its contribution to GDP. The results reported in Oneal and Russett (fn. 6, 1999) show that the pacific benefits of trade, 1950–92, are robust to several alternative specifications, samples, and estimation procedures. Oneal and Russett (fn. 6, 1999).

we, can estimate the reduction in the probability of an event occurring if any one risk factor for a typical individual were different by a given amount.

For this, we calculated a baseline probability against which to make comparisons. We assumed the dyad is contiguous, because these states are particularly prone to conflict. Then we set each continuous variable at its mean value for the contiguous dyads, except that the lower dependence score was made equal to its median value, which is more representative. We postulated that the pair of states is not allied and does not include a major power. We then estimated the annual probability that this 'typical' dyad would be involved in a militarized dispute using the coefficients reported in columns 1 and 4 in Table 5.1. Next we changed the theoretically interesting variables in succession by adding a standard deviation to the continuous measures or by making the dyad allied.

The first two columns of Table 5.2 give the percentage increase or decrease in the annual risk of a dyad being involved in a dispute under these various conditions. Column 1 is based on the coefficients estimated using all dyads, and column 2 is produced with the coefficients for just the politically relevant subset of cases.[57] Looking at the results in column 1, it is apparent that democracy and interdependence dramatically reduce the likelihood of conflict. Compared with the typical dyad, the risk that the more democratic dyad will become engaged in a dispute is reduced by 36 %. If the dyad is more autocratic, the danger of conflict is increased by 56 %. A higher dyadic trade-to-GDP ratio cuts the incidence of conflict by 49 %. A larger number of joint memberships in IGOs has little effect on a dyad's likelihood of conflict if all pairs of states are used in the estimation process. When analysis is limited to the politically relevant dyads, however, the benefit of joint memberships in IGOs is clear. If the number of common memberships is fifty-three rather than thirty-two, the likelihood of conflict is reduced by 13 %. And when the analysis is limited to politically relevant pairs, the effects of democracy and economic interdependence are somewhat less than when all dyads are considered.

The substantive importance of the Kantian variables is confirmed if their effects are compared with the results of changing the realist variables. Consider again the second column of Table 5.2. If a state's preponderance of power is a standard deviation higher, that reduces the probability of a dispute by 31 %, but that result would require a fourfold increase in the capabilities of the stronger state. An alliance lowers the incidence of interstate violence by 24 %. This is sub substantially less than when the dyad is more democratic or with a standard deviation higher level of bilateral trade.

We have argued that the characteristics of the less constrained state largely account for the likelihood of dyadic conflict, but the potential for violence may be significantly affected by the nature of the other dyadic member.[58] Democracies are

[57]This baseline probability is 0.031 among all dyads and 0.055 for the politically relevant pairs.

[58]Maoz (fn. 30); Oneal and Russett (fn. 6, 1997); Oneal and James Lee Ray, "New Tests of the Democratic Peace Controlling for Economic Interdependence, 1950–1985," *Political Research Quarterly* 50, no. 4 (1997).

Table 5.2 Percentage of change in risk for annual involvement in militarized disputes for contiguous Dyads (1886–1992)

	Based on		
	1. Equation 5.1 (All Dyads)	2. Equation 5.1 (Politically Relevant Dyads)	3. Equation 5.2 (All Dyads)
DEM_L increased by 1 std. dev.	–36	–33	
DEM_L decreased by 1 std. dev.	+56	+48	
$DEPEND_L$ increased by 1 std. dev.	–49	–33	
IGO increased by 1 std. dev.	–2	–13	
CAPRATIO increased by 1 std. dev.	–27	–31	–33
ALLIES equals 1	–22	–24	–22
$RELDEM_L$ increased by 1 std. dev.			–30
$RELDEPEND_L$ increased by 1 std. dev.			–36
RELIGO increased by 1 std. dev.			–18
$AVGDEM_L$ increased by 1 std. dev.			–26
$AVGDEPEND_L$ increased by 1 std. dev.			–33
AVGIGO increased by 1 std. dev.			+3

In each case other variables are held at baseline values

more peaceful than autocracies at the national (or monadic) level as well as dyadically; but in our previous research we found, as Kant expected, that democracies and autocracies are particularly prone to fight one another because of the political distance separating them. Other analysts think that asymmetric interdependence may lead to conflict.[59] To evaluate these hypotheses we considered the influence of the higher democracy score and trade-to-GDP ratio, adding these variables to Eq. 5.1 both individually and as interactive terms with the lower democracy score or trade-to-GDP ratio.[60]

The results, not reported in a table but available from the authors, indicated that the conflict-prone character of mixed pairs—one democracy and one autocracy—was limited to the post-World War II era. Plausibly the special institutional and ideological animosities between democrats and communists, solidified by the cold war, account for that. In the multipolar period, 1885–1939, dyads consisting of two democracies were the most peaceful after about 1900. Autocratic pairs and mixed

[59]Robert O. Keohane and Joseph S. Nye, *Power and Interdependence: World Politics in Transition* (Boston: Little Brown, 1997); John A. Kroll, "The Complexity of Interdependence," *International Studies Quarterly* 37 (September 1993); Immanuel Wallerstein, "The Rise and Future Demise of the World Capitalist System," *Comparative Studies in Society and History* 16, no. 4 (1974); Barbieri (fn. 24 and 54).

[60]If the effect of one variable (DEM_L, $DEPEND_L$) is thought to depend on the value of another (DEM_H, $DEPEND_H$), the test should include their interactive terms (DEM_L * DEM_H and $DEPEND_L$*$DEPEND_H$). See Robert J. Friedrich, "In Defense of Multiplicative Terms in Multiple Regression Equations," *American Journal of Political Science* 26, no. 4 (1982).

dyads had similar rates of conflict. We found no evidence that asymmetric interdependence raised the likelihood of a militarized dispute. Increasing trade had significant pacific benefits whatever the relative size of the states involved. We did find a declining marginal utility for high levels of economic interdependence.[61]

5.3.1 *Disentangling the Systematic and Cross-National Influences of the Kantian Measures*

Estimating Eq. 5.1 indicates that the likelihood of a dispute among all dyads is a function of the lower democracy score and the lower trade-to-GDP ratio in a dyad but not of states' joint memberships in international organizations. We suggested that the failure of the IGO variable to perform as expected results partly from including large numbers of irrelevant pairs of states that have no significant political relations and lack a realistic possibility of becoming engaged in a dispute. By contrast, limiting the analysis to contiguous dyads and those containing a major power highlights the benefits of international organizations. We also noted that our measure of joint IGO membership increases rather steadily over time. This may obscure the contribution of international organizations to peaceful interstate relations by making comparisons across time less meaningful, as with nominal GDPs in periods of inflation.

The influence of IGO membership can be reconsidered by distinguishing between the frequency of states' participation in international organizations through time and the standing of individual dyads relative to this annual measure at each point in time. We decompose each Kantian variable—the lower democracy score, the lower trade-to-GDP ratio, and the number of joint IGO memberships—into a systemic measure, the average value of states' democracy score, level of interdependence, or joint membership in IGOs (Fig. 5.1), and a cross-sectional measure that ranks dyads relative to this annual average. The annual average of the number of joint IGO memberships (AVGIGO), for example, captures the prominence through time of international organizations, while the degree of involvement of individual dyads relative to this average (RELIGO) identifies those states that are more (or less) linked through the network of IGOs in each year.

To distinguish between the systemic and cross-sectional Kantian influences, we substitute in Eq. 5.1 AVGDEM and RELDEM_{L} for DEM_{L}, AVGDEPEND and $\text{RELDEPEND}_{\text{L}}$ for DEPEND_{L}, and AVGIGO and RELIGO for IGO. Our second equation becomes:

[61]Analyses in which we modeled the effect of interdependence as a hyperbola suggest that the benefits of trade increase rapidly and then approach a limit asymptotically. See Mark Gasiorowski and Solomon Polachek, "East-West Trade Linkages in the Era of Detente," *Journal of Conflict Resolution* 26, no. 4 (1982).

$$\begin{aligned}\text{DISPUTE} = {} & \text{RELDEM}_{\text{L}} + \text{RELDEPEND}_{\text{L}} + \text{RELIGO} + \text{AVGDEM} + \text{AVGDEPEND} \\ & + \text{AVGIGO} + \text{ALLIED} + \text{CAPRATIO} + \text{NONCONTIG} \\ & + \text{DISTANCE} + \text{MINORPWRS}\end{aligned} \tag{5.2}$$

Column 1 of Table 5.3 reports the results of estimating Eq. 5.2 using all pairs of states. All the relative and systemic Kantian variables except the annual average of states' involvement in IGOs have a negative sign, indicating that increasing values reduce the likelihood of a militarized dispute; all but AVGIGO are very significant statistically. As explained in the last section, we standardized the three relative measures to permit direct comparison of their estimated coefficients. These indicate that economically important trade has the greatest conflict-reducing benefits, followed by democracy and joint memberships in international organizations. Two of the three Kantian systemic variables also affect the incidence of dyadic disputes: the likelihood of conflict drops when there are more democracies in the system and trade is more important economically; with both variables significant at the 0.001 level.[62] The influences of the other variables in the equation are relatively unchanged. Preponderant power reduces the likelihood of a dispute, as do distance, an alliance, or the absence of a major power in the dyad. Using the onset of a dispute as the dependent variable produced nearly identical results.

The results of estimating Eq. 5.2 are important for three reasons. First, they show that dyads relatively more involved in international organizations at any point in time tend to be more peaceful, supporting the Kantian hypothesis regarding *IGOs*. Second, the results indicate that the statistical significance of democracy and the trade-to-GDP ratio in Eq. 5.1 is the consequence of temporal as well as cross-sectional variation. This is valuable assurance of the robustness of the pacific benefits of these Kantian influences. We now have explicit justification for believing that states can modify their circumstances by policies that increase democracy, interdependence, and, given the significance of the relative *IGO* measure, participation in international organizations. Third, it supports the view that there are systemic consequences of increasing democracy and trade for all pairs of states, not just for the liberal dyads.

The estimated coefficients for Eq. 5.2 allow us to compare the substantive importance of the relative and cross-sectional measures. We again calculate the probabilities of conflict for various hypothetical dyads. In calculating the baseline

[62]There is a mild downward trend in the likelihood of a dispute over the period 1885–1992. To insure that the systemic Kantian variables were not simply collinear with this secular trend toward decreasing rates of disputes, we included in each of the equations reported in Table 5.3 an indicator of time, which equals the year minus 1884. The coefficients of the Kantian variables changed very little, and the average democracy score and trade-to-GDP ratio remained significant at the 0.001 level; the measure of time was never significant at the 0.05 level in these tests. If Eq. 5.2 is estimated for just the 1885–1939 period, the coefficient of the average level of interdependence becomes statistically insignificant, primarily because the level of trade at the outset of World War I was higher than it was during the interwar years; the average level of democracy remained significant at the 0.001 level.

risk, we assume as before that the dyad is contiguous and set each continuous variable at its mean (or median for the trade ratio) for this subset of cases. We make the dyad unallied and assume it does not include a major power. We estimate the annual probability that this representative dyad would be involved in a dispute using the coefficients in column 1 of Table 5.3. Then one at a time we change each continuous variable by a standard deviation; finally we make the dyad allied.

Column 3 of Table 5.2 gives the annual probabilities of a dyad being involved in a dispute under these conditions. The effects of the cross-sectional Kantian variables, which rank dyads according to their position relative to the annual systemic averages, are again substantial. For dyads with a higher relative democracy score the risk of conflict is 30 % below the baseline rate; a standard-deviation increase in relative dependence means a 36 % lower probability of conflict; and when states' participation in *IGOs* is higher the likelihood of conflict is reduced by 18 %. The substantive significance of the Kantian variables for interstate relations again emerges by comparing these effects with those that result from changing the realist variables.

A higher capability ratio means lowering the danger of violence by a third, and when two states are allied the probability of conflict is lower by 22 %. Note also the effects of the Kantian systemic variables. The risk of a dispute drops by 26 % if the systemic average of the democracy score increases by a standard deviation (from –0.47 to +1.26); it falls 33 % if the systemic average of the trade-to-GDP ratio rises by a standard deviation (about 30 % to 0.006). There is effectively no change if the systemic average for states' participation in IGOS grows. Thus, two of the Kantian systemic variables have powerful effects throughout the international system. By normative or institutional means, an increase in the number of liberal states constrains the use of force even by dyads that are not democratic or interdependent.[63] The effect of IGOs is limited, however, to those states that participate jointly in more of these international forums relative to other pairs.

5.3.2 Assessing the Hegemon's Influence on Dyadic Conflict

In our last analyses we investigate the role of the hegemon. We first evaluate a central claim of the theory of hegemonic stability and power-preponderance theory.[64] Both of these realist theories predict that conflict becomes more likely as the power of the leading state declines relative to its principal rivals. At the same time,

[63]To insure that the effects of the annual averages of the democracy score and trade ratio were truly systemic and not confined to only those dyads that were relatively democratic or interdependent, we added three interactive terms (AVGDEM*RELDEM$_L$, AVGDEPEND*RELDEPEND$_L$, and AVGIGO*RELIGO) to Eq. 5.2. The results indicated that the effects of the systemic Kantian variables are not confined to just those dyads that rank high relative to the annual averages.

[64]A.F.K. Organski, *World Politics* (New York: Knopf, 1968); George Modelski, ed., *Exploring Long Cycles* (Boulder, Colo.: Lynne Rienner, 1987); Gilpin (fn. 43); Kugler and Lemke (fn. 39);

Table 5.3 Models of the Kantian peace, 1886–1992: predicting involvement in militarized Disputes (dyadic and systemic influences, all Dyads)

Variable	1. Only kantian systemic variables	2. Systemic kantian, Heg. power; satisfaction	3. Systemic kantian, Heg. defense Burden
Relative lower democ.	–0.3688***	–0.3576***	–0.4102***
(Reldemj	(0.0680)	(0.0677)	(0.0703)
Relative trade/GDP	–0.7270***	–0.7045**	–0.5149**
($Reldepend_L$)	(0.2333)	(0.2412)	(0.2132)
Relative IGO	–0.1304**	–0.1060*	–0.1602***
(Reugo)	(0.0500)	(0.0512)	(0.0502)
Average democracy	–0.2383***	–0.2485***	–0.2702***
(Avgdem)	(0.0412)	(0.0412)	(0.0423)
Average dependence	–292.4397***	–260.3094***	–355.5549***
(Avgdepend)	(36.4178)	(48.7066)	(39.7875)
Average IGOs	0.0043	0.0102	–0.0440*‘‘
(Avgigo)	(0.0109)	–0.0115)	(0.0136)
Capability ratio	–0.2897***	–0.2787***	–0.3125*‘‘
(CAPRATIO)	0.0518	–0.0521)	(0.0135)
Alliances	–0.2554	–0.2186	–0.3330*
(Allies)	(0.1625)	–0.1665)	(0.1636)
Noncontiguity	–2.0080***	–2.0423***	–1.9225*‘‘
(Noncontig)	(0.1803)	–0.1828)	(0.1802)
Log distance	–0.4915***	–0.4637***	–0.5202‘‘*
(Distance)	(0.0567)	–0.0597)	(0.0569)
Only minor powers	–2.0230***	–2.0073***	–2.0694*‘‘
(Minorpwrs)	(0.1893)	(0.1941)	(0.1911)
Hegemonic power		–1.5339	
(Hegpower)		(0.9502)	
Joint satisfaction		–0.0893	
(Satisfied)		(0.1057)	
Heg. defense burden			17.9704*‘‘
(Hegdef)			(1.9906)
Constant	–0.7345	–0.7113	–0.3735
	(0.4850)	(0.5075)	(0.4975)
Chi^2	1559.82	1530.24	1529.38
P of Chi^2	0.0000	0.0000	0.0000
N	149,372	147,963	149,372

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$, one-tailed tests

(Footnote 64 continued)
K. Edward Spiezio, “British Hegemony and Major Power War, 1815–1939: An Empirical Test of Gilpin’s Model of Hegemonic Governance,” *International Studies Quarterly* 34, no. 2 (1990).

we also address the argument that it has been the power of the (democratic) hegemon to reward its allies that accounts for the democratic peace. In a final test we consider whether the hegemon's sense of its own insecurity, as indicated by the ratio of its military expenditures to its gross domestic product, is associated with a heightened danger of conflict globally.

We assess the importance of the hegemon's relative power and states' satisfaction with the status quo by adding two terms to Eq. 5.2: HEGPOWER, the proportion of the major powers' capabilities held by Britain (through 1939) and the U.S. (after 1945); and SATISFIED, our measure of joint satisfaction, based on the similarity of each dyadic member's portfolio of allies to that of the leading power. It is appropriate theoretically to include both in the same equation. If the hegemon is able to regulate the level of conflict in the international system, then its influence should be greatest with those states with which it is most closely allied. At the same time the advantages for a state of aligning itself closely with the hegemon should be greatest when the power of the leading state is relatively large vis-à-vis its principal rivals; the hegemon in that situation should be most able to confer benefits upon its supporters.

Column 2 of Table 5.3 suggests that the strength of the leading state relative to its principal rivals does matter. The measure of hegemonic power is nearly significant ($p < 0.06$). Strong hegemony seems to reduce violence in the international system. This apparent effect stems, however, from the inability of a weakened hegemon (Britain) to prevent the outbreak of system wide wars. In an analysis not reported in the table, the coefficient of our measure of hegmonic power reversed signs when the first year of each of the world wars was dropped: hegemony was then positively related to the incidence of disputes in the system ($p < 0.003$). Apparently the pacific benefits of hegemonic strength do not apply during normal periods of international relations. By contrast, we found no evidence in these analyses that states' satisfaction with the status quo accounts for the democratic peace. The measure of joint satisfaction in column 2 of Table 5.3 is far from statistical significance, while the significance of relative and systemic democracy is little changed.[65]

Finally we consider whether the hegemon's sense of its own security, as indicated by the proportion of *GDP* it devotes to military expenditures (*HEGDEF*), is related to the likelihood of dyadic conflict. We add our measure of the hegemon's defense burden to Eq. 5.2. The results of this test are reported in column 3. As seen there, the defense burden of the leading state is positively associated ($p < 0.001$) with the likelihood of dyadic disputes. There are wide-ranging consequences when the hegemon feels endangered. Nor is the heightened danger of conflict limited to the world wars, as with hegemonic power, or significant only for the hegemon or its allies. In a separate analysis not reported in the table, we confirmed that other states,

[65]We tested alternative specifications in evaluating the role played by states' satisfaction with the status quo. We adopted the weak-link assumption, adding the smaller of the tau-b measures of satisfaction to Eq. 5.2, and investigated whether two dissatisfied states might also be peaceful; but these terms were not statistically significant.

too, experience more disputes when the hegemon has increased the proportion of its resources committed to the military. Our systemic and relative Kantian variables nonetheless remain important. Even the systemic measure of states' participation in international organizations is now significant at the 0.001 level. The effectiveness of **IGOs** may depend in part upon the major powers not feeling a need to develop, and presumably use, independent military means for protecting and promoting their interests.

5.4 A Kantian System? Past and Future

Our analyses for the years 1885–1992 indicate that Kant was substantially correct: democracy, economic interdependence, and involvement in international organizations reduce the incidence of militarized interstate disputes. The pacific benefits of the Kantian influences, especially of democracy and trade, were not confined to the cold war era but extend both forward from that era and back many decades. Moreover, these benefits are substantial. When the democracy score of the less democratic state in a dyad is higher by a standard deviation, the likelihood of conflict is more than one-third below the baseline rate among all dyads in the system; a higher bilateral trade-to-GDP ratio means that the risk of conflict is lower by half. The pacific benefits of democracy in the twentieth century are clear, and the change from the nineteenth century is consistent with an evolutionary view: democratic institutions matured, and the suffrage was extended. In addition, as Kant believed, states may learn from the success and failure of their policies.

The benefits of joint membership in intergovernmental organizations are more modest but nevertheless significant for the politically relevant dyads—contiguous states and dyads containing at least one major power. For these particularly dangerous dyads, the probability of a dispute drops by 13 % when the number of joint memberships in **IGOs** is greater by a standard deviation. The pacific benefits of international organizations are also apparent when the trend in this variable is eliminated: among all dyads, pairs of states more involved by a standard deviation in **IGOs** relative to the annual systemic average are 18 % less likely to become embroiled in interstate violence.

By distinguishing the influences of the Kantian systemic averages from the standings of each dyad relative to the annual means, we also showed benefits of democracy and trade over time as well as cross-sectionally. The effects of the systemic Kantian influences on dyadic conflict are important. The international system is more peaceful when there are more democracies and when trade is greater. *All* dyads—even those not democratic or interdependent—become less dispute-prone when those systemic Kantian variables increase. The constraining

effect of norms and institutions that emerge when there are more democracies and when trade is economically important for many states holds even for those that participate to only a limited degree in the Kantian subsystem.[66]

Over the period 1885–1992 states' participation in IGOs rose steadily, but there is little evidence of a trend toward increased democracy or economic interdependence over the complete span of time. A long trend toward greater interdependence may be masked by two aspects of our data. First, the sample changes over time. Less developed and more peripheral states are probably underrepresented before World War I. Only with the establishment of the IMF and UN agencies does information on states' wealth and dyadic trade become reasonably complete. Thus, the average level of bilateral interdependence may be overstated in the early years. Second, decolonization in the late 1950s and the 1960s created dozens of new states that were less democratic and less integrated into the global economy than the states already in the system, lowering the average scores for democracy and interdependence. And as noted, the codings of democracy that we use overstate the democratic character of states in much of the nineteenth century before suffrage was extended to women and those without property.

Both democracy and interdependence do show a marked jump after World War II. The number of democracies has grown steadily since the late 1970s, especially after the cold war ended. Trade grew rapidly in the 1970s. Since 1987 these phenomena have been followed by a precipitous drop in the number of interstate wars, despite the entry of many new states into the system.[67] Our results for the early post-cold war years cover only 1989–92, but they indicate that the beneficial effects of democracy, interdependence, and IGOs continued past the end of the cold war. Moreover, our analyses of the 1885–1992 period suggest that the relative peace of the past decade owes less to the systemic effects of power and hegemony than to growing Kantian influences.

As for the realist influences, some of the dyadic characteristics—chiefly distance, power preponderance, and minor power status—also reduce the likelihood of disputes. This is not surprising, though the lack of a robust effect for alliances is. The Kantian influences have not abolished power politics. Realist variables at the systemic level also make a difference in the incidence of dyadic conflict. Both world wars occurred when Britain, the hegemonic state, was weak. Yet hegemony does not always work as hypothesized. During more normal periods of international relations, there were more militarized disputes when the hegemon was powerful than when it was weak; and when the hegemon felt threatened (as evidenced by higher military spending relative to its gross domestic product), the likelihood of disputes rose throughout the system.

Democracies fought two world wars side by side, along with some autocracies that shared their strategic interests. Was the democracies' common alignment

[66]See the references in fn. 17 and 19 and the textual discussion accompanying them.

[67]Monty G. Marshall, *Third World War* (Lanham, Md.: Rowman, Littlefield, 1999).

purely a result of strategic interests? It is more likely that shared interests in democracy and economic freedom played an important role. By contrast, alliances had no systematic dispute-inhibiting influence prior to the cold war. For the post-1945 era, when a reasonably strong effect of alliances is evident, it strains belief to attribute that effect primarily to strategic interests. Of course the cold war was substantially about national security as understood by realists. But it was also about a clash of two fundamentally different political and economic systems. The governments, dominant classes, and peoples of the free-market democracies felt not only that their physical security and national independence were threatened but also that their prosperity and especially their political and economic liberties were at stake. Hence they allied with one another to preserve their common way of life.[68]

The post-cold war era is full of affirmations about the importance of democracy, freedom, and prosperity built on interdependent markets. Some may be just rhetoric, but sophisticated global economic actors understand the role that interdependence plays in their prosperity. In 1999 NATO fought a war against Serbia in the name of democracy and human rights in Europe, against a dictatorial government that did not constitute a strategic threat. In time we shall see whether peace will hold among democracies and interdependent states, but to call the democratic peace "a byproduct of a now extinct period in world politics"[69] sounds very like a premature report of its death.

Analytically, we are progressing toward a synthesis of Kantian and realist influences and of dyadic and systemic perspectives. Kant argued that three naturally occurring tendencies operate to produce a more peaceful world. Individuals desire to be free and prosperous, so democracy and trade will expand, which leads to the growth of international law and organizations to facilitate these processes. Peace, therefore, does not depend upon a moral transformation of humanity as long as even devils are self-interested and can calculate.[70] For Kant, a child of the Enlightenment, this was evidence of an ordered universe and, perhaps, of providential design. Yet he did not think that the process was mechanical or the outcome certain: reason would not always prevail, and states and individuals would not always act in conformity with their enlightened interests. Human agents must learn from experience, including that of war, and change behavior.

The current unipolar character—inevitably transitory—of our world, with no other state close to the power of the United States, provides an opportunity to build a peace based not only on military force but also on Kantian principles. Hegemony does not last forever. Consequently, democracy should be extended and deepened, the "cosmopolitan law" of commerce expanded, and international law and respect for human rights institutionalized. Kant would say this is a moral imperative.

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[68]By controlling for states' interests, we have tried to show that the democratic peace is not an artifact of the cold war; see Oneal and Russett, "Is the Liberal Peace Just an Artifact of Cold War Interests? Assessing Recent Critiques," *International Interactions* 25, no. 3 (1999).

[69]Gowa (fn. 3), 114.

[70]Kant (fn. 1), 112.

Appendix: Variables

ALLIES	1 if dyad members linked by defense treaty, neutrality pact, or entente
AVGDEM	average democracy score for all states in a year
AVGDEPEND	average dyadic trade to GDP ratio for all states in a year
AVGIGO	average number of dyadic shared IGO memberships
CAPRATIO	logarithm of ratio of higher to lower power capability in a dyad
DEM_H	higher democracy score in a dyad
DEM_L	lower democracy score in a dyad
$DEPEND_H$	higher dyadic trade-to-GDP ratio in a dyad
$DEPEND_L$	lower dyadic trade-to-GDP ratio in a dyad
DISPUTE	involvement in dyadic dispute
DISTANCE	logarithm of dyadic distance in miles between capitals or major ports HEGDEF: ratio of leading states military spending to its GDP HEGPOWER: leading states proportion of the capabilities of all major powers IGO: number of international organization memberships shared by a dyad MINORPWRS: 1 if dyad does not include a major power
NONCONTIG	1 if dyad is not contiguous by land border or less than 150 miles of water $RELDEM_L$: DEM_L – AVGDEM/standard deviation of DEM $RELDEPEND_L$: $DEPEND_L$ – AVGDEPEND/standard deviation of $DEPEND_L$ RELIGO IGO – AVGIGO/standard deviation of IGO
SATISFIED	tau-b measure of similarity of dyad members' alliance portfolios to that of the leading state

Chapter 6
Comparative Public Health: The Political Economy of Human Misery and Well-Being

Hazem Adam Ghobarah, Paul Huth and Bruce M. Russett

Nearly 10 percent of the world's economic resources are devoted to health care.[1] But why do certain countries devote more resources to public health? Why are some countries better than others at achieving tangible health outcomes using the same level of economic resources? Surprisingly, political scientists and public health scholars have done only limited systematic research on these important questions. We address them by developing and testing an analytical framework of domestic and international political influences on public health. We use new data from the World Health Organization to examine cross-national variation first in the level of public expenditures on health, and then in the level of achievement of health outcomes. We measure these influences and their relative impact in terms of dollars and years of health, respectively. Dictatorship, severe income inequality, ethnic heterogeneity, and persistent international hostilities substantially depress the amount of public resources allocated to health care. Moreover, we analyze the extent to which, given the same level of resources allocated to public health, overall national health performance suffers further from unequal provision of services, rapid urbanization, and civil conflict.[2]

The health of humanity varies enormously: by genetic endowment, environmental conditions, and access to health care; by age, gender, income level, and country (Gakidou/King 2002). Some people live long healthy lives in peace and affluence; many others' lives are briefer and burdened by major disabilities from disease or injury, and often the characterization "nasty, brutish, and short" is all too apt. Our central claim in this article is that politics plays an important role in influencing public health conditions, but unfortunately political scientists and other scholars have only conducted limited systematic research on the topic (e.g., Moon 1991; Przeworski et al. 2000; Price-Smith 2002). As a result, the existing literature on the comparative cross-national analysis of the determinants of public health

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performance is largely based on the work of economists and public health experts (Filmer/Pritchett 1999; Evans et al. 2000a) in which political processes and conditions are understudied. We believe that political scientists can contribute substantially to a better understanding of why public health conditions vary in systematic ways across countries.

We develop and then test an analytical framework of domestic and international political influences on human misery and well-being. Drawing on newly developed cross-national measures of public health from the World Health Organization (WHO), we find strong evidence that cross-national variation in public health performance is shaped by a variety of political forces, including democracy, civil wars, international rivalries, and political inequalities resulting from ethnic cleavages and disparities in wealth. We hope to help broaden the research agenda of comparative and international relations scholars by encouraging further systematic cross-national analyses of the determinants of human misery and wellbeing. Indeed, our larger objective is to focus the attention of both social science and public health on these influences, in the hope of stimulating critical analyses to refine the findings we report here.[3]

6.1 What Is to Be Explained?

Previous work in political science has concentrated on measures of mortality, as these have been the only data available for most countries. Davis/Kuritsky (2002) report that severe military conflict in sub-Saharan Africa cut life expectancy by more than 2 years and raised infant mortality by 12 per thousand. In a global sample, Zweifel/Navia (2000) find democracies have an infant mortality rate about 10 per thousand below that of comparable non-democracies. Przeworski et al. (2000: 241) report the same difference in infant mortality rates, and a gap of about 5 years in life expectancy. Similarly, Lake/Baum (2001) find substantial differences in both measures, as well as in measures of citizens' access to health resources related to both contemporaneous comparison of regimes and changes in regimes over time.

In this article we use new data compiled by the WHO that are more comprehensive and more reliable than information on life expectancy and infant mortality rates. The unit of analysis is the nation-state, since our interest is in the systemic and institutional influences that are characteristic of national political systems. Many of our explanatory variables reflect the characteristics of institutions of the whole society (e.g., regime type, level of expenditure on health, the experience of civil war or international security threats) and in some degree affect virtually all its members. But we also examine the effects on the average level of health conditions in the society stemming from the distribution of income within states, their ethnic

[3]In this we respond to the call of King/Murray (2002) for systematic analysis of human misery. Also see Russett (1978) and Pritchett/Summers (1996).

heterogeneity, urbanization, and levels of education. Some (e.g., regime type) are obviously political variables, but all reflect the political power—or lack of it—of various groups and their ability to secure better health through public and private resources.

Our principal analysis is to explain outputs of the health system across countries, as expressed by WHO's measure of overall health—Health Adjusted Life Expectancy (HALE)—for the year 2000. It discounts total life expectancy at birth in each country by the number of years the average individual spends with a major disability as the burden of disease or injury—the gap between total life expectancy and expected years without disability. It is estimated from three kinds of information: the fraction of the population surviving to each age level (calculated from birth and death rates), individual-level data on the incidence and prevalence of various diseases and disabilities at each age, and the weight assigned to debilitation from each type of condition. The result is the proportion of the population suffering from disabilities, giving the average number of years of healthy life that a newborn could expect to live.

The measure taps the concept of years of healthy and productive life, and so is expressed in intuitively meaningful units. It varies substantially by region of the world and income level. In rich countries, more disabilities are associated with chronic conditions of old age—and, at that point, relatively short life expectancies. By contrast, in poor countries infant mortality is far higher and many health problems derive from the burden of infectious diseases like malaria and schistosomiasis, carried by children who may live a long time with seriously impaired health and quality of life. Empirically, the share of simple life expectancy lost to disability varies from under 9 % in the healthiest regions of the world to over 14 % in the least healthy ones (WHO 2000: 28). Adjusting life span by time spent with disability comports with psychological findings that people do not simply seek long life, but sharply discount the value of years at the end of life spent with major physical and psychological disabilities (Diener et al. 2001).

This information-intensive measure requires not just vital registration data for births and deaths, but expensive health surveys of death, disease, and disability by age and gender. While widely used for monitoring and forecasting in the United States (see, e.g., Cutler/Richardson 1997), data only began to be collected on a global basis by WHO for the year 1990 (Murray/Lopez 1996), with the most comprehensive report being its 1999 and 2000 surveys (WHO 2000). Life tables for 2000 for all 191 WHO members were developed from surveys that were supplemented by censuses, sample registration systems, and epidemiological analyses of specific conditions. WHO experts provided estimates of their degree of uncertainty about the data's accuracy, subjected it to a variety of statistical tests for incompleteness and bias, and adjusted it accordingly. Then they estimated disease-specific disability rates for all countries within each of 14 regions of the world defined geographically and epidemiologically, and used these to adjust available data on death rates at different age levels and life expectancy for each country (Mathers et al. 2000). The index—of expected healthy life years (i.e., disability-free life)—ranges from 73.8 (Japan) to 29.5 (Sierra Leone), with a median of 58.5 (Syria).

Our analyses must be cross-sectional, as adequate time-series data do not exist on a global basis. Causal inference must thus be somewhat tentative, but still is possible with careful theory and the use of appropriate lags for the independent variables. While limitations of these data must be borne in mind, they are the best that have ever been available, and do permit us to make systematic inferences about the influences on health conditions across countries (see, e.g., Filmer/Pritchett 1999: 1312; Williams 1999; Murray/Lopez 2000).

6.2 Theoretical Framework

To understand why there is so much cross-national variation in human misery and well-being we build upon existing theory and evidence regarding the influence of a variety of economic and social variables by systematically examining political variables. While the long-term goal of our theoretical and empirical research is to understand the potentially wide-ranging set of complex causal connections that shape public health, in this article we take a first step in that direction by breaking down our analysis into two stages.

First, we address *political influences on the allocation and total spending of resources devoted to improving the health of the population.* These are key variables for explaining health conditions in a country, and so warrant attention to determine what influences help produce relatively high health spending. The amount of resources devoted to health is determined both by the *total resources available in the economy* and by *public and private allocation decisions* on how much of the resources to spend on health care. Given our focus on political determinants, we pay particular attention to governments' decisions to allocate financial resources to public health expenditures. Then we investigate what affects a health system's effectiveness at using the resources allocated to it, or 'productivity.' These influences include not only the level of health expenditures, but also social and political factors that influence what particular health conditions are targeted and which segments of the population are the greatest beneficiaries of services provided by the health care system. Figure 6.1 summarizes our conceptual framework.

We begin by discussing the general relationships between politics and health, and then elaborate testable hypotheses for more specific causal connections linking political variables to public health. In broad theoretical terms we identify four major influences on public health in societies and that political conditions and processes in turn are important causes of each of these major influences on health. In summary, we argue that public health conditions are shaped by the interplay of exposure to conditions that create varying risks of death and disease for different groups in society and the ability of groups in society to gain access to health care and therefore receive the full range of benefits produced. A country's health performance reflects its particular political struggles and competition over investment and resource decisions regarding health care and over the distribution of health care.

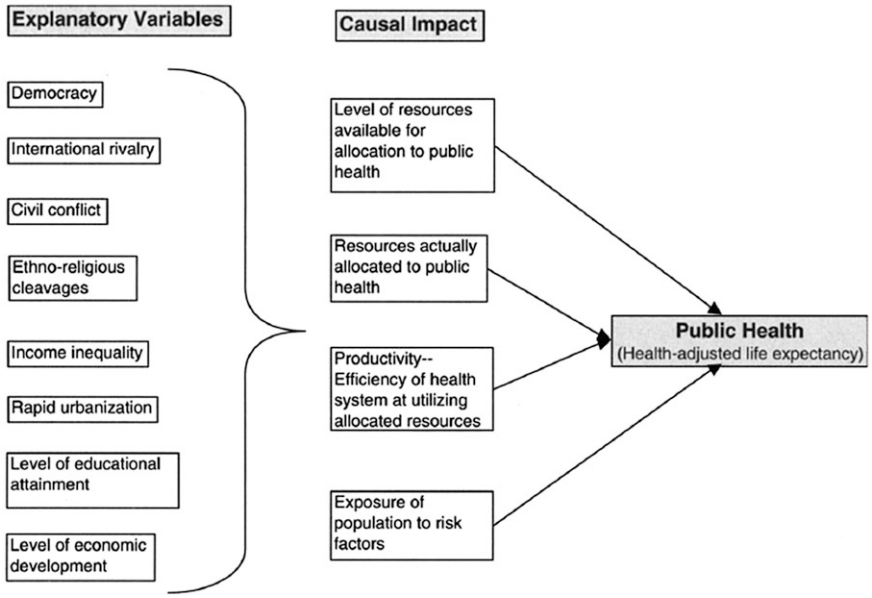

Fig. 6.1 Conceptual framework for studying the impact of political, economic, and military factors on public health

(1) *The exposure of populations to the risk of death, disease, and disability.* Different populations across and within countries are exposed in different degrees. Geography and levels of development are basic factors to consider. People in tropical climates are at greater risk of many infectious diseases. In poor countries much of the population lives in rural areas where access to good health care is generally lower than in cities. As a result, preventive care is less available and treatment of disease and injury is less extensive and effective. At the same time, health care systems can suffer in large urban areas experiencing rapid growth with the result that some urban populations are at great risk for many health problems (Shah 1997; Garrett 2001; Szreter 2001). Political institutions and practices, however, can raise or lower health risks by influencing access to public services. Differential political influence plays a crucial role in determining who has full or limited access to health benefits. For example, income inequalities often translate into political inequalities, with the health needs of low-income groups neglected relative to those of richer groups (Moon 1991; Moon/Dixon 1992; Wilkinson 1996; Foege 2000: 7). When political conflicts escalate to large-scale violence they expose civilians to great health risks due to direct attack, dislocation, and the destruction of public health infrastructure.

(2) *The financial and human resources available for addressing public health needs*. Higher levels of income and wealth provide a larger pool of financial and human resources to draw upon. Public and private actors can spend more on health care needs and to develop and purchase more advanced medical

technologies. A larger pool of financial resources will enable greater investments in human resources; that is, training more doctors and health specialists. Irregular transfers of political power and political unrest in undemocratic systems reduce growth rates (Przeworski et al. 2000: Chap. 4), and hence the pool of financial resources for health care.

(3) *The level of resources actually allocated to public health needs by the private and public sectors*. Public health analysts consistently argue that education levels in society affect public health (e.g., Sen/Dreze 1999; Evans et al. 2000a). A more educated population is likely to be more knowledgeable of health risk factors, to support greater investment and expenditure, and to utilize health care services. But claims to resources for public health compete with other demands, and politics can prove crucial in deciding which resources are actually allocated. Below we hypothesize that leaders in democratic countries have greater political incentives to invest in collective goods such as public health care. We also consider how international security threats create pressures for government leaders to allocate more resources to military and defense capabilities, at the expense of non-defense needs such as public health.

(4) *The degree to which resources actually allocated to public health are efficiently utilized.* Politics can influence efficiency in two ways. Public health services may not be directed to groups with the greatest need. Poor urban residents, low-income groups, and ethnic minorities are often at greater risk of health problems, yet less effectively represented in the political competition for scarce resources. Health care services for these politically marginalized groups are skewed in favor of wealthy segments of the population or dominant ethnic groups who on average are healthier and less at risk. Second, health systems often become less efficient during wartime (due to shortages of doctors, displaced populations, and the destruction of the health care infrastructure), and these inefficiencies are likely to persist into the postwar period as well.

The first stage in understanding differences in public health conditions across countries begins with the influences on the level of public expenditures devoted to health care. Since the choice to allocate public resources to health care is fundamentally a political one beyond pure availability of resources in the whole economy, we must know what affects that choice. We then show that allocation decisions concerning public health spending are important to explaining the overall level of resources devoted to the health system on a per capita basis. Total health expenditure per capita, in turn, becomes a critical variable to explain health outputs, notably HALE.

To analyze health expenditures we use WHO data that began with IMF and national sources, supplemented by national accounts data from UN and OECD sources and household surveys and WHO estimates (Pouillier and Hernandez 2000). Since our first step concerns the government decision to allocate budgetary expenditures to health care, the dependent variable for this equation is public health expenditures as a percent of GDP for 1997 (WHO 2001). It ranges from 0.1 % in Zaire (Congo) to 8.1 % in Germany with a median of 2.7 % (Albania).

6.3 Explaining the Allocation of Resources to Public Health

We begin with hypotheses concerning domestic politics.

H1: *Higher levels of democracy will result in state leaders allocating more expenditures to public health.*

Political leaders want to retain power. They must form a winning coalition among the politically active. To do so they distribute private goods to their supporters, and provide collective goods widely for the population. All leaders provide both private and collective goods in some degree. But since democratic leaders must satisfy a wider range of supporters they are less able than authoritarian ones to extract rents for the private benefit of small groups, and must respond more to broad demands for public well-being (Olson 1993; Bueno de Mesquita et al. 1999; Lake/Baum 2001). They are more likely to invest in public goods such as health services because populations will hold them accountable for failing to address basic and pressing health care problems. For example, famines are much more common in authoritarian states (Sen 1981), which spend less to prevent them or to relieve their consequences. Przeworski et al. (2000: 239) report that the strong effect of democracy in lowering infant mortality operates largely through health expenditures (see also Dasgupta 1993 and Moon 1991: Chap. 6).

Political system type is measured by the Polity IV average score for 1996 and 1997, from (http://www.systemicpeace.org/polityproject.html). For the 22 countries in our sample with no Polity score we imputed a regime score from Freedom House scores (https://freedomhouse.org/reports#.VSwqMJh0ypo), which correlate highly (r = 0.95) with Polity where both exist. Following common practice (e.g., Maoz/Russett 1993) we create a 21-point index for each state from a scale for degree of autocracy ranging from −10 (most autocratic) to 0 (least autocratic) and one for degree of democracy from 0 (least democratic) to +10 (most democratic), and then produce the composite index by summing the two components. This scale, which we treat as interval, varies from −10 (e.g., North Korea, Myanmar) to +10 (e.g., Japan, Norway), with a median of 7 (e.g., Ukraine).

H2: *Higher levels of income inequality in society will result in state leaders allocating fewer expenditures to public health.*

High income inequality indicates a greater ability of economically privileged groups to influence the political system for their own benefit rather than that of the majority. Many public health care programs are directed at basic health services for poor and disadvantaged groups. They are of little direct value to wealthier segments of the population, who rely more on private health care and more specialized forms of public health services. Thus political pressure from economically powerful groups diverts state expenditures away from basic universal health care.

Our measure is the Gini index of inequality of income distribution in 1997. This index, derived from a Lorenz curve of the actual distribution of household income, represents the area between the curve and the 45° line for a totally equal income

distribution. The data begin with World Bank estimates for 111 countries, supplemented by WHO's multiple imputation estimates using information on socioeconomic development and life expectancy at birth (Evans et al. 2000b; an early effort is Russett et al. 1981). Theoretically the Gini index ranges from zero (complete equality) to 1.00 (one person has it all); in practice our national Gini indices range from a very equal 0.187 (Slovakia) to 0.609 (Sierra Leone), with a median of 0.374 (Uganda).

H3: *Higher levels of racial/linguistic/religious diversity in society will result in state leaders allocating fewer expenditures to public health.*

Differences in the ethnic and racial makeup of a country's population can be a source of political conflict that produces various forms of discrimination and unequal access to political power (see, e.g., Gurr 2000). Political inequality in turn skews the distribution of resources devoted to public policy programs, including health care. Minorities suffering from discrimination are likely to be in greater need of basic health services but in a weak political position to press for them effectively. Dominant ethnic groups seek to limit public health expenditures for which minorities could be primary beneficiaries and to instead try and shift resources into other state programs that are of greater benefit to them. Overall, public health expenditures will reflect the political weakness of groups discriminated against, and thus will be lower than in more homogenous populations.

We use Vanhanen's (1999) index of racial-linguistic-religious heterogeneity. This index, stable over moderate time periods, measures the percentage of the largest ethnic group identified by each of these three criteria, giving each equal weight by summing the three percentages and subtracting the sum from 300 (a completely homogeneous state by all three criteria). It is conceptually somewhat different from that of Gurr (1993), when logged correlating with an r of 0.69 with Gurr's index. But it was created with Gurr's effort in mind and covers more countries. It ranges from 177 (Suriname, very heterogeneous) to a low of 0 (North Korea, complete homogeneity), with a median of 38 (Uzbekistan). The index is skewed, so we use its natural log.

H4: *Involvement in an enduring international rivalry will result in state leaders allocating fewer expenditures to public health.*

International wars are likely to have major short- and long-term impacts on public health spending. We cannot, however, investigate those effects here. By standard criteria there were only two international wars during the 1990s; that is, the Gulf War 1990–1991 and Kosovo 1999. This is not enough to give us reliable estimates of the effect of international wars on national health performance, more so as the human effects were vastly compounded by the economic sanctions against Iraq and Serbia before and after those wars. To provide an international conflict dimension we turn to international rivalries, an indicator of conflict and security threats that may cause states to shift resources from health. We expect that during an enduring international rivalry with repeated threats or use of force short of war, public

spending will be diverted from social welfare programs—including health—to military purposes (e.g., Ball 1988; Mintz 1989; World Bank 1993; Fitzsimmons/Whiteside 1994: 25–26; UNDP 1994; Chan 1995; Adeola 1996; Yildirim/Sezgin 2002).

An enduring international rivalry is defined as a relationship between two states experiencing at least 6 militarized international disputes during a 20 year period, and in which fewer than 11 years have elapsed since the last dispute. We extend data from Diehl/Goertz (2000) to recent years from Wallensteen/Sollenberg (2000). We code as 1 each of the 25 countries involved in an enduring international rivalry during 1989–1997, and all others as 0.

We conclude with two hypotheses about basic economic and social factors used in analyses by the WHO and health economists (Filmer/Pritchett 1999; Evans et al. 2000a).

H5: *Higher per capita incomes will result in state leaders allocating more expenditures to public health.*

H6: *Higher levels of education in society will result in state leaders allocating more expenditures to public health.*

The higher the level of per capita income, the more tax revenues that are potentially available to spend on the health of the public without producing acute trade-offs between health spending and other state-funded programs. The more educated the population, the better informed it is likely to be about the potential benefits of various programs and expenditures, and thus to call for and support greater public inputs to the health care system.

Gross Domestic Product (GDP) per capita is measured for 1998 in PPP-adjusted $ (U.S. Central Intelligence Agency, 1999) and its range is from $530 (Sierra Leone) to $32,700 (Luxembourg), with a median of $3,500 (Jordan). We use the natural logarithm of GDP per capita to reduce skewness. For the measurement of education levels in society, we follow the lead of WHO analysts, which use the level of educational attainment. WHO regards average level of schooling in the adult population as the most widely available and sensitive measure, logged to correct skewness and to reflect the declining marginal impact of education.[4] For 1998 it ranges from 1.04 years of education (Mali) to 11.5 (United States), with a median of 6.03 (Costa Rica).

[4]Some observations were estimated by multiple imputation from other data on educational attainment. For sources and methods see Evans et al. (2000b).

6.4 Empirical Results for the Allocation of Resources to Public Health

We test these hypotheses using ordinary least squares regression on data for 179 countries: nearly all the 191 members of the WHO, omitting only small states lacking data on one or more of the explanatory variables.[5] Table 6.1 shows the results for *public health expenditures as a percentage of GDP*.The columns show, respectively: (1) the estimated coefficients, (2) the standard errors, (3), the probability levels,[6] and (4) through (7) the actual change in value of the dependent variable and the percentage change from the median value by moving each explanatory variable to the 5th and 95th percentiles.

All political hypotheses are supported, with significant coefficients and important substantive effects. Throughout the Polity scale democracies spend more on their citizens' health than do autocracies. Controlling for all other factors, a democratic government at the 95th percentile on the Polity scale allocated about 49 % more to health than did a dictatorship at the 5th percentile on the Polity score. For instance, the relatively democratic Philippine government spent more than twice as much per capita on public health as did Suharto-led Indonesia, despite the two countries' roughly similar income per capita. Income inequality sharply reduces public health spending (a 23 % drop from the median to the 95th percentile of inequality). Nigeria has high income inequality at 0.481 and only 0.9 % of GDP is spent on public health, while Ghana's income Gini is more equal at 0.317 and 1.4 % of Ghana's GDP goes to public health. Ethnic heterogeneity also makes a big difference, especially toward the homogeneous end of the scale (the 5th percentile on heterogeneity shows 11 % higher spending than the median). Bangladesh, ethnically homogeneous but impoverished, allocates 2.2 % to health while Ethiopia, similarly poor but more heterogeneous, allocates just 1.4 %. An enduring international rivalry also depresses public health expenditures and the substantive impact is large, producing a 24 % reduction in public funds allocated to health. For instance, Pakistan and Syria, with relatively high levels of defense spending, allocate less than 1 % of GDP to public health.

The two control variables from standard public health models have a powerful effect. GDP per capita has a substantial impact, especially among richer countries (21 % higher in the 95th percentile than at the median). The average level of education also makes a big difference, especially toward the low end, near the 5th percentile.

Overall, we find that domestic and international politics play an important role in shaping government decisions to allocate resources to public health programs. The

[5]For the two equations below the N varies by 1 in either direction because of missing data on expenditures. We have also examined instances where collinearity might be a problem, and found none in any of the equations we tested. The highest correlation among any pair of independent variables used in a single equation is only 0.7, for education and GDP per capita.

[6]Since all our hypotheses specify a direction of relationship, the p-values are for one-tailed tests.

Table 6.1 Explaining public expenditures on health as a percentage of GDP

Explanatory variables	Coefficient	Standard error	p-value	Movement in percentage of GDP spent on public health when explanatory variable moves from median down to 5th percentile	Percentage change (%)	Movement in percentage of GDP spent on public health when explanatory variable moves up from the median to the 95th percentile	Percentage change (%)
Intercept	1.550	1.190	0.10				
GDP per capita	0.362	0.131	0.00	−0.54	−16.7	0.69	21.1
Income inequality (Gini)	−5.217	1.277	0.00	0.65	20.0	−0.76	−23.2
Education	0.679	0.266	0.01	−0.85	−25.9	0.34	10.4
Ethnic heterogeneity	−0.148	0.090	0.05	0.37	11.3	−0.16	−5.0
Enduring international rivalry	−0.776	0.294	0.00	0.00	0.0	−0.78	−23.8
Democracy (polity score)	0.066	0.018	0.00	−0.72	−22.2	0.53	16.1

N = 179, Adjusted R-square = 0.50, Sigma = 1.32, Mean of dependent variable = 3.26

CC

next step is to use public health spending as an explanatory variable in an equation to explain overall levels of total health care spending.

6.5 Hypotheses on Total Levels of Health Spending

Our second equation represents a simple model to account for total health expenditures per capita. Total spending per capita (1998) ranges from $4,055 (United States) to $11 (Somalia), with a median of $197 (Thailand). WHO declares that it is very hard for countries to provide good health outputs below a total expenditure of about $60 per capita, and that it would cost just $6 billion per year to bring up to this threshold the 41 countries with lower expenditures (Evans et al. 2000a: 24). As these distributions are skewed we use natural logarithms.

The analytical focus is now on the overall level of financial resources committed to the health care system. We draw on standard analyses by economists and public health experts to formulate several hypotheses. In this model the effect of the political influences is captured indirectly by including public health expenditures as a percentage of GDP as an explanatory variable. We had no theoretically compelling hypotheses for why those political variables would exert a strong direct impact on private health expenditures.[J]

H7: *Higher per capita incomes will result in higher total health expenditures.*
H8: *Higher levels of education in society will result in higher total health expenditures.*

As previously argued, the higher the level of per capita income in society, the greater the tax revenues available for public spending on health by governments. Furthermore, higher levels of income and wealth should also enable individuals and businesses to afford to spend more on private health care. Again following WHO practice, we also expect that higher education levels in society would be associated with greater support and interest in achieving high health standards through support of both public and private spending on various health care programs. For both income and levels of education we use the same measures as in the first equation.

H9: *Higher allocations of private spending to health care will result in higher total health expenditures.*
H10: *Higher allocations of public spending to health care will result in higher total health expenditures.*[7]

[7]Nor is there much evidence that they do. Public and private health spending in part substitute for each other. They are weakly correlated, at −0.1. In an expanded equation to explain private health spending only two political variables, income inequality and enduring rivalry, are even weakly significant (p = about 0.05). And only those two are significant in an expanded equation for total health spending (p = just under 0.10).

These two hypotheses reflect the straightforward relationship that in societies where both public and private actors make decisions to allocate a larger percentage of available resources to health care, the overall level of total health spending should be greater. Thus while H7 posits that wealthy societies can afford to spend more on health care, H9 and H10 point out that there are always competing claims in society on how to spend available resources. As a result, public and private decisions to spend more or less on health relative to other programs help determine the overall amount of resources spent on maintaining and improving health care. We use the same source for private health spending as for public spending, and sum them. Private health spending ranges from 0.3 % (Kuwait) of GDP to 8.8 % (Lebanon) with a median at 1.9 % (Oman).

6.6 Empirical Results for Total Levels of Health Spending

Table 6.2 reports the results in the same format as in Table 6.1. All hypotheses are supported with significant coefficients that produce moderate to large substantive effects.[8] GDP per capita has a powerful impact. For example, the shift from the median GDP of approximately $5,000 per capita to the 95th percentile GDP of $22,700 per capita produces an increase of $1,028 in total health spending per capita. Education also produces strong effects as the movement from 6.5 years of average education to 10.2 years is associated with an 11 % increase in total health spending per capita. Both of these findings converge with standard analyses by economists and public health experts (Filmer/Pritchett 1999; Evans et al. 2000a). Finally, higher allocations of public or private resources to health spending are strongly and positively associated with overall total health spending levels. Since public spending usually constitutes a larger portion of total spending, the marginal impact of allocating public spending is greater, as shown in the table.

This second set of results is important. First, as we show below, *total health expenditures per capita* is a powerful variable in accounting for overall health outcomes on a cross-national basis, so we need to understand what affects it. Second, it shows that *allocation of public spending to health expenditures* is a major contributor to *total health expenditures per capita,* and we have already shown (Table 6.1) that public spending on health is a function of several political variables. The critical point then is that political variables have important but indirect impacts on health performance through their causal linkage to public health spending.

[8]While still very good at 0.50, the adjusted R-square for the allocation of resources to public health in Table 6.1 is substantially lower than the 0.97 for the equation explaining total levels of health spending in Table 6.2 and 0.81 for the equation explaining total levels of health performance in Table 6.3. This apparent weakness is largely because the allocation variable is a ratio rather than an absolute level. Imprecise measurement can play a bigger role with ratios, as they are likely to be more volatile in any single cross-section.

Table 6.2 Explaining total expenditures on health

Explanatory variables	Coefficient	Standard error	p-value	Change in expenditure when explanatory variable moves from median down to 5th percentile	Percentage change (%)	Change in expenditure when explanatory variable moves from median down to 95th percentile	Percentage change (%)
Intercept	−3.738	0.165	0.000				
GDP per capita	0.937	0.025	0.000	−$156.9	−75.4	$1,027.9	494.2
Education	0.207	0.052	0.000	−$46.9	−22.6	$23.1	11.1
Private spending on health as % of GDP	0.126	0.014	0.000	−$26.3	−12.7	$80.8	38.8
Public spending on health as % of GDP	0.190	0.010	0.000	−$61.4	−29.5	$362.4	174.2

N = 178, Adjusted R-square = 0.97, Sigma = 0.261. Mean of dependent variable = 5.34 ($208)

6.6.1 Theoretical Analysis of the Causes of National Health Performance

We now turn to the centerpiece of our analysis, in which we examine the level of health achievement in a population. Our dependent variable is HALE, the WHO measure for *health-adjusted life expectancy* at age zero, discussed at the beginning of the article. We present several new hypotheses about the direct impact of political variables on HALEs, and include variables from basic WHO models as additional explanatory variables. Our first three hypotheses share a common logic about domestic political variables, linking limited access to health services and greater exposure to health risk factors to lower HALE scores.

Hll: *The more unequal the distribution of income, the lower will be the HALE.*

While we have already posited that income inequality indirectly impacts on health performance by influencing allocation decisions on public health expenditures (see H2), we also hypothesize a more direct effect as well. That is, the more unequal the distribution of income, the more unequal will be the distribution of access to both public and private health care facilities. The provision of high quality health care services is thus limited to a smaller segment of the general population, producing lower overall levels of health performance. The rich get more access—at low marginal utility, and the poor get less access—at a level of income at which the marginal utility of greater access would be high. As a result, the poorer segments of the population already at greater risk to disease, disability, and death fail to receive necessary health care services, producing aggregate patterns that produce lower HALE scores.

H12: *The more ethnically/linguistically/religiously diverse the population, the lower will be the HALE.*

As we argued above, ethnic differences often result in discrimination and unequal access to political power. Once again, group cleavages in society not only indirectly impact on health conditions through the allocation of public spending on health (see H3), but also directly affect health performance by limiting access to the health care system. Access to health services will be biased in favor of politically dominant ethnic groups in society, and politically weak minorities will suffer from limited access to health services. Consequently, minority groups that are already exposed to greater health risks due to discrimination in housing, education, and job opportunities will lack sufficient support from the health care system.

H13: *The faster the pace of urbanization the lower will be the HALE.*

Fast-paced urbanization, particularly in low- and middle-income countries, often brings poor new urban dwellers into slums where they are exposed to new disease vectors and other increased health risks. They will lack adequate access to care as the supply of health service lags behind the surge in need. Surveillance,

immunization, and the provision of safe water all become more difficult. Rapid urbanization often reflects an influx of poor and marginalized people from rural areas—people who are politically weak and thus suffer from inadequate access to health care despite great need. New residents of urban slums are unlikely to be well organized in unions to create effective pressure for services either in the workplace or in politics. They are likely to be under-represented in established political parties that have already developed a base of political support among other urban constituencies. A gap between great need and inadequate health care delivery marks this relative neglect of new city dwellers. Marginal utility analysis predicts that individuals or groups receiving less than an equal share of health care lose more disability-adjusted life expectancy than is gained by individuals or groups receiving more than an equal share of health care. That should be especially true when the disadvantaged group is exposed to the diseases of urban slums.

Our measure of recent urbanization is the average annual percentage change in the urban portion of the population, 1990–1995 (United Nations 1998: 132–135). It ranges from −0.41 % (Belize) to 7.35 % (Botswana), with a median of 0.88 % (Grenada).

H14: *The occurrence and severity of civil wars will reduce the level of HALE.*[9]

We expect civil wars to kill and maim people. But that is more than just a tautology. Wars continue to kill people well after the shooting stops. Civil wars do so by destroying health care system infrastructure that cannot rapidly be replaced, by disrupting normal economic activity and health care delivery, and by slowing down the rebuilding of the health care system in the postwar period due to multiple and wide-ranging reconstruction programs in other areas of society (Collier 1999; see also Stewart 1993).

Military forces often deliberately target health care facilities in order to weaken the opposition. The result is that the human and fixed capital resources available to support the health care system are depleted. For example, heavy fighting in urban areas is likely to damage or destroy clinics, hospitals, and health care centers; rebuilding this infrastructure is unlikely to be completed quickly in the postwar period as governments face many pressing reconstruction programs. Wartime destruction and disruption of transportation infrastructure (roads, bridges, railroad systems; communications and electricity) also weakens the ability to distribute clean water, food, medicine, and relief supplies, both to refugees and to others who stay in place. As a result, health care systems suffer shortages in supplies and personnel, inadequate facilities, and a reduced capacity to reach populations outside of major urban centers. These shortages and limited access severely strain health care professionals' ability to deliver treatment and aid efficiently into postwar periods. Furthermore, severe civil wars may induce a substantial flight of highly trained medical professionals, and this loss of human capital may not be reversed by

[9]Ghobarah et al. (2003) analyze the effects of civil wars more extensively.

their prompt return or replacement by newly trained health workers until long after the wars end.

Civil wars often produce huge movements of persons displaced within their own countries. They often lack clean water, food, and access to health care, and these people may remain displaced for years after the end of the civil war. Thus the very people exposed to high health risk factors simultaneously suffer from limited and inadequate access to health services. For example, in many countries ravaged by civil wars the crude mortality rates among newly arrived refugees were 5–12 times above the normal rate. Epidemics of diarrheal diseases, measles, acute respiratory infections, malaria, and other diseases are typical. Malnutrition is common, weakening people's defenses against infection. Civil war has been labeled as the predominant cause of famine in the 1990s. (On much of the above see Toole 2000.)

Even after the fighting subsides, epidemic diseases may become rampant, extending far beyond the displaced population, and immunization and treatment programs are overwhelmed (Fitzsimmons/Whiteside 1994). Non-displaced populations may also be at greater risk following severe civil wars. For example, diseases that become rampant in camps for displaced populations may easily spread to other regions. Prevention and treatment programs already weakened by the destruction of health care infrastructure during civil wars become overwhelmed as new strains of infectious disease bloom. These spreading diseases may be especially damaging to children, given their greater susceptibility to infection. For example, efforts to eradicate Guinea worm, river blindness, and polio, successful in most countries, have been severely disrupted in states experiencing the most intense civil wars. Drug-resistant strains of tuberculosis can develop and in turn weaken resistance to other diseases, and it is commonly held that the spread of AIDS in Africa has been greatly increased by refugee population movements associated with civil wars (Reid 1998; Epstein 2002). Finally, the risk of physical violence is likely to increase in the aftermath of long and severe civil wars, based on changes in individual and social psychology (Bracken/Petty 1998). Homicide and other crime rates rise during international wars, tending to peak in the first year after the war. The experience of war makes the use of violence within states more common (Archer/Gartner 1976; Stein 1980). Gerosi/King (2002) report a significant rise in homicides and suicides, transportation deaths, and other unintentional injuries (both of the latter are likely to include misclassed suicides) in the U.S. population immediately following the Korean and Vietnam wars. If international war has this effect, we should certainly expect the direct and immediate experience of civil war to do the same. These social and psychological changes are magnified by the widespread availability of small arms after many civil wars and the relative weakness of many state police forces compared to private security forces.

H15: *Civil war in a geographically contiguous country will lower the HALE.*

Whereas many displaced persons stay in their own countries during civil wars, others flee across national borders to become international refugees: their own countries lack the means to care for them, and they often are fleeing political or

ethnic persecution from those who have the upper hand in the war. The Rwanda civil war generated not only 1.4 million internally displaced persons, but a total of 1.5 million refugees into neighboring Zaire, Tanzania, and Burundi (Toole 2000: 98). Large-scale refugee movements can produce adverse health consequences for neighboring countries in two ways. First, if the refugees must be cared for mainly by the medical resources of the receiving country, those resources may be diverted from care of the host country's own population. Second, they can bring infectious diseases associated with the disruptions of war and the poor living conditions in which they find themselves in host countries. Refugee camps can become vectors for transmitting infectious diseases to the host population.

For FI 14, deaths from civil war in the years 1991–1997 represents a measure of both the existence and severity of civil war, expressed as the number of deaths per 100 people in the country to measure the war's intensity. Civil wars are defined as armed conflicts producing 1,000 or more fatalities per year among regular armed forces, rebel forces, and civilians directly targeted by either. Civil war years and fatality figures are derived from leading data sets on civil war compiled by scholars (COW data on civil wars website: http://www.umich.edu/~cowproj/; Licklider 1995; Regan 2000; Doyle/Sambanis 2000; Wallensteen/Sollenberg 2000). For most countries its value is 0; for the 34 countries experiencing civil war during the period it ranges from 0.02 to 96.9 (Rwanda). For H15, we simply use a dummy variable coded as 1 if any contiguous state experienced a civil war from 1989 to 1998. Contiguity is defined as sharing a land border or separated by no more than 12 miles of water.

The last hypotheses draw on standard WHO models of cross-national health performance.

HI6: *The higher the level of total health expenditures per capita the higher will be the HALE.*

Higher income improves health *through* public and private decisions to spend money on hospitals, preventive and curative care, sanitation, and nutrition. Earlier work by economists such as Pritchett/Summers (1996) showed that "wealthier is healthier." We build on their work with a wider set of countries and a finer-grained argument about *how* total income leads to better health. Per capita GDP does not directly determine the production of health outputs. Rather, it permits a high level of expenditure for health purposes, and though highly collinear with income ($r = 0.90$), health spending is also influenced by political processes and institutions. For example, above we found that democracy has a strong impact on total health expenditures by raising public health spending. And spending is distributed in a political process that produces actual health outcomes. So our two-stage model, in the economics tradition of production function analysis, treats income as an uncontrollable variable outside the direct process that brings good public health outputs. We follow the WHO (Evans et al. 2000a: 13) in using total health expenditure per capita as a theoretically satisfying variable to incorporate prior political processes that affect spending. It includes health services and prevention,

but not the provision of clean water and sanitation that are also affected by levels of education and income.

HI7: *The more educated the population the higher will be the HALE.*

At higher levels of education, preventive and treatment programs become more widespread and effective. Demand for better health care increases as does more knowledgeable and effective consumption throughout the population. Education is strongly associated with the health of both children and adults in rich and poor countries. It is the other independent variable, with total health spending, in WHO analyses of health attainment (Evans et al. 2000a: 13).[10]

6.6.2 Empirical Results for Influences on Health Performance

Table 6.3 shows the results for the HALE equation in the same format as previous tables. The strongest impact, not surprisingly, is from the level of total health spending—with a shift from the median to the 95th percentile bringing 10 years of additional healthy life. The coefficient for ethnic heterogeneity is barely significant, but produces some substantive effect: moving from the median of the heterogeneity index to a quite homogenous 5th percentile brings HALE more than a year higher. This direct effect reinforces the separate stronger negative impact of ethnic diversity on the allocation of public health expenditures. Together, these results suggest that ethnic diversity operates to diminish the overall level of health achievement primarily by reducing overall expenditures, and to a lesser extent also through some discrimination in the distribution of those expenditures and hence access to health care.

The impact of income inequality on HALE is highly significant and substantively strong. A shift from the median Gini index to the 95th percentile reduces average healthy life expectancy in that country by over 2 years. This is in addition to the separate impact of income inequality on HALE through reducing the allocation to public health expenditures. Together, these results indicate a substantial

[10]Two variables that we hypothesized and found to affect public health spending are not included in this output equation. As we noted in discussing the relevant spending hypothesis, the recent literature indicates that democracy's major impact is in raising public health spending, and thus strongly but largely indirectly affects health outcomes. Similarly we hypothesized that the principal effect of an international rivalry short of war would be fiscal, in reducing public health spending. Also, three of the variables we now hypothesize to affect health outputs did not appear in our equations to explain health spending. We encountered contradictory arguments about the probable effect of civil wars (at home, and in neighboring states) on health spending, and no compelling hypothesis that rapid urbanization would significantly affect spending either way. We have, however, run expanded HALE and spending equations not shown here, and none of these variables, when included, had a statistically significant effect.

Table 6.3 Explaining years of healthy life expectancy (HALE)

Explanatory variables	Coefficient	Standard error	p-value	Change in years of healthy life expectancy when the explanatory variable moves from median down to 5th percentile	Percentage change (%)	Change in years of healthy life expectancy when the explanatory variable moves from median up to 95th percentile	Percentage change (%)
Intercept	36.980	3.769	0.00				
Total health expenditure	3.921	0.434	0.00	−7.84	−14.2	9.80	17.7
Rapid urban growth	−1.426	0.408	0.00	1.00	1.8	−3.57	−6.4
Income inequality (Gini)	−16.296	4.783	0.00	2.04	3.7	−2.36	−4.3
Ethnic heterogeneity	−0.489	0.344	0.08	1.22	2.2	−0.54	−1.0
Education	5.044	1.103	0.00	−6.28	−11.4	2.52	4.6
Civil war deaths 1991–97	−0.085	0.037	0.01	0.00	0.0	−0.98	−1.8
Contiguous civil War	−2.311	0.817	0.00	0.00	0.0	−2.31	−4.2

N = 180, Adjusted R-square = 0.81, Sigma = 4.98 years, Mean of dependent variable = 55.3 years

impact of income inequality on health conditions (HALE) that operates both through lowering public health expenditures and through discrimination in the distribution of those expenditures, and hence on access to health care services. It is important to also recognize that the indirect negative impact of income inequality on HALE through lowering public health expenditures is not adequately compensated by private health spending. Even controlling for total health spending, in unequal societies the overall level of life expectancy is lower and the level of disability is higher.

The United States provides an example for both the above findings. It is moderately diverse in ethnic composition (86 countries are more homogeneous) and distinctly low in economic equality (108 countries are more equal). Despite being the richest country on the globe and the biggest total spender per capita on health care, 27 countries have better HALE.

The impact of education is also strong, especially among poorer countries. If Benin somehow could provide its people with an average of 6 years of schooling instead of the actual 1.7 years; that is, if it were at the median level of schooling rather than at the 5th percentile from the bottom, we would expect its citizens to gain over 6 more years of healthy life. Partly that reflects the absence of per capita income in this equation, as education—more highly correlated with income than with health expenditures—likely picks up some effect of income here. Nonetheless, educational attainment was fairly strongly associated with total health spending, and these two results together indicate that education affects both the level of health expenditures and the achievement of better health through greater access and effective use of health services.

A high pace of urbanization also has a strong impact, cutting HALE by over 3 years in the more rapidly urbanizing countries. As we argued, this negative impact is likely to be due to the susceptibility of new urban dwellers to disease and the political weakness of new poor urban residents to ensure that the health care system delivers adequate prevention and treatment to them.

Finally, the matter of civil war. First, civil wars within a country have a clear negative impact on health conditions with the loss of a full year of healthy life at the 95th percentile. Not surprisingly, civil wars do kill people, and not just during the course of the war. The damage to life and well-being lingers for years after the war is fought, due to the disruption of institutions and the infrastructure. Truly severe civil wars (rare events to be sure) are even more detrimental. These can reduce healthy life expectancy by nearly 10 full years (e.g., Rwanda and Liberia).

Moreover, it is not just civil war in one's own country that matters. A country's HALE is typically depressed by more than 2 years if a neighboring state recently suffered from a civil war. This relationship is not weakened even if we exclude all countries that themselves experienced a civil war.

Note the cluster of eight countries (Namibia, Zambia, South Africa, Congo-Zaire, Zimbabwe, Malawi, Swaziland, and Lesotho, in declining magnitude of the residual) in southern Africa that are outliers at the left of Fig. 6.2, with predicted HALES 9–16 years above their actual achievement. All but Congo were also in the top ten for per capita HIV/AIDS cases in 1999. It is commonly believed that the

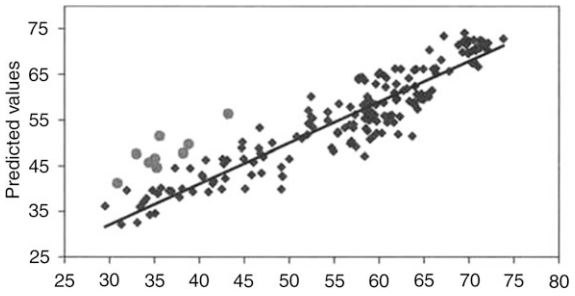

Fig. 6.2 HALE 2000 (observed)

incidence of AIDS in Africa has been greatly abetted by civil wars (Reid 1998; Epstein 2002). None of the eight countries experienced major civil conflict in the 1991–1997 period, but a few (Namibia, South Africa) had civil wars a few years earlier, and the manifestation of HIV infection is often delayed. All of them also border on states that experienced civil wars either in 1991–1997 or somewhat earlier.

Many other explanations have been proposed for the prevalence of AIDS in these countries (UN Program on HIV/AIDS, http://search.unaids.org/). No one or two are satisfactory. Public health researchers do not agree on why AIDS is so common in this region. We do not show an equation that includes an HIV/AIDS variable, since to do so would merely put a label on a disease,[11,12,13] without providing a socioeconomic explanation of its prevalence.[14] This concurs with

[11]Suppose civil war kills all but one person in a country during the war, yet that last person is very healthy and is expected to live long. HALE would then drop in the first year due to all the war deaths, but rise in the next year because it is based only on people alive. In fact, however, we see low HALEs for several years after a war, reflecting new deaths and disabilities.

[12]Theory does not tell us just what the correct lag should be. For most infectious diseases—which we hypothesize as the principal cause of indirect civil war deaths—the lag time would seem short. Effects of damage to the health care system would probably last longer, and the lag for cancers would be too long and varied for us to reasonably test for it. Experimentation with the lag structure indicates that the coefficient for wars in the 1977–1990 period is only about one-fourth as large as for the 1991–1997 period in our basic equation, and not statistically significant. If we make a break between 1991–1995 and 1996–1997 the impact of the coefficient for the latter period is higher, but the standard error is very much higher. Eliminating all countries whose civil wars extended past 1997 reduces the impact of wars in 1996–1997, but not that of earlier wars. Until more detailed data are available the 1991–1997 lag to the 2000 HALEs seems about right.

[13]The metrics are only approximately comparable between the continuous civil war variable and the dummy variable for presence of a civil war in an adjacent state. One death from civil war per 100 people represents the 95th percentile of civil war deaths (34 countries out of 177 experienced civil wars, of which 9 were at or above this level of severity, so the comparison is reasonable but underestimates the effect of very severe civil wars at home).

[14]If a variable for the adult HIV rate in 1999 is added, it is highly significant and raises the predictive power of the equation. The explanatory variables that lose power do offer some hints as to what may be behind the AIDS effect: the rate of urbanization becomes statistically insignificant, and the significance level of income inequality drops to $p = 0.08$. Inequality and rapid urbanization may well promote HIV/AIDS, but we cannot establish a causal effect here.

Evans et al. (2000a: 22), who decline to use an HIV variable to predict HALE as a measure of efficiency of the health system. Their view, and ours, is that the health system should be held at least partly accountable for the failure to control AIDS.

6.7 Conclusions, Limitations, and Future Research

In trying to explain expenditure inputs into the health system, and outputs in the form of the reduction of human misery, we combined variables commonly used by public health analysts with economic, social, and political influences much less commonly studied in this context. The phenomena we tried to explain were measured by newly available cross-national data from WHO. Though preliminary, the results showed the utility of modeling health expenditures and then using those expenditures as an explanatory variable for achievement in health care. Forecasting as well as explanation can benefit. Politics matters, in ways that illuminate the sub fields of both comparative politics and international relations as well as public health.

The models we use to explain variation in the allocation of public spending on health care show that, in addition to income and education, several political influences matter. For example, the degree of democracy in a country is strongly associated with higher allocation levels. We also found that ethnically diverse countries and those experiencing great income inequality show significantly lower levels of spending allocated to public health. Furthermore, countries engaged in enduring international rivalries allocate lower levels of public spending to health. Our findings help to quantify these influences and to assess their relative impact.

When we moved to explaining outputs of the health system, the patterns were similar in some respects but importantly different in others. Total health expenditures per capita strongly raise the level of disability-adjusted life expectancy, as does education. As expected, the direct negative effects of civil wars and rapid urbanization on HALE are strong. Income inequality strongly depresses HALEs more by its indirect effect in reducing public health spending than by its direct effect. The primary effect of ethnic heterogeneity works indirectly by lowering public health spending, but also impacts directly on HALE. Working through different causal routes, both show what happens when groups and segments of the population have little political power.

This examination of some of the causes of human misery and its alleviation is still in an early stage. Better time-series information is needed to permit stronger causal inferences. Improved data are essential—and are likely to be forthcoming over the next few years. Certainly we need to better comprehend micro-level political and social processes. For example, variation in the health conditions of women and how politics influences health care opportunities for women requires careful analysis. Here we have emphasized health (spending and output) as the phenomenon to be explained, and lagged our explanatory variables accordingly. But poor health conditions surely contribute to economic stagnation, and very likely to civil unrest. Also, democracy may have additional indirect effects on health. We focused on democracy's impact on allocating public spending to health care but there may be further links to educational levels, minority and women's rights, political peace and stability, and economic growth. A more satisfying understanding doubtless requires modeling these reciprocal causal effects beyond what can be done in a single article.[15] Finally, while we have considered international security threats in our analyses, another large international influence on health conditions may be the process of economic globalization and its possible impact on societal inequalities.

One possibility for research (Ghobarah et al. 2003) has been to employ a new data set from WHO on so-called DALYs—that is, disability-adjusted life years lost from various particular diseases and conditions, applied separately to both genders and various age groups. In time this will allow us to better estimate the correct time lags, and to focus much more effectively; for example, on the effect of civil wars or income inequality on women and children, and on the burden imposed by particular diseases. Some of these data are discussed in WHO (2000), and more are becoming available. The result should be a far deeper understanding of which groups are especially afflicted, how, and why.

[15]While we intend in future work to use simultaneous equations to estimate these effects, we currently lack the instrumental variables needed to ensure the effects estimated by 2- or 3-Stage Least Squares are reliable and robust to different instrumental variables and moderate changes in model specification. The advantage of 2- or 3-Stage Least Squares would be to increase the efficiency of the estimated standard errors (i.e., to reduce the standard errors). As a result, the findings we report in this article are based on a conservative test of our central hypotheses linking political variables to public health. We are encouraged therefore by the generally strong results we have uncovered despite a conservative approach to statistical testing.

Bruce Russett during a boat trip, Branford Connecticut, 2009

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Chapter 7
Defense Expenditures and National Well-Being

The existence of a trade-off between military expenditures and social spending is widely hypothesized but often difficult to establish empirically.[1] This article constructs a model to test the effects of changes in military spending on federal expenditures for health and education from 1941 through 1979. Important economic, demographic, and political changes are controlled. No systematic tradeoff between military spending and federal health and education expenditures is found, nor in this period was there any significant depressing effect on health and education expenditures by Republican presidential administrations. Thus, the current (Reagan) administration, under which there are major increases in military spending and major cuts in health and education spending, emerges as exceptional.[2]

7.1 Guns or Butter: What Kinds of Tradeoffs?

Most people believe there is some trade-off between guns and butter. If a nation increases the resources it devotes to military activities without increasing total product, civilian sectors of the economy must pay by foregoing benefits they would otherwise receive. This assessment is part of the conventional wisdom, but it has little specific content. It does not, for example, tell us what kind of trade-offs to expect; that is, what particular parts of the economy or social system will suffer the greatest impact. Will the costs be borne disproportionately by individuals or business, rich or poor, young or old, ethnic majority or minority? Will the decrease in nonmilitary spending affect mostly current consumption, or by discouraging

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capital investment, will it primarily affect future generations who will have to produce their GNP with a smaller-than-otherwise industrial plant? Or will the sharpest cuts come at the expense of social investment, causing future generations to be less healthy or less well educated than they would have been without the preceding military effort?

Conventional wisdom often emphasizes the trade-off between military spending and capital investment and attributes the undoubted economic success of postwar Japan and West Germany to their ability to shift their defense burdens largely onto the United States and therefore to devote their own resources to building modern, highly productive industry. This view, complete with detailed examination of industrial investment and productivity, has advocates on both the left and right, including Melman (1974) and Burns (1971: 115). According to Burns, Chairman of the Council of Economic Advisers under President Eisenhower, "The real cost of the defense sector consists, therefore, not only of the civilian goods and services that are currently foregone on its account; it includes also an element of growth that could have been achieved through larger investment in human or business capital." By this line of argument, whatever its desirable stimulative effects in a particular short-term condition of slack, the burden of American military spending is over the long term directly responsible for the decline of American productivity relative to Japanese and European competitors. Military spending would be particularly corrosive, because it attracts to ultimately unproductive uses the funds and workers in high technology industry which could otherwise constitute America's most promising export sectors (Thurow 1981).

Systematic evidence for this argument, though fragmentary, tends to support it. For example, in multivariate analyses of fifteen industrialized economies from 1960 to 1970, Smith (1977) and Smith/Smith (1980) report significant negative relationships between military expenditure and investment and the rate of growth in GNP. Benoit (1973) found a slight negative relationship for an earlier period, as did Szymanski (1973) for 1950 to 1968. In time-series examinations, Russett (1970, Chaps. 5 and 6) found a stronger trade-off between defense and fixed investment than between defense and personal consumption in the United States, France, and the United Kingdom, but not in Canada. Of course the precise trade-off between military spending and specific kinds of civilian expenditure (private consumption, investment, or government civil spending) is a matter for political decision, not some automatically dictated exchange. Different politicians or parties will have different preferences under different circumstances, although it is often tempting to preserve current consumption as much as possible to minimize current political protest, even at the expense of investment and thus long-term consumption.[3] A full investigation of the degree and circumstances of various trade-offs would require a complex model of the determinants of investment, only one of which is military

[3]In his time-series analysis Pryor (1968: 122–125) found a substitution effect between military spending and investment for only a few western industrial countries, but the time span was short (1950–62), the military levels low in the majority of countries, and the variation in military spending often not great enough to force significant trade-offs.

spending. That is a difficult task even for professional economists and is surely beyond our ability here.

A very different view proposes that military spending undergirds modern industrial capitalist economies. According to this line of reasoning, if it were not for the prop provided by military spending, industrial capitalism would quickly collapse into under consumption. To absorb "surplus capital" the government must increase its spending and taxing. "Welfare state" spending is opposed by conservatives because it is thought to damage work incentives in the labor market and to compete unfairly with private enterprise. Thus expanded public spending for civil purposes is not acceptable, but military spending is acceptable, precisely because it does not compete with any private vested interests (Baran/Sweezy 1968, especially Chaps. 6 and 7). With the short-term slack appearing in the economy, Arthur Burns was described as giving that precedence over his qualms, concluding that "unless some decisive governmental action were taken, and taken soon, we were heading for another dip, which would hit its low point just before the elections… He urgently recommended that two steps be taken immediately: by loosening up credit and, where justifiable, increasing spending for national security" (Nixon 1962). Former Defense Secretary Schlesinger once made the counter-cyclical value of military spending explicit in testimony to Congress (*The New York Times* 1974).

The view of military spending as an essential prop to an "under consuming" economy finds mixed support in the available evidence. Certainly the expansion of defense spending as war clouds gathered in 1940 and 1941 helped to pull the American economy out of the Great Depression, although economic recovery was already well under way. Until the major wartime exertions, expanded defense production could merely take up slack, without any significant trade-offs at all. In an analysis of year-to-year military spending changes in the postwar United States, Nincic/Cusack (1979: 108) found that "Military spending cut back at an expected rate of $2 billion per annum *after on-year presidential elections and expanded at a similar rate in the 2 years prior to those elections*," suggesting deliberate utilization of defense increases as part of a "political business cycle." On the other hand, Smith (1977), despite sympathies for neo-Marxist interpretations, found no evidence to support the under consumptionist hypothesis when examining data on all Organization for European Cooperation and Development countries, and concluded rather that military spending is pursued, even at direct economic cost, for its strategic value in securing the capitalist international system.

We can, however, focus with a little more promise on certain kinds of trade-offs within the government sector. Peacock/Wiseman (1961) found a consistent tendency for a "displacement effect" resulting from United Kingdom participation in wars. Typically the government sector expanded greatly to carry the new military burden, and then, at the end of the war, failed to contract proportionately. Thus after each war the government sector became permanently enlarged. Taxes legitimated by the war effort could be, in part, maintained, and some of the revenues freed from war devoted to public spending for civilian welfare, especially health and education. Stein (1980) reports a similar effect from United States twentieth-century participation in war, except for the Vietnam experience. According to this evidence,

a trade-off occurs between military spending and government health and education spending, at least with the downturn of the former. The effect of military spending expansion need not simply be symmetrical to the effect of military contractions.

Yet the more one looks, the more complex and confusing the picture that seems to emerge. Russett (1969, 1970) found evidence of reasonably strong negative relations between military spending and government spending on health and education for the United States, France, and the United Kingdom, as did Lee (1972) for the United States. However, the data are limited in time (basically the 1940s through the 1960s), and the relationship virtually disappeared in Russett's analysis of the United Kingdom data for the whole period from 1890 to 1966. Moreover these results are largely based on simple bivariate regressions without controls for spurious relationships. Caputo (1975) analyzed data for the United States, United Kingdom, Sweden, and Australia, and was surprised to find largely positive relations between military spending and health and education expenditures. But Caputo's computations were for the absolute values of expenditures, over time in rapidly growing economies, so his (spurious) positive results should have been less than astonishing. Kennedy (1974) seems to have made the same error.

Finally, it matters very much just which spending series one looks at. Wilensky (1965, Chap. 4) found a negative relationship between military and welfare spending in sixteen industrialized countries, but since heavy military spending often generates employment under conditions of economic slack, it operates to reduce unemployment and some other welfare payments, and the finding should not be generalized to other kinds of social programs. Whereas Russett found a strong negative bivariate relationship between military and *all* government spending on education and health in the United States, he showed rather weak relationships within the federal budget—the tradeoffs were usually much stronger between defense spending and health and education expenditures at the state and local level. Although incomplete, this evidence suggests that federal budgeteers (bureaucrats or legislators or both) were likely to try to maintain all expenditures at the central level and to force the difficult choices downward by preempting tax revenues or cutting various kinds of assistance to state and local governmental units. This result is corroborated by the best study to date of the military-health trade-off. With the use of a somewhat larger data base (1929–1974) than Russett's, Peroff/Podolak-Warren (1979), like Russett, found a significant trade-off between military and total federal health appropriation requests, but none at all at the federal level when they looked either at federal allocations or at final federal expenditures. In the course of the full budgetary process, this trade-off effectively disappeared.

In light of contemporary controversies over the burdens of national defense, it is important to achieve some sophisticated long-term perspective. The data must apply to countries and periods where there is substantial variation in the relevant variables and where the levels of military spending are often high enough to force hard, deliberate political choice (i.e., trade-offs). The analysis is best restricted to industrialized capitalist states, since both domestic and international constraints are likely to be very different for communist systems and less-developed countries. The models must be complex and multivariate so as to identify the effects of a variety of

other influences that might be related to both military and social spending, and thus if uncontrolled would suggest spurious relations. Here I shall investigate tradeoffs between United States military spending and federal spending on health and education. My data cover federal outlays including transfers to lower government levels—the end-product—reported in the *Historical Statistics of the United States* (U.S. Bureau of the Census 1975) and *individual* volumes of the *Statistical Abstract of the United States* (U.S. Bureau of the Census, various years). Fully comparable data solely at the state and local level simply do not seem to be available, and in any case it makes sense to look first for trade-offs within the same budget-(federal). By choosing health and education we pick civil spending that is not simply consumption or current 'butter,' but which is a form of social investment. Trade-offs there would have major consequences for the long-term growth and well-being of the nation.

7.2 Modelling the Determinants of Federal Civil Expenditures

My first model tries to explain changes in federal spending for education as a result of changes in military spending and other variables. Note at the outset that I am concerned with changes, not levels of spending. My assumption is that trade-offs occur at the margin, and hence respond to increments or decrements rather than total budgets. Even so, I must specify the kind of change. The absolute increase or decrease, presumably in constant dollars, is not the same as a rate of change. With the former, a regression weights analysis in favor of those years when the absolute changes up or down are very great. This is especially a problem in a growing economy (even when the data are in constant dollars), and the result is to weight recent years, with larger absolute changes, more heavily than earlier ones. Problems of autocorrelation are typically more serious with absolute change data as well. Thus, although I refer briefly to absolute changes, I usually use the rates of change, producing a more equal weighting. Such a procedure also has different theoretical assumptions, namely that the effects of different amounts of change depend in part on the size of the base from which they originate at each change point (Russett 1971).

My basic hypothesis of a trade-off between education and military spending is in the form

$$\frac{E_t - E_{t-1}}{E_{t-1}} = a - b\frac{M_t - M_{t-1}}{M_{t-1}} + e.$$

It is possible, of course, that other kinds of trade-offs operate within the federal budget. For example, under pressure of increased military spending the real crunch might occur, say, between health and education: education might substantially hold its position, but at the expense of some other federal civil spending programs. I hypothesize that this is not the case; rather, the major civil spending programs will

be positively related, but to check it, I add two other major federal budget categories of interest as b_2 health and b_3 housing.[4]

I began, as indicated, with data on the yearly changes in federal outlays by different major budgetary categories. To avoid distortion by the widely varying effects of inflation, data are deflated by the appropriate price index where possible. For housing and health expenditures I used the Housing Price Index and the Health Price Index. No such long-term index was available for military or education expenditures, so for those I simply used the Federal Government Purchases Deflator. Since defense and education typically make up more than 40 % of federal purchases, this is not an unreasonable measure. (Data on prices are from *Economic Report of the President,* 1981.)

Next I recognize that the effects are likely to be different in different international political circumstances. In particular the trade-offs may be different in wartime, and that difference may vary with the intensity of conflict. To control for the presence and intensity of war I introduce a new variable, battle deaths; that is, total number of deaths of U.S. military personnel in combat. For peacetime years this figure is of course very low (but not necessarily nil; e.g., there were some combat deaths among U.S. advisers in Indochina even in the early 1960s), but the figures are much higher for the three intensive American military efforts of the period, and especially for the years of World War II (1942–1945) and the Korean War (1950–1953). It effectively serves as a control for wartime experience, although I did perform some analyses that excluded entirely the World War II years from the data.[5]

Next, the effects will vary under different economic conditions. A military buildup occurring at a time of substantial excess economic capacity, e.g., early World War II, will not force the same painful trade-offs that may be faced in a period of already nearly full utilization, such as Vietnam. To control for this variation, I introduced three new variables: GNP growth rate in constant dollars, an index of increase in productivity in the economy, and the index of capacity utilization, both as reported by the *Economic Report of the President*, 1981. I hypothesized that spending on education would be cut sharply under military pressures when economic growth or productivity growth was essentially stagnant, or when the economy's productive capacity was already at nearly full utilization. An alternative index for the latter purpose might have been the level of (un)employment, but I decided to omit this index because it would have been rather collinear with capacity utilization except in the 1970s, and in those recent years the constraint on economic growth has

[4]The classifications are the standard ones reported in the *Statistical Abstract of the U.S.* Military does not include veterans' benefits. Education includes education, employment training, social services and research, and general education aid. Health includes health care services, research, education and training of health care workforce, and consumer and occupational health and safety.

[5]Earlier analyses have indicated that the coefficients usually are not significantly different in wartime from usually are not significantly different in wartime from those in peacetime (Russet 1971: 44–46; Lee 1972: 68), except when the subsamples used are so small as to be virtually meaningless (Hollenhorst and Ault 1971).

been more one of highly utilized physical capacity than the (consistently high) level of human unemployment.[6]

Yet another determinant, partly economic, partly political, may be the level of federal tax revenues. The Vietnam War experience suggests it may matter greatly how military expenditures are financed. Most peacetime military buildups have been financed largely by tax increases, World War II and the Korean War were financed by a combination of taxes and deficit financing, with inflation partly held in check by wage and price controls, and the Vietnam War was funded primarily by deficit financing and subsequent inflation. Trade-offs between education and military spending should be minimized in years when tax revenues increase sharply, thus limiting the pressures for trade-offs to preserve some semblance of a balanced budget.

In addition to various constraints on the supply of funds for education, of course, there are also demand pressures. The most important of these concern changes in the size of the population to be educated, which we measure variously by the total population under age 18 and the total school enrollment.[7]

Finally, decisions about expenditure trade-offs occur in a political system where different actors subscribe to different political ideologies. According to the usual understanding, liberals or Democrats or both are more likely to value and hence to try to preserve social spending even in the face of military increases; conservatives or Republicans or both are more likely to wish to restrain such programs, and thus to be especially willing to make the trade-offs when military spending goes up. On the military downswing, however, the pattern is likely to be reversed. Liberals and Democrats conversely will choose to take advantage of defense cuts to promote social programs; conservatives and Republicans will prefer to return the money saved from military activities in the form of tax cuts and will not favor increasing social programs. A full test of this hypothesis would be very difficult, and if it required a coding of major political actors' ideologies might even risk falling into the trap of a tautology. We can, however, at least control for the party of the president, and thus include a dummy variable for a Republican president and hypothesize a negative sign for its coefficient.

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[6]Because productivity and capacity data were available only for the post-World War II years, and when used they proved not significant and did not affect the coefficients of interest, in fact I do not usually report equations using them.

[7]Alternative demand measures, such as the proportion of the population under 18, were sometimes substituted but with no notable effect on the other variables. The total population in the age group appears to capture our theoretical concept most precisely. Obviously there is substantial collinearity between school enrollment and population under 18, as there was between our measures of capacity/productivity. If we were seeking an elegant model specification of the causes of educational spending, this would be cause for concern. But since the purpose here is rather to be sure that important control variables (correlated in the equation with both military spending and the error term) are not omitted, and thus that the coefficient military spending is consistent and unbiased, it is better to include them.

A typical equation, therefore, is as follows in constant dollars:

$$\begin{aligned}\%\Delta\,\text{Education} = a &- b_1\,\%\Delta\,\text{Military} + b_2\,\%\Delta\,\text{Health} \\ &+ b_3\,\%\Delta\,\text{Housing} + b_4\,\%\Delta\,\text{Productivity} \\ &- b_5\,\text{Capacity} + b_6\,\%\Delta\,\text{GNP} + b_7\,\%\Delta\,\text{Taxes} \\ &+ b_8\,\%\,\Delta\,\text{Population under 18} + b_9\,\%\Delta\,\text{Enrollment} \\ &- b_{10}\,\text{Battle Deaths} - b_{11}\,\text{Republication} + e.\end{aligned}$$

As noted, productivity and capacity were often omitted. Also, these relationships apply in a political system subject to substantial delays for information gathering, assessment, negotiation, recommendation, and implementation. To allow for that I usually lagged all but the expenditure variables and taxes 1 year behind the government outlays. I experimented with simultaneous relationships and a longer lag but found the 1 year period to show the strongest effects.

A similar procedure was used for estimating the impact of military spending and other variables on health expenditures. Most of the independent variables are the same. Education of course moves to the right-hand side to replace health. Population under 18, or its equivalent, is replaced as a demand variable by population 65 or over, on the grounds that the greatest need for health care is typically among the aged. In addition, we know that the introduction of Medicare in 1966 changed the system by building in a higher level of fixed obligations for health spending, and thus I add a dummy variable for years when Medicare was in effect.

Some of these data, notably on production and capacity utilization, are not available for the full time-span covered by our expenditure data and so had to be employed in equations with slightly fewer years. Also, as noted, I computed some of the equations using absolute changes and others using percentage rates of change for the fiscal variables. Budgetary data were reported for fiscal years, whereas other variables typically were available only for calendar years; we reconciled this by assigning the appropriate portions (usually half) of each fiscal year to a calendar year; i.e., 1970 data were constructed from data for half of fiscal year 1970 and half of fiscal 1971.

7.3 Results

First we should look at the bivariate relations between military spending on the one hand, and health and education on the other. Table 7.1 shows that military spending tended most often to move in the same direction as health or education. The military and major civil spending categories rose together (in current dollars) 21 of the 39 years; they fell together only three times for health and four times for education. Basically, however, health and education were going up in almost all of these years (33 or 34 of 39), regardless of what was happening with the military—hardly what the idea of a trade-off would lead us to expect. Figure 7.1 is a scattergram

Table 7.1 Number of years when various combinations of military and social spending changes occurred

	Education		Health	
Military	Increase	Decrease	Increase	Decrease
Increase	21	2	21	2
Decrease	12	4	13	3

Note Chi square = 1.93 for education and 0.85 for health, neither of which is statistically significant. N = 39

representing the percentage of change in each of the three major expenditure categories on the vertical axis and time on the horizontal axis. A careful perusal of Fig. 7.1 supports this interpretation; the only very large reductions in health or education spending during this whole period coincided with very large cuts in

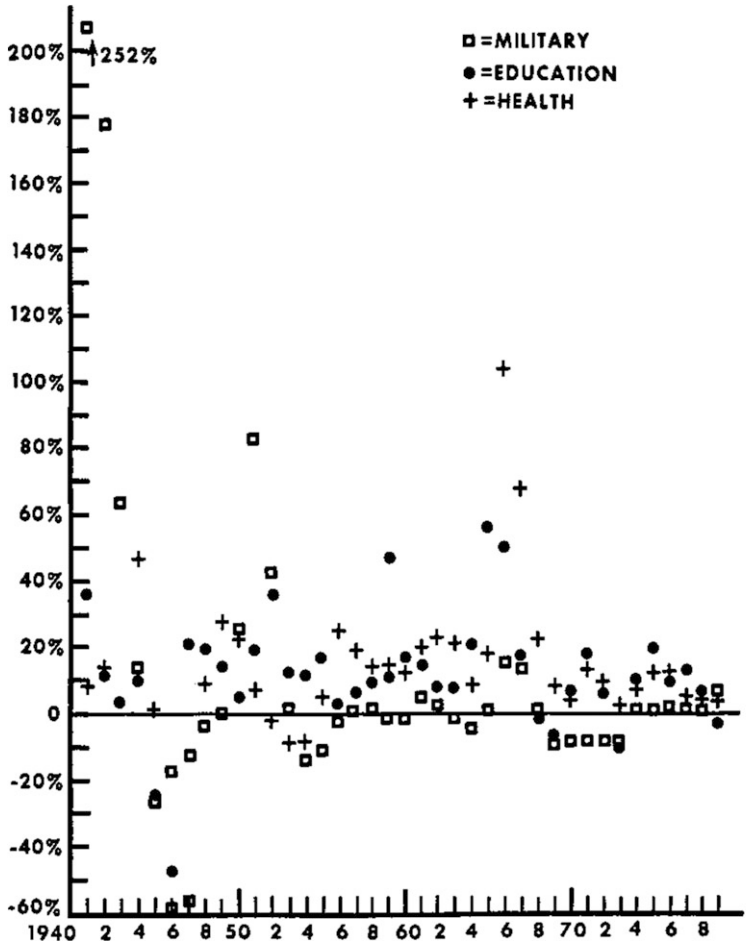

Fig. 7.1 Percentage change in federal spending categories, 1940–1979

military spending immediately after World War II. In this instance, the "permissive trade-off" did not hold. Notably, most of the few years in which military spending was cut and health and education rose occurred during Republican administrations—Eisenhower and Nixon-Ford.

These results of course only show bivariate relationships between military and civil spending, and the comments about Republican presidents do not take into account other variables that may compound the relationships. It is important also to control for the World War II outliers, with a dummy variable or by removing those years or both. Therefore we turn now to Table 7.2, which displays some ordinary least squares (OLS) equations to explain percentage changes in federal education outlays. In the first version (with 9 independent variables, for the full 1941–1979 period), we see positive relationships between education spending and the other two major civilian public expenditure categories: health and housing. They are not subject to substantial tradeoffs among themselves. Less expected may be the significant positive relation between education and military spending, at least as this model is constructed. That relationship, however, is deceptive, since it indicates a positive relationship after we have controlled for the stronger positive relationships between education and health and housing. In the model used in the second column, removing health and housing from the equation, the relationship with military remains positive, but not significant.

Table 7.2 Explaining percentage change in federal education outlays

	1941–79		1947–79	
	Full equation	Reduced equation	Full equation	Reduced equation
Constant	1.06* (0.040)	1.42* (0.44)	0.097† (0.048)	0.102† (0.057)
% Δ housing	0.013* (0.005)	–	0.014* (0.004)	–
% Δ health	0.204† (0.114)	–	0.179† (0.102)	–
% Δ military	0.178† (0.100)	0.120 (0.111)	0.086 (0.190)	−0.030 (0.227)
% Δ taxes	−0.175 (0.218)	−0.167 (0.242)	0.508 (0.562)	0.684 (0.681)
% Δ population under 18_{t-1}	1.42 (1.22)	2.02 (1.30)	–	–
% Δ enrollment_{t-1}	1.55 (1.23)	2.07 (1.31)	0.982 (0.919)	1.69 (1.08)
Republican_{t-1}	−0.028 (0.047)	−0.063 (0.051)	−0.185 (0.415)	−0.045 (0.049)
% Δ GNP_{t-1}	−0.005 (0.007)	−0.003 (0.007)	−0.001 (0.007)	−0.001 (0.008)
$\text{Battle deaths}_{t-1}$	−0.000002† (0.0000009)	−0.000003* (0.000001)	–	–
$\bar{R}^2$ = D – W	0.50	0.35	0.35	0.04
	1.75	1.52	1.62	1.35

*Statistically significant at the 0.01 level with a one-tailed test
†Statistically significant at the 0.05 level
Note For each independent variable the top entry is the regression coefficient (*b*) and in parentheses below it is its standard error. The coefficient of determination ($\bar{R}^2$) is adjusted as appropriate to small samples. D–W is the Durbin-Watson statistic, a standard measure of autocorrelation

It is clear from the strength of the battle-deaths variable in the first two columns that wartime (especially big wars) experience is different from peacetime. The experience of war years is substantively important, these years should not simply be dismissed as outliers; nevertheless it is necessary also to reestimate the equation omitting the World War II years from the sample. In so doing we are able to remove battle deaths from the equation, since its primary purpose was to control for World War II, and also remove population under 18, which proved nonsignificant. The last two columns show these results. We again observe an initially positive (but nonsignificant) coefficient for military, which this time turns to a trivially negative coefficient when housing and health are removed from the equation in the last column. But in no column do we discover the anticipated significant negative coefficient for military, or anything approaching it. In the period in question, therefore, we find no evidence that rates of increase in military spending reflect trade-offs with educational expenditures. Although we can never be entirely confident that further analysis may not reverse negative findings like this, we believe it is quite robust. Various other runs, with simultaneous relationships or other lag structures, with variants of our 'demand' variables and without nonsignificant variables, made little difference in the key coefficients. Whereas one should always wonder whether the equation is misspecified, it is not obvious to me that I have, for example, left out a variable importantly associated with both military and the dependent variable in a way that would seriously distort the results.

One other aspect of Table 7.2 is worth comment before proceeding: Note the nonsignificant relationship between education and the dummy for Republican president. Although the sign is always negative, the coefficient is trivially small. Republican presidents have not—whether by choice or by ineffectiveness—previously had notable effects in bringing federal educational spending below the levels that would have obtained under Democratic incumbencies.

Table 7.3 repeats the exercise for federal health outlays, with similar results. In the full period with all variables, the coefficient for military is, as anticipated, negative (at the 0.05 level), but this relationship turns much weaker in the second column, when the confounding effects of housing and education are removed and several nonsignificant variables are also dropped. Under these circumstances, however, the demand variable of an aging population becomes very important, as does the presumed 'permissive' effect of rapid growth in federal tax revenue. When, as with education, we take the World War II years out of the sample, the coefficient for military spending turns positive, if not significantly so. In overview, the evidence is preponderantly against any systematic trade-off between military spending and our civilian outlay category, health. And again, there is little evidence of more effective opposition to health spending by previous Republican presidents; the coefficients are negative as expected, but trivial.

Although I prefer the rate-of-change model to one concerned with absolute changes because it is closer to my theory and less subject to distortion by overweighting the effects of recent years in a growing economy, I may briefly discuss the results of some equations using absolute changes. Despite introducing substantial changes in some parts of the results, the above basic conclusions are left

Table 7.3 Explaining percentage change in federal health outlays

	1941–79		1947–79	
	Full equation	Reduced equation	Full equation	Reduced equation
Constant	0.250 (0.248)	0.489* (0.138)	0.496 (0.309)	0.707† (0.294)
% Δ housing	−0.007 (0.008)	–	−0.008 (0.008)	–
% Δ education	0.566* (0.223)	–	0.644† (0.319)	–
% Δ military	−0.175* (0.099)	−0.074 (0.093)	0.384 (0.371)	0.503 (0.378)
% Δ taxes	0.522 (0.311)	0.623† (0.274)	−0.395 (0.999)	−0.036 (1.02)
% Δ population over 65_{t-1}	0.803 (0.802)	⊕14.67* (5.23)	−16.2 (9.89)	−19.8† (9.82)
Republican_{t-1}	−0.050 (0.069)	–	−0.020 (−0.075)	−0.029 (0.078)
% Δ GNP_{t-1}	0.010 (0.010)	–	−0.001 (0.014)	−0.007 (0.013)
$\text{Battle deaths}_{t-1}$	0.0000005 (0.000001)	⊕0.000001 (0.000001)	–	–
Medicare_{t-1}	0.026 (0.100)	–	−0.127 (0.112)	−0.058 (0.107)
$\bar{R}^2 = \text{D} - \text{W}$	0.27	0.26	0.17	0.10
	1.30	1.17	1.19	1.23

⊕ Not lagged
*Statistically significant at the 0.01 level with a one-tailed test
†Statistically significant at the 0.05 level
Note See Table 7.2 for identification of the statistics

intact. In the entire period from 1941 to 1979, once again the military coefficients are if anything positive, not negative. The party of the president remains unimportant. (Remember, by this procedure the more recent years, those during and after the Vietnam War, are heavily weighted. The war was financed largely by inflation rather than tax increases or severe cuts in the Great Society programs—i.e., no trade-offs at that level—and at the end of the war there was little distribution of the cut in military expenses in the form of increased social spending.)

7.4 Current Trade-Offs

By some standards the results of this exercise have been disappointing. We did not produce powerful explanatory equations for the several categories of federal civil spending, but that was not really the purpose. Neither did we find systematic or powerful trade-off effects between that spending and military expenditure. Testing for those effects *was* the purpose.

The failure to find such relationships should not be generalized to other kinds of civil expenditures. For example, trade-offs between military spending and private investment, or between military spending and spending on civil functions by all levels of government combined, have not been considered here. What evidence exists suggests that systematic trade-offs have occurred, but that evidence is dated

and ambiguous. Proper testing of hypotheses about these trade-offs will be a demanding task, either to obtain adequate data or to devise good theoretical specifications.

It is possible that with the use of other theoretical perspectives and thus other model specifications, others may find relationships in these data. More sophisticated analysis may help, but simply 'massaging' this data set is not likely to be enough. The absence of a relationship between federal military and social spending appears to be quite robust.[8] Doubtless there are some times and political circumstances when major trade-offs can be avoided by picking up slack in a depressed economy. Other times trade-offs do occur, deliberately or inadvertently. Sometimes federal civil spending may be kept largely intact by imposing tax increases, or by permitting the hidden and unsystematic 'tax' implied by deficit financing and inflation. The point is that I could find no regular pattern of trade-offs in the data for the last four decades of American history.[9] Different combinations of political will and environment have resulted in different patterns of choice.

Federal spending for education began to rise substantially immediately after World War II, at first partly because of the GI Bill of Rights. But other programs were expanded or initiated shortly thereafter, and federal educational spending increased in real dollars in every year from 1947 through 1968. Federal spending for health was slower to hit the upward track but even more persistent once it got well started; in every year from 1955 through 1979 it rose in real dollars.

One remarkable fact about this growth in federal education and health spending is that it continued through several major periods of military buildup. Expenditures for education rose throughout the cold war rearmament and Korean War, and during all but two of the Vietnam War years. Federal spending for health continued to rise throughout the Vietnam period. Even during the four costly World War II years from 1941 through 1944, these civilian federal programs continued to expand. Sacrifices surely were imposed, but they were largely sacrifices imposed on current consumption, not on the kind of long-run social investment required to build a

[8]Autocorrelation does not appear to be a serious problem with the majority of these equations, as indicated by the Durbin-Watson statistics for them. Where it is a problem, its effects are to exaggerate the apparent significance of the coefficients. Since we did not find many high coefficients for the variables that interested us, that is hardly a problem, and thus there is no cause to move to more sophisticated statistical analysis than OLS. Similarly, the relatively low power of the equations and the interesting variables suggests it would not yet be profitable to move to a complex system of simultaneous equations, despite the undoubted interdependence of these variables.

[9]The language of these sentences, appropriate to the 1980s, implies a concern only with trade-offs that may occur when military spending rises, not with the possible beneficiaries when spending decreases. In fact, as noted in Table 7.1, trade-offs actually occurred in. only 14 or 15 of the 39 years under study and usually occurred when military spending went down. We should not assume one is merely the opposite of the other. Experience with reductions in military spending is relatively limited, occurring in just 16 of the 39 years in our sample. Table 7.1 suggests there is some trade-off in these years, and in principle we might analyze years with military upswings in separate equations from those with downswings. However, the samples—especially for years with military downswings—would be very small for adequate multivariate analysis, and the technical problems of analyzing yearly data for years that were often not adjacent would be formidable.

Table 7.4 Recent federal outlays ($ billion)

	FV 1981	FY 1982 Reagan proposals	FY 1982 Outlays
Education, training, and social services	31.8	23.3	23.8
Health	74.6	66.1	65.7
National defense	159.2	170.0	166.4

*The 1982 figures were reduced by 9 % to approximate the effects of inflation. Outlays are as reported for the first 8 months of the fiscal year, plus 50 %

Sources Clark (1981), p. 445; Executive Office of the President, O.M.B. (1981), pp. 32 ff., and *Treasury Bulletin,* July 19 82, p. 9

healthier and better-educated population. Indeed, the problems of ignorance, ill-health, and malnutrition among many potential draftees during World War II helped to convince even the most defense-minded legislators and officials that the federal government had to take remedial action.

A second remarkable fact is that support for increased federal health and education programs was reasonably nonpartisan. Federal spending for education, e.g., the National Defense Education Act, went up sharply during the Eisenhower years and continued to rise during all but 1 year of the Nixon and Ford administrations. Federal health expenditures passed unscathed through the Nixon and Ford years. When these Republican presidents felt compelled to raise defense readiness, they kept the increases within limits and accepted the taxes necessary to maintain social programs.

The current Republican president, sensing widespread public support for military expenditures (Russett and DeLuca 1981), has imposed trade-offs between military and federal civil spending. These trade-offs were not deterministically ordained by long-standing patterns of political choice.[10] Decisions to increase military spending, and simultaneously to slash federal support for education and health, were deliberately taken and imposed. Arguably the changes do not even represent trade-offs in the conventional sense, since the dominant philosophy advocates greater military spending and reduced social spending quite independently. If a SALT III treaty imposing a 50 % cut in the arms budget were signed tomorrow, would social spending rebound?

The magnitude of current budget shifts is shown in Table 7.4, both for the proposals of the Reagan administration and the actual outlays for fiscal 1982. In the proposals we see an 8.0 % increase ($12.7 billion) in military spending, and decreases in education and health of 26.1 and 10.5 respectively. In the outlays the amounts are a 4.5 % ($7.2 billion) increase for the military, and cuts of 25.2 and 11.9 % for education and health.[11] None of the other variables in our model can account for these shifts. There is no shooting war, and the other variables are neither

[10]For a good analytical discussion on this theme see Ravenal (1978), Chap. 7.

[11]These changes are adjusted to be in constant dollars to indicate the real trade-offs accurately.

very volatile nor, in our equations, very powerful anyway. Most important, the data show that it is not merely the presence of a Republican in the White House which made the difference; the *Reagan* presidency *is* different.

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Chapter 8
Ethical Dilemmas of Nuclear Deterrence

For the first time in the nuclear era, normative and practical issues have become explicitly intertwined in widespread public discussion of deterrence.[1] Previously, 'mainstream' strategic analysts typically avoided overt attention to normative questions, preferring to concentrate on the alleged psychological or military foundations of deterrence theory. Public commentators who did raise normative issues all too often did so only at the fringes, debating the virtues of pacifism or the implications of simple "red versus dead" declarations. Of course there had long been analysts who insisted on raising more subtle and complex normative issues, but their impact was limited. In the past few years, however, normative issues have been brought front and center and knitted inextricably into the traditional political and military context. In this article I shall address these issues by explication of the choices faced, and the conclusions adopted, by the Catholic bishops.[2]

8.1 The Drafting Process

The National Conference of Catholic Bishops of the United States issued its Pastoral Letter on War and Peace in May 1983. The Letter is detailed, complex in its reasoning, and remarkably progressive for a group often—and not always justly—regarded as cautious and politically rather conservative.[3] The Letter throws down some fundamental challenges to contemporary American military policy, significantly contributes to a de-legitimization of nuclear weapons as an instrument of war-

[1]This text was initially published by Bruce Russett as: "Ethical Dilemmas of Nuclear Deterrence," *International Security* 8:4 (Spring 1984), 36–54 © 1984 by the President and Fellows of Harvard College and the Massachusetts Institute of Technology. Permission to republish this article was granted on 7 October 2014 by Mr. Nick Yeaton, Permissions Assistant, The MIT Press, Cambridge MA, USA.
[2]Bruce Russett is Professor of Political Science at Yale University and Editor of the *Journal of Conflict Resolution.* He is also President of the International Studies Association, and author most recently of *The Prisoners of Insecurity: Nuclear Deterrence, the Arms Race, and Arms Control.*
[3]The hierarchy has adopted 'conservative' positions on some social issues, such as school prayer and abortion. But it was a very early proponent of Social Security, has been progressive on race relations, and is currently one of the most effective critics of U.S. foreign policy in Central America.

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fighting or even in some ways of deterrence, and demands far-reaching changes in thought and action.

For many years the American Catholic Church rarely took a public stand in opposition to the state's foreign policy. Rather, it emphasized the unquestioned patriotism of the institution and its members. Partly this was because it was initially a church of immigrants, and often of immigrants (Irish, Italian, East European, Spanish-speaking in this century) at the lower end of the socioeconomic scale. In recent decades, however, this situation changed. Catholics moved into the mainstream of American social and political life (viz., the emergence of a body of American Catholic lay-intellectuals, and the election of John F. Kennedy as President) and no longer felt insecure. Furthermore, as they became able to shape foreign policy actively, they began to feel more responsibility for it. Many Catholic laypeople and clergy (the Berrigan brothers being the most prominent example) were active in opposition to the Vietnam War, and by 1971 the U.S. Catholic Bishops' Conference as a body concluded that continuation of that conflict could not be morally justified.[4]

Toward the end of that decade, as concern about the dangers of nuclear war grew more pervasive, Catholics were again among the more prominent critics of established perceptions and policies. Even some bishops began to make strong public statements not only about the immorality of the arms race but about the immorality of nuclear deterrence itself, and calling for disengagement from the production or deployment of nuclear weapons. While calls for unilateral nuclear disarmament or pacifism were by no means the norm in the American Catholic community, they were too widespread and forcefully articulated to be ignored. Moreover, there was a long-standing moral-theological critique of the kind of counter-population strategy that was inherent in American declaratory deterrent policy. Indeed, in 1944 Father John Ford had published an analysis of strategic bombing during World War II that clearly demonstrated, in terms of traditional Catholic thinking, that deliberate bombing of population centers was morally utterly unacceptable. This analysis—written before the first atomic bomb—exhibits a cogency of reasoning yet to be improved upon.[5]

Responding to the generally rising concern, several bishops introduced resolutions calling for a formal statement on the topic by the entire Conference. These resolutions were supported vigorously by 'doves,' but also by other bishops who hoped to see some consensus replace the increasingly discordant cacophony of ecclesiastical voices. As a result, the Ad Hoc Committee on War and Peace was established in 1981, and chaired by then—Archbishop Joseph Bernardin of Cincinnati. Archbishop Bernardin was already widely respected for his good judgment and ability to encourage consensus even in the presence of heated initial disagreement. His skills had been recognized in his election several years earlier for

[4]U.S. Catholic Conference, *Resolution on Southeast Asia* (Washington, D.C., 1971).

[5]John Ford, "The Morality of Obliteration Bombing," *Theological Studies*, Volume 5 (September 1944), pp. 272–286.

a term as President of the Bishops' Conference, and would be recognized again in his subsequent appointment as Archbishop of Chicago and elevation to Cardinal. Other members of the Committee were Bishops George Fulcher and Daniel Reilly (perceived as 'centrists' on this issue, with no substantial record of public pronouncement), Bishop Thomas Gumbleton (President of *Pax Christi*, an organization dedicated to nonviolence) and Bishop John O'Connor (second in command of the Catholic Military Chaplains, with a Ph.D. in political science, regarded as somewhat of a political and theological conservative). The Committee was supported by a five-member staff including a representative each from the nation's men and women religious (monks and nuns), Father J. Bryan Hehir (Director of the Conference's Department of International Justice and Peace in Washington, and a Ph.D. in Government from Harvard), Edward Doherty (also from the Department of Justice and Peace, and a retired U.S. Foreign Service Officer), and myself as "principal consultant."[6]

Choice of a Committee that covered most of the American foreign policy spectrum was no coincidence. The Bishops' Conference is constitutionally prohibited from adopting a Pastoral Letter by less than a two-thirds majority of all members. Moreover, the bishops are extremely uncomfortable in taking public positions on the basis of sharply divided votes. The informal, but very real, decision rule is more like 85–90 % of all members present and voting; if the draft appeared unlikely to garner that many votes, it would probably have been returned to the Committee for further revision. Thus the process guaranteed that all sides would be heard, and that the Committee would report a draft Letter that seemed to reflect a broad range of views. The majority of the bishops could be expected to be somewhere near the 'center' of the American spectrum on this issue, but enough could be located near either end that the 'center' alone could not carry the vote. The document would have to be acceptable to a significant share of *both* 'hawks' and 'doves' to achieve the necessary majority. Furthermore, it would not be enough simply to write a document full of glittering generalities about the virtues of peace; too many bishops wanted a statement with specific evaluations, touching central issues in the nuclear debate, for a platitudinous statement to be acceptable either. In consequence, the Committee's task was a formidable one.

The Committee proceeded with many days of discussion, along with hearings at which about 50 experts (including theologians, biblical scholars, political scientists, present and former government officials and military officers, and peace activists) were heard and questioned. After circulation and intensive criticism of various portions proposed by many members of the Committee and staff, the Committee's first public draft was released early in June of 1982. This draft immediately became the subject of widespread discussion. Reactions varied greatly, as could be predicted. The Committee then, on the basis of the public commentary and numerous private communications, produced a second draft that was distributed in October

[6]It must be clear that in writing this commentary I am representing myself only, and the U.S. Catholic Conference is in no way responsible.

1982 and discussed at length by all the bishops in their annual meeting in November. The Committee took the latest set of comments into consideration and produced a third draft at the beginning of April 1983. This third draft became subject to the bishops' formal process of amendment, with the Committee preparing formal recommendations for disposition of the over 200 proposed amendments. Final action was of course the responsibility of the entire Conference. In the end the Letter, as amended, was adopted by a vote of 328 to 9 (96 %)—better than virtually anyone had dared anticipate.[7]

Both the drafts and the full meetings of the Conference had been subjected to enormous public scrutiny, with the debate at the final meeting conducted under the eyes of scores of television cameras from around the globe. The process, then, had become one of full involvement by the lower clergy, the laity, and the public in general. In so doing, it served a major purpose of those who in the first place proposed that the Letter be written: It brought great public attention to the issues of nuclear weaponry, and established those issues not as esoteric technical matters best left to the 'priesthood' of civilian and military strategists, but as fundamentally political and moral issues which were the proper province, and indeed responsibility, of ordinary citizens. This, as much as the Letter's substance, may ultimately constitute its most enduring achievement.

As for the substance, first it is important to repeat what was said at the outset of this article: the Letter is severely critical of accepted policy in a number of highly significant ways. Second, despite changes through various drafts of the document, the changes occurred within quite a narrow range of substance. The basic thrust and substance of the Letter, rooted in a very substantial degree of consensus on the Committee as to what constituted the constraints of established Catholic teaching on peace and war, endured from the first draft. While the document did go through refinement of tone, and some limited shifts in substance and applications, its underlying principles did not change.

8.2 'Acceptable' Deterrence

The consensus was forged around the long-established principles of "just war" analysis. It is thus not written from the point of view of an advocate of nonviolence. The bishops did take the nonviolent position seriously. That has a long and honored position in the tradition, from the early days of the Church through St. Francis of Assisi and modern witnesses. In this letter it is accorded a prominence that is really unprecedented for official Church documents. It is presented as a legitimate and often laudable option for individuals, even in the face of injustice—an option which

[7]The most complete and best-informed account of the process of producing the Letter is Jim Castelli, *The Bishops and the Bomb* (Garden City, N.Y.: 1983). An excellent set of commentaries on the Letter is Philip J. Murnion, ed., *Catholics and Nuclear War* (New York: Crossroad, 1983).

should be respected by governments. Nevertheless, it is not required of individuals, who have a right to defend themselves and perhaps a duty to defend others. In this world of conflicting states, governments too have a right to self-defense, and even an obligation to defend their people and their allies—although, as for individuals, that does not always include a right to exercise lethal violence. The bishops did not want to *prescribe* nonviolence because most of them sincerely believe in that right of self-defense, and that there are major values—liberty, justice, human rights—which are endangered in the world, and should be defended.

Another constraint was an unwillingness to demand of people an obedience they were not yet ready to give as a matter of conscience. A specter that always hung over deliberations was the response to *Humanae Vitae*, the papal encyclical on birth control. No one wanted to put individuals under that kind of moral burden. Neither did anyone want to fragment the institutional Church by making nonviolence, or even some form of "nuclear pacifism," mandatory.

A final constraint, emerging after release of the first draft but both consistent with that draft and defining the terms of subsequent debate, was Pope John Paul II's June 1982 statement to the United Nations. It said, in part:

> In current conditions, 'deterrence' based on balance, certainly not as an end in itself but as a step on the way toward a progressive disarmament, may still be judged morally acceptable.

The Letter appropriately calls this a "strictly conditioned" acceptance of deterrence. We must realize how little it explicitly accepts. It cannot be used to indicate a blanket acceptance of all, or even many, forms of deterrence.

Most obvious, and noted by virtually all commentators, is the condition that deterrence must be "a step on the way toward a progressive disarmament." Deterrence cannot be considered "an end in itself," nor can we resign ourselves to an indefinite future whereby we are condemned, in the Pope's next words, to be "always susceptible to the real danger of explosion."

Another element of his statement is the phrase "based on balance." It implies a need, as recognized by most strategists and policymakers, to maintain some sort of 'parity' or "essential equivalence" to the capability of one's opponent. American analysts have taken that need to mean not necessarily matching an opponent one-to-one in every weapons category, which would make little sense given the great asymmetries of technology, geography, and interest between the two superpowers. Many analysts would concede even that it need not imply being able to do as much damage to the opponent as he can do to you, but only enough, reliably, to make the costs of beginning a war far too high for a rational opponent to contemplate. But a further implication of the "based on balance" phrase is a willingness to concede such a capability to the opponent. In other words, one can reasonably read the Pope's words as rejecting notions of seeking 'superiority' or means to 'win' or 'prevail' in nuclear wars. Such notions can lead to a continuing upward spiral of the arms race as one power tries to establish such a capability and the other seeks to avoid being under such a threat, or to establish its own 'winning' capability. At worst, attempts to achieve a 'winning' capability would produce first-strike forces and "use it or lose it" situations of extreme danger in crisis.

There are other limitations implicit in the Pope's words. He refers very generally to 'deterrence,' not to particular implements or strategies of nuclear deterrence. In the French original of his United Nations address, the operative words are "*une dissuasion*"—*a* deterrent, some deterrent, not any and all deterrents. He does not even explicitly endorse *nuclear* deterrence. What we have here, in explicit words, is no more than a recognition that in competitive international relations states require, at least "in current conditions," *some* means to deter other states from aggressive action. The specific form of that deterrent is not specified. Moreover, deterrence "*may still be judged*" morally acceptable. Again, this is hardly a blanket endorsement of everything that is said, done, or planned in the name of deterrence.

The vague, general, and ambiguous content of Pope John Paul's words must be fully appreciated. Possibly he would explicitly accept various specific aspects of American or Soviet deterrent policy. The fact remains that he has not done so. The very restricted nature of his overt 'acceptance' impels the kind of further normative analysis articulated by the bishops in their Letter.

8.3 A Just War Analysis of Deterrence

The just war tradition, developed from St. Augustine onward, has been the predominent strain of Catholic thought concerning any resort to violence on behalf of political units. That tradition, rightly understood, constitutes a strong presumption against violence, and establishes very strict constraints both on the circumstances under which a resort to violence may be considered 'just' and on the actions that can morally be taken in the course of exercising that right. Three analytical categories of that tradition are especially relevant.

First is the requirement of *discrimination*, or observing the principle of noncombatant immunity. This requirement forbids direct attacks on civilians: "Under no circumstances may nuclear weapons or other instruments of mass slaughter be used for the purpose of destroying population centers or other predominantly civilian targets… No Christian can rightfully carry out orders or policies deliberately aimed at killing non-combatants."[8] This is a strong statement. It implicitly condemns the bombing of Dresden, the firebombing of Tokyo, and of course the atomic bombing of Hiroshima and Nagasaki. (No matter that the destruction of those cities may have helped shorten the war, and even have reduced the total number of civilian casualties from what they might otherwise have been. The direct killing of innocents—making them means to achieving some good end or avoiding some great evil—can never, by this reasoning, be morally permissible.)

The wording of the presentation is very important, in light of the Letter's distinction between general principles of moral theology (those principles are not open

[8]All quotations attributed to the Pastoral Letter are taken from U.S. Catholic Conference, *The Challenge of Peace: God's Promise and Our Response* (Washington, D.C., 1983).

to question by the reader) and applications on specific matters of policy. Applications are matters of opinion, on which a Catholic—though he or she must "give serious consideration and attention" to the judgments reached in Church teaching—may nonetheless still disagree in good conscience, and obedience is not demanded. (Note the comments above about prudence in demanding such obedience.) Most of the policy recommendations in the Letter are clearly identifiable as applications, judgments. But the prohibition of deliberately killing noncombatants is not, nor did the Committee or the bishops in plenary session ever consider any other possibility. It is a basic principle of Christian ethics that one may not directly and intentionally kill innocent human beings. Its relevance to nuclear deterrence follows from the same premise as does the Catholic condemnation of abortion. The fetus is innocent, and may not be deliberately killed, even to avert some great evil or achieve some good end. The same reasoning applies if children or adult civilians are deliberately killed in a bombing raid—and there can be no question but what individual human beings are at stake. In the words of Cardinal Bernardin's opening address to the Chicago May 1983 meetings, such an action is 'murder.'

The condemnation of direct attacks on civilian population centers as such removes a great deal of deliberate ambiguity from past American deterrent policy. 'Collateral' damage must be limited, not intended, and "bonus effects" of civilian casualties may not be sought. American *operational* policy has at times fluctuated in the relative attention to counterforce and counterpopulation targeting. Military targets often have been broadly defined to include "economic recovery" capabilities and even the civilian labor force. *Declaratory* policy for many years stressed the potential destruction of the attacker "as a viable 20th century nation," defining that destruction as some portion of the enemy's population and general industrial capacity. Secretary of Defense Robert McNamara's well-known 1962 attempt to move toward a counterforce declaratory policy failed, but was resurrected in the subsequent decade. In 1973, Secretary of Defense Elliot Richardson testified, "We do not in our strategic planning target population per se any longer."[9] This kind of statement has subsequently been repeated, most frequently in the last 2 years in obvious response to the evolving position of the bishops' Letter. However one judges the sincerity of official disavowal of an intent deliberately to strike civilians, achieving its expression has to be considered a major achievement, one with many implications for the direction of future policy.[10]

The second just war category, of equal importance, is the principle of *proportionality*. By some (inevitably subjective and uncertain) calculation, the harm done

[9]On the evolution of policy, see David Alan Rosenberg, "The Origins of Overkill: Nuclear Weapons and American Strategy, 1945–1960," *International Security*, Vol. 7, No. 4 (Spring 1983), pp. 3–71; and Desmond Ball, *Targeting for Strategic Deterrence*, Adelphi Paper No. 185 (London: International Institute for Strategic Studies, 1983).

[10]"No civilian targets" means no civilian targets ***ever***, even in retaliation for attacks on American civilians. This last aspect will not be popular with many strategists, who understandably would like to retain the threat of purely retaliatory strikes against civilians as a means to ensure Soviet good behavior during a 'limited' nuclear war.

by an act, even unintentionally, may not be disproportionate to the good intended to be achieved or to the evil to be avoided. The principle of discrimination forbids counterpopulation warfare; the principle of proportionality puts sharp limits on counterforce warfare. The latter principle recognizes that in almost any war some civilians will unavoidably be killed if military targets are hit. This is clearly a case of "double effect," and admits that some civilian deaths can be accepted as a by-product of striking a military target. But just because civilians are not killed intentionally does not mean they can be killed without limit. Specifically, the Pastoral Letter expresses very grave reservations about the massive civilian casualties that would surely occur in any nuclear exchange, even one directed deliberately only to military targets. The section on deterrence is filled with references to the way military facilities and civilian living and working areas are interspersed, to the fact that the number of civilians who would necessarily be killed is 'horrendous,' and cities admissions by the Reagan Administration that "once any substantial numbers of weapons were used, the civilian casualty levels would quickly become truly catastrophic." The principle of proportionality thus says that discrimination alone—merely limiting a nuclear strike to counterforce targets—is not enough to make that policy "morally acceptable."

Many strategists and government officials—especially, but not only, members of the current Administration—have maintained that improvements in strategic weaponry are movements in the direction of greater moral acceptability. Specifically, improvements in accuracy, coupled with elimination of the very large warheads placed on older missiles like the Titan, will have the effect of limiting collateral damage. The number of (supposedly greatly reduced) civilian casualties sustained when military targets are hit could therefore be judged appropriate to some aims of war or deterrence. Nuclear deterrence could then be said to be both discriminating and proportionate.[11] Modernization of the strategic arsenal, with more accurate weapons like the MX, is therefore morally permissible and even required! Similar claims are made for 'small' battlefield tactical nuclear weapons.

On first encounter, it is hard to disagree with this assessment. A reduction in unintended civilian deaths would be consistent with traditional moral principles. But on examination the problems are immense. One problem is the fact, as already mentioned, that any large-scale nuclear exchange, even of 'discriminating' weapons, would inevitably produce millions or tens of millions of civilian casualties. Numerous studies, drawing on private and government material, reach this conclusion. The combination of immediate casualties from blast and radiation, with longer-term casualties from fallout, disruption of the medical, sanitation, transportation, and communication systems, ecological devastation, climatic effects, and so forth, would be very great—even from attacks that were 'limited' to such "strictly military" targets as the 1052 American and 1398 Soviet land-based ICBMs. Actually, the Defense Department's list of military and militarily related

[11]This argument is expressed by Albert Wohlstetter, "Bishops, Statesmen, and Other Strategists on the Bombing of Innocents," *Commentary*, June 1983, pp. 15–35.

industrial targets (40,000 of them, including 60 in Moscow alone) encompasses industry and utilities essential to the economic recuperation of the Soviet Union.[12] If the Soviet (American) economy is destroyed, tens of millions of Soviet (American) citizens will die of hunger and disease. To 'prevail' in such a war would have little meaning, and there are not many causes to which such deaths would be 'proportionate.'

One problem is therefore the illusion that any large-scale nuclear exchange could in any real sense be 'limited' in its consequences. The other problem is with the expectation that nuclear war could be fought in some precise fashion of strike and counter-strike, that in any substantial nuclear exchange the war could be restricted to a limited number of strictly military targets. There are people who imagine it could be done, with acceptable consequences. The majority of analysts, however, consider the likelihood of such limitation, under wartime conditions of anger, confusion, ignorance, and loss of control, to be extremely small. One cannot definitively rule out the possibility, but neither should one bet the future of civilization on it. Two of the most knowledgeable experts on this matter are Desmond Ball and John Steinbruner, who offer nearly identically skeptical views. In Steinbruner's words,

Once the use of as many as 10 or more nuclear weapons directly against the USSR is seriously contemplated, U.S. strategic commanders will likely insist on attacking the full array of Soviet military targets… If national commanders seriously attempted to implement this strategy (controlled response) in a war with existing and currently projected U.S. forces, the result would not be a finely controlled strategic campaign. The more likely result would be the collapse of U.S. forces into isolated units undertaking retaliation on their own initiative against a wide variety of targets at unpredictable moments.[13]

In a nutshell, limitation of nuclear war fails a third principle of the just war tradition: *reasonable chance of success.*

So much for what could—or could not—morally be done in war. Is *deterrence*—as contrasted with what one actually *does* in war—different? After all, the purpose of deterrence, as we are so often reminded, is to prevent war.

The bishops have two answers to this. One is the fact that, whatever our good intentions, deterrence may fail. If we make plans—build weapons, construct strategic programs, proclaim doctrines, instruct commanders—on the basis of principles we would not be willing to act upon, we just may be called to act upon them anyway. Many things happen almost automatically in any war or defense establishment. In the 1914 crisis the powers had competitive mobilization plans that worked automatically, making World War I almost unavoidable. Or, we may

[12]Counterforce strategies have, in the past, repeatedly had the effect of enlarging the list of targets (Rosenberg, "Origins of Overkill," p. 50). That is therefore a trap inherent in contemporary counterforce policies.

[13]"Nuclear Decapitation," *Foreign Policy*, Number 45 (Winter 1981–82), pp. 22–23. Also see Desmond Ball, *Can Nuclear War Be Controlled?* Adelphi Paper No. 161 (London: International Institute for Strategic Studies, 1981).

contemplate recent talk about launching nuclear weapons on warning. Plans adopted in the name of deterrence may come to fruition in action, whatever our desires at the time. If war should come as the result of some uncontrollable crisis, or a physical or human accident, plans calling in the name of deterrence for morally unacceptable acts would very likely be *realized* as morally unacceptable acts. The second answer is the traditional principle of Catholic moral theology that says one may not intend what one may not do. An intention to commit an immoral act in a particular event (even if one is confident that the triggering event will not transpire) is itself immoral. For the bishops, the argument from "mere deterrence" will not fly.

Another aspect of recent strategy that the bishops probably would reject is brinkmanship, or what Thomas C. Schelling called "manipulating the shared risk of war."[14] Schelling recognizes that a would-be deterrer might well threaten to do something that, in the event deterrence failed, he would not in fact want to carry out. The United States might *threaten* to go to all out nuclear war if the Soviet Union occupies West Germany. In the event the Soviet Union *did* occupy West Germany, the United States government might not want to execute its threat. In fact, a government fully in control of its military forces probably would *not* want to initiate all-out nuclear war. One way to deal with this situation would be to build some variant of a "doomsday machine": commit oneself irrevocably and automatically to an act of mutual destruction that one would not want to carry out if one retained a choice at the time. Almost everyone rejects the "doomsday machine" solution as grossly imprudent and disproportionate.

But a less drastic solution would be to build into a situation an element of unpredictability and uncontrollability. In practice, a Soviet invasion of West Germany might very well trigger all-out nuclear war whether or not the American government wished it to do so. American nuclear weapons would be widely dispersed, to low-level commanders who would very likely have operational control over the weapons. (The PAL [Permissive Action Link] codes that prevent unauthorized use in peacetime very likely would be released to low-level commanders in a time of high crisis in Europe.) One of those commanders, in the "fog of war" with his troops under siege, might very well use the weapons.[15] Or the Soviet Union, fearing they would be used, might stage a preemptive attack on them. Use of a few tactical or theater nuclear weapons would be very likely to escalate into a strategic exchange between the American and Soviet homelands, as several military analysts cited in the Pastoral Letter have testified. The threat of unintended use of nuclear weapons in the event of a conventional war or even a high-level crisis in Europe provides a powerful deterrent to the deliberate initiation of war, of any kind, in the center of that continent. No rational Soviet leader would deliberately run such a risk.

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[14]Thomas C. Schelling, *Arms and Influence* (New Haven: Yale University Press, 1966), p. 99.

[15]Paul Bracken, *The Command and Control of Nuclear Forces* (New Haven: Yale University Press, 1983).

If we believe that political crises (unlike military events) are always fully controllable, then perhaps such a deterrent seems prudent. But if we believe that political crises are not always controllable or avoidable (1914 again, or a revolt in Eastern Europe that somehow attracts support from the West, or a political breakdown in Yugoslavia that draws in regular or volunteer fighters from East and West), it does *not* seem prudent. In the apt words of Michael Howard, military forces must serve two purposes: they must deter enemies, and they must reassure friends.[16] Nuclear 'deterrent' systems that depend on their uncontrollability are not reassuring to one's friends. The bishops termed "the deliberate initiation of nuclear war" to be morally unjustified. I believe they would similarly declare a deliberate posture of probable loss of control to be an unjustifiable moral risk. As they have said, "Non-nuclear attacks by another state must be resisted by other than nuclear means."

8.4 Use, Threat, and Possession

The just war tradition demands that the means used to defend must themselves be at least morally neutral. They may not be indiscriminating, nor used in a disproportionate manner. They must offer a reasonable chance of success. The bishops say they are extremely skeptical whether any use of nuclear weapons could pass these tests. Deterrence, in the sense of what one prepares to do, must pass the same tests.

Yet another question is whether one may threaten to perform acts which one could not licitly do or intend. The broad question of 'bluffing' as a theological issue is not, I understand, settled. The bishops avoid it in their Letter. On more narrowly pragmatic grounds, we can ask whether making deterrent threats of indiscriminate or disproportionate use of nuclear weapons would be a prudent national policy. The answer, I believe, is clearly 'no.' For one thing, if the threatener were known to adhere to other aspects of the Christian just war tradition, it would be an obviously empty bluff—the threatener simply would not be believed. If the threatener were not a known adherent to the just war tradition, the threat would gain greater credibility. But to be credible, the threat would have to be supplemented by public orders and plans for the contingent use of nuclear weapons if deterrence failed. Declaratory policy would have to be contrary to operational policy, with only a very small circle of policymakers aware of the difference. It is very unlikely that such a policy could succeed. On the one hand, the fact that the threat was only a bluff probably would become known, through leaks or espionage. Or, if the secret were held tightly enough, the automaticity inherent in strategic nuclear planning very possibly would take over in the event of war, especially if war included (as it very likely would) a 'decapitating' attack that removed the commander-in-chief. The use of nuclear weapons would then probably follow the lines of the declaratory policy

[16]"Reassurance and Deterrence," *Foreign Affairs*, Vol. 61, No. 2 (Winter 1982/83), pp. 309–324.

rather than the secret operational policy—and nuclear weapons would be used in a morally unacceptable manner. The circle cannot be squared.

To encourage belief in the probability of "morally acceptable limited nuclear war" would play into the hands of the war-fighters, the 'prevailers,' those who think "victory is possible." It would encourage those who want to continue to rely on a threat of first use of nuclear weapons to deter a wide range of acts in Europe, the Middle East, and elsewhere. It would encourage brinkmanship and crisis risk-taking at the expense of building up alternative, non-nuclear means of defending ourselves and our allies. The bishops prudently avoid that trap.

The trap on the other end of the spectrum lies in the position that a nation may continue to possess nuclear weapons but with an explicit policy that it will not use them under any conceivable circumstances. This becomes the "you can have it but you can't use it" position. It is easily parodied.[17] It falls under much the same objections as apply to expressing a threat one could not licitly execute. If it is known that the weapons would not be deliberately used under any circumstances, then the weapons lose most of their deterrent power. If—as is in fact virtually unavoidable in a complex military establishment—one leaves open the possibility that the weapons will be used despite the commander-in-chief's intention not to use them, the result is hardly better from a moral standpoint. "Leaving something to chance" inescapably involves moral responsibility for those who leave it to chance, and intend to benefit from the chance. Again, the circle cannot be squared.

Some critics, including several conservative columnists, *The New York Times* in a May 6, 1983 editorial, and Albert Wohlstetter in his article cited earlier, have accused the bishops of adopting just such a "you can have it but you can't use it" position. It is true that the second draft (October 1982) of the pastoral letter was ambiguous—deliberately so—on this matter. While it contained no passage explicitly saying *no* use would be permissible, it was imbued (properly) with a strong rhetoric of "saying no to nuclear war," and contained a few passages whose full meaning was obscure.[18]

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[17]The television program "Saturday Night Live" did a comic interview with a mock bishop who, after explaining the "you can have it but you can't use it" position on nuclear weapons, then declared that "as celibates we are familiar with this problem."

[18]Most troublesome in this respect was the quotation from Cardinal Krol which said, "not only the ***use*** of strategic nuclear weapons, but also the *declared intent* to use them involved in our deterrence policy, are both wrong." (Italics in original.) This statement could be taken to refer to any use of nuclear weapons, or only the use or declared intent to use weapons indiscriminately—i.e., against cities. Since counterpopulation warfare was still an element of American declaratory policy (and very possibly of operational policy) at the time of Cardinal Kro's statement, he was not necessarily condemning ***any*** use or threat. Similar ambiguity arose regarding advice, in the pastoral section at the end of the second draft, to men and women in defense industries: "You also have specific questions to face because your industry produces many of the weapons of massive and indiscriminate destruction which have concerned us in this letter. We have judged immoral even the threat to use such weapons. At the same time, we have held that the possession of nuclear weapons may be tolerated as deterrents while meaningful efforts are underway to achieve multilateral disarmament." I believe that, in context, the operative qualifier is "massive and indiscriminate destruction," but it is understandable how some readers could have taken this passage as a blanket condemnation.

The ambiguity was intended to mollify critics who chose to interpret some passages in the first draft—notably, "If nuclear weapons may be used at all, they may be used only after they have been used against our own country or our allies, and, even then, only in an extremely limited, discriminating manner against military targets"—as the bishops' giving some "Good Housekeeping Seal of Approval" to limited nuclear war. In context it certainly was nothing of the kind. Predictably, the ambiguity of the second draft opened the bishops up, from the perspective of conservative critics, to ridicule or mischievous charges that the bishops, despite their disclaimers, were 'really' adopting a stance of unilateral nuclear disarmament. Fortunately this ambiguity was removed in the third draft and the form adopted in the final Chicago meeting. In fact, a proposed amendment by Archbishop Quinn, of "opposition on moral grounds to any use of nuclear weapons," was not adopted.[19]

8.5 A Dilemma Without Easy Resolution

These two traps—the extremes of counterforce as nuclear "war-winning" and of "possession without use"—frame a fundamental dilemma that cannot easily be resolved. There *is no* perfect practical solution to the problem of nuclear deterrence. Moral considerations further complicate the problem. The bishops' position in the final Letter is not so ambiguous as it is frankly torn between desirable ends.

One proposed deterrent has been through advocacy or adoption of an extreme version of MAD (Mutually Assured Destruction) that is expressly and solely a counterpopulation deterrent. But practically, it would mean abandonment of almost all forms of extended deterrence, since no state would initiate its own sure destruction in order to 'defend' another. And morally, most Christians reject strategies of counterpopulation warfare.

A possible way to ease, though not escape, the moral dilemma would be through adopting a posture of 'tolerating' nuclear weaponry as a means to a good end (deterrence, or ultimate disarmament). There were hints of this kind of reasoning in the first and second drafts of the Letter. But critics labeled that reasoning 'consequentialist' and feared it would lead to much wider application of "bad means justifying a good end" variants of moral theology. Consequentialist reasoning is widely condemned by traditionalist Catholic theologians. While it is not entirely clear that the early drafts depended on such reasoning, and there are respectable Catholic theologians who do not reject consequentialism, it was not a supportable basis for the bishops' Letter. To avoid totally rejecting nuclear deterrence, the bishops had to find some strategy that at least had a chance, in some hypothetical

[19]It is nevertheless true that some critics, notably Wohlstetter and the *Times* editorial, ostensibly were responding to the third draft or final version. A charitable interpretation of their criticism is that they simply had not read the later versions carefully. McGeorge Bundy, in his "The Bishops and the Bomb," *The New York Review of Books*, June 16, 1983, pp. 3–8, exhibits a much better understanding of the Letter.

circumstances, of being morally neutral (discriminating, proportionate) rather than intrinsically evil. The need to clarify their position helped increase the bishops' determination to make a variety of specific applications in other parts of their Letter. They lay out the reasoning against vulnerable "prompt hard-target-kill" weapons, and specifically mention MX and the Pershing II as candidates for this category. (The first two drafts mentioned MX in the text, but as part of a compromise in the final versions the specific identification of MX was moved to a footnote but supplemented with reference to Pershing II.) They call for 'sufficiency' and reject any quest for nuclear superiority. They oppose "proposals which have the effect of lowering the nuclear threshold and blurring the difference between nuclear and conventional weapons" (probably including the neutron bomb). Furthermore, they recommend a variety of measures, including a comprehensive test ban treaty, removal of nuclear weapons from border areas where they might be overrun in war (thus forcing early decisions on their use), and "immediate, bilateral, verifiable agreements to halt the testing, production, and deployment of new nuclear weapons systems." This last was widely, and correctly, interpreted as meaning support for a freeze.[20]

The central problem for the bishops' analysis is not deterrence of attack on the United States, but of attack on allies or neutrals under American protection. This of course has also been the central function of American nuclear deterrence since its inception. Nuclear deterrence, furthermore has been extended to deterrence of *conventional* attacks on our allies, a policy promoted by the relatively inexpensive nature of nuclear weapons (more "bang for the buck") and the difficulties of raising adequate conventional defense forces against the "Eastern hordes." Thus a key element of some acceptable resolution of the bishops' dilemma is their strong advocacy of a "no first use" posture. It is not quite an unequivocal rejection of first use ("We do not perceive any situation in which the deliberate initiation of nuclear warfare, on however restricted a scale, can be morally justified"), but it comes very close. In doing so, the bishops oppose the idea of using nuclear weapons for extended deterrence, and require that non-nuclear attacks be resisted by other than

[20]This passage was subject to several changes from the second draft to the final version. The third draft substituted 'curb' for 'halt,' but at the same time broadened coverage to all "nuclear weapons" systems in place of the second draft's reference to 'strategic' systems. The changes occurred during the course of some agonized discussions in the Committee under conditions when it appeared, after a communication from the Vatican, that the delicately achieved compromise of the document could be upset, with possible public charges that the Committee had exceeded its proper role. The majority reluctantly accepted these changes (while still supporting a freeze) in order to retain other parts of the document that constituted its heart. Unfortunately the press, in their first comments on the third draft, concentrated on the 'halt' to 'curb' change, missed the expansion of 'strategic,' and largely ignored the other ways in which the Letter remained, as it had been through all permutations, profoundly critical of many aspects of official policy. The Committee majority therefore was pleased when the plenary body of bishops, in Chicago, immediately voted overwhelmingly to return to the word 'halt.' This sequence of events had the effect of demonstrating that the majority of all the bishops wanted a freeze, and that this was not something thrust upon them by a drafting committee.

nuclear means. If so, a purely counterforce deterrent has no need for prompt hard-target-kill capabilities, or any other seemingly first-strike forces which could endanger crisis stability. The risks of escalation are high under the best of circumstances. If the opponent should begin nuclear war, *some* of those risks would already have been taken. To deter that act, and to bring the war to a negotiated halt just as soon as possible, we may plan certain very restricted forms of retaliation. But the risks of first use of nuclear weapons are too high to justify our ever setting the process in motion.

While understanding that "development of an alternative defense position will still take time," the bishops insist that NATO "move rapidly" toward such a position. They are willing—clearly if unenthusiastically—to consider that "some strengthening of conventional defense would be a proportionate price to pay, if this will reduce the possibility of nuclear war." This is an essential piece of realism. While many military experts differ as to whether non-nuclear defense of Western Europe really is possible, there are many cogent and informed arguments for its feasibility.[21] The hurdles really are political rather than economic or military, and the lack of current political will in America and in Europe need not be taken as a given for all eternity. Furthermore, there are also other ways to help defend Western Europe than by nuclear *or* non-nuclear forces. A general lowering of international political tensions would help, as would a structure of rewards implicit in the extension of East-West economic interdependence. And if the United States were to abandon nuclear deterrence of non-nuclear threats, the act would contribute greatly to a worldwide de-legitimization of nuclear weapons. It would help persuade potential nuclear powers that nuclear weapons 'buy' more insecurity than security.

The bishops' normative and factual assumptions thus lead them, in terms of the familiar policy debates over deterrence, to the conclusion that, while the need for military deterrence cannot be evaded in a world of conflicting states, relatively lower levels of threat are adequate and a shift to lower levels is required.[22] Lower but adequate levels of threat mean no "city-busting" and no first-strike capability; extended deterrence of conventional attack can succeed without reliance on nuclear threats; and rewards, as well as punishments, must play a key role in any acceptable

[21]The Pastoral Letter cites some participants in this debate. Others include Robert S. McNamara, "The Military Role of Nuclear Weapons: Perceptions and Misperceptions", *Foreign Affairs*, Vol. 62, No. 1 (Fall 1983), pp. 59–80; John Mearsheimer, *Conventional Deterrence* (Ithaca, N.Y.: Cornell University Press, 1983); Bernard W. Rogers, "The Atlantic Alliance: Prescriptions for a Difficult Decade," *Foreign Affairs*, Vol. 60, No. 5 (Summer 1982); and the Report of the European Security Study, *Strengthening Conventional Deterrence: Proposals for the 1980s* (New York: St. Martin's Press, 1983). General Rogers has reservations about whether a full no-first-use policy is feasible, but has been campaigning vigorously for at least a no-early-first-use posture. For evidence of widespread European public support of a no-first-use policy, see Bruce Russett and Donald R. DeLuca, "Theater Nuclear Forces: Public Opinion in Western Europe," *Political Science Quarterly*, Vol. 98, No. 2 (Summer 1983), pp. 193–195.

[22]Recall the view of McGeorge Bundy that the explosion "of even one hydrogen bomb on one city of one's own country would be recognized in advance as a catastrophic blunder." "To Cap the Volcano," *Foreign Affairs*, Vol. 48, No. 1 (Spring 1969), p. 10.

deterrent posture. A shift to lower levels is required because of the ever-present and not fully controllable chance that deterrence may fail, bringing our threats to reality. Their position is not perfect, but it is reasonable, logically coherent, and fully comprehensible in the language of secular discussion. While the bishops derive their conclusions in large part from their normative assumptions, others can share the conclusions without sharing all those assumptions.

I repeat, there is no perfect, or maybe even good, solution overall. Every possibility contains practical and moral dangers. No one can be optimistic about the chances of surviving decades or generations of continuing reliance on nuclear deterrence in any form. People are prone to error, and machinery to accidents. An indefinite future of nuclear weapons seems intolerable. The bishops correctly insist on a new way of thinking for the long run. They have not totally de-legitimized nuclear deterrence, but they have stimulated and "are prepared and eager to participate… in the on-going public debate on moral grounds." Meanwhile, the extremes of unilateral disarmament and even of *nuclear* pacifism seem undesirable, and full mutual nuclear disarmament really does seem improbable. Pope John Paul IP's statement that deterrence "may still be judged morally acceptable" still somehow rings true. That statement is in no way authoritatively binding even on Catholics, and it is full of ambiguities. But there is no path other than one of continued wrestling with the ambiguities and contradictions inherent in any deterrent policy.

Yale University

Yale

Yale's roots can be traced back to the 1640s, when colonial clergymen led an effort to establish a college in New Haven to preserve the tradition of European liberal education in the New World. This vision was fulfilled in 1701, when the charter was granted. … In 1718 the school was renamed "Yale College" in gratitude to the Welsh merchant Elihu Yale, who had donated the proceeds from the sale of nine bales of goods together with 417 books and a portrait of King George I.

Yale College survived the American Revolutionary War (1775–1783) intact and, by the end of its first hundred years, had grown rapidly. The nineteenth and twentieth centuries brought the establishment of the graduate and professional schools that would make Yale a true university. The Yale School of Medicine was chartered in 1810, followed by the Divinity School in 1822, the Law School in 1824, and the Graduate School of Arts and Sciences in 1847 (which, in 1861, awarded the first Ph.D. in the United States), followed by the schools of Art in 1869, Music in 1894, Forestry & Environmental Studies in 1900, Nursing in 1923, Drama in 1955, Architecture in 1972, and Management in 1974.

International students have made their way to Yale since the 1830s, when the first Latin American student enrolled. The first Chinese citizen to earn a degree at a Western college or university came to Yale in 1850. Today, international students make up nearly 9 % of the undergraduate student body, and 16 % of all students at the University. Yale's distinguished faculty includes many who have been trained or educated abroad and many whose fields of research have a global emphasis; and international studies and exchanges play an increasingly important role in the Yale College curriculum. The University began admitting women students at the graduate level in 1869, and as undergraduates in 1969.

Yale College was transformed, beginning in the early 1930s, by the establishment of residential colleges. Taking medieval English universities such as Oxford and Cambridge as its model, this distinctive system divides the undergraduate population into twelve separate communities of approximately 450 members each, thereby enabling Yale to offer its students both the intimacy of a small college environment and the vast resources of a major research university. Each college surrounds a courtyard and occupies up to a full city block, providing a congenial community where residents live, eat, socialize, and pursue a variety of academic

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and extracurricular activities. Each college has a master and dean, as well as a number of resident faculty members known as fellows, and each has its own dining hall, library, seminar rooms, recreation lounges, and other facilities. Today, Yale's 11,000 students come from all fifty American states and from 108 countries. The 3,200-member faculty is a richly diverse group of men and women who are leaders in their respective fields.

Yale has a tripartite mission: to create, preserve, and disseminate knowledge. Yale aims to carry out each part of its mission at the highest level of excellence, on par with the best institutions in the world. Yale seeks to attract a diverse group of exceptionally talented men and women from across the nation and around the world and to educate them for leadership in scholarship, the professions, and society. Teaching and research at Yale University are organized through the schools, departments, and programs. The undergraduate school, Yale College, is the heart of the University. More than 2,000 undergraduate courses in the liberal arts and sciences are offered each year by over sixty-five departments and programs.

Building on its historical strength, Yale is a leader in research and teaching in contemporary *Political Science*. The Department is home to around 45 faculty, whose scholarship and teaching span across the subfields of Political Science and the countries of the world. The undergraduate major is among the largest on campus, and the graduate program produces Ph.D. students who have taken leadership positions in the discipline.

Many Political Science faculty also play active roles in related programs at Yale, such as the Program in Ethics, Politics, and Economics; Directed Studies; the Institution for Social And Policy Studies; and the *MacMillian Center*. The Department also sponsors numerous seminars, lectures, and conferences that are open to all members of the Yale community. Yale's Political Science department offers both an undergraduate (BA) degree in Political Science and a graduate (PhD) in Political Science.

The Whitney and Betty MacMillan Center for International and Area Studies at Yale is the University's focal point for encouraging and coordinating teaching and research on international affairs, societies, and cultures around the world. The MacMillan Center seeks to make understanding the world and the role of the United States in the world, an integral part of liberal education and professional training at the University. It provides seven undergraduate majors, including six focused on world regions: African, East Asian, Latin American, Modern Middle East Studies, Russian and East European Studies, and South Asian Studies. The seventh is focused on Global Affairs. At the graduate level, the MacMillan Center provides four master's degree programs. Three are regionally focused on African, East Asian, and European and Russian Studies, and one is focused on Global Affairs. The MacMillan Center also sponsors seven graduate certificates of concentration: African Studies, European Studies, Global Health, International Development Studies, International Security Studies, Latin American and Iberian Studies, and Modern Middle East Studies. In total, 250–300 students are enrolled in these degree programs in any given year.

The MacMillan Center has numerous interdisciplinary faculty councils, centers, committees, and programs. These provide opportunities for scholarly research and intellectual innovation and encourage faculty and student interchange for undergraduates as well as graduate and professional students. The home of one of the oldest interdisciplinary programs in International Relations, the MacMillan Center is a founding member of the Association of Professional Schools of International Affairs (APSIA), along with Columbia, Georgetown, Princeton, Tufts, and other institutions. More at: http://www.yale.edu/about/index.html

University of South Carolina

UNIVERSITY OF
SOUTH CAROLINA

The Palmetto State established South Carolina College on December 19, 1801, as part of an effort to unite South Carolinians in the wake of the American Revolution, promoting "the good order and harmony" of the state. The founding of South Carolina's state college was also part of the Southern public college movement spurred by Thomas Jefferson. Within 20 years of one another, Georgia, North Carolina, South Carolina, and Virginia established state-supported colleges.

In the antebellum era, the Palmetto State generously supported South Carolina College. Its faculty included noted European scholars such as Francis Lieber and Thomas Cooper, as well as renowned American scholars John and Joseph LeConte. Offering a classical curriculum, South Carolina College became one of the South's most influential colleges, earning a reputation as the training ground for South Carolina's antebellum elite.

But South Carolina's secession from the Union unleashed the devastation of the American Civil War, and the state and South Carolina College paid dearly. The institution closed for want of students, and in the ensuing decades it struggled to regain its former status.

As Reconstruction from the Civil War proceeded, the state's General Assembly chose the first African-Americans to serve on the University's Board of Trustees in 1868, and in 1873 the first black students enrolled. While politically controversial, this development was an extraordinary opportunity at a time when opportunities for higher education were rare. The University of South Carolina became the only Southern state university to admit and grant degrees to African-American students during Reconstruction. Following the end of Reconstruction in 1877, South Carolina's conservative leaders closed the University. They reopened it in 1880 as an all-white agricultural college, and during the next 25 years the institution became enmeshed in the state's political upheaval.

In 1906, the institution was re-chartered for the final time as the University of South Carolina. In 1917 it became South Carolina's first state-supported college or university to earn regional accreditation, and the 1920s brought the introduction of new colleges and degree programs, including the doctorate.

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The outbreak of World War II launched an era that transformed the University. Carolina hosted naval training programs during the war, and enrollment more than doubled in the postwar era as veterans took advantage of the G.I. Bill. In the 1950s, the University began recruiting national-caliber faculty members and extended its presence with the establishment of campuses across South Carolina.

In 1963 the University of South Carolina became the university of all the people of the state. As the result of a federal court order, Henrie D. Monteith, Robert Anderson, and James Solomon became the first African-American students to enroll at the University in the 20th century. Minority enrolment would continue to grow in their wake and was complemented by a substantial international student population in subsequent decades. At the same time, enrollment was 5,660 in 1960, but nearly quadrupled 20 years later. That increase in the student body was accompanied by the introduction of many new programs, including three that would prove to be momentous.

University 101 became a national model for cultivating freshman-year success; the accompanying National Resource Center for the First-Year Experience and Students in Transition is based at the University. The international master's in business administration program, also launched in the 1970s, has consistently ranked among the country's top three such programs. The honors program blossomed into the South Carolina Honors College and is now hailed among the nation's finest.

As the result of concerted efforts to expand its research capabilities, the University in 2006 was designated by the Carnegie Foundation for the Advancement of Teaching as a research institution of "very high research activity," the foundation's highest classification. The University is South Carolina's only institution to have earned that distinction.

University of South Carolina, Department of Political Science

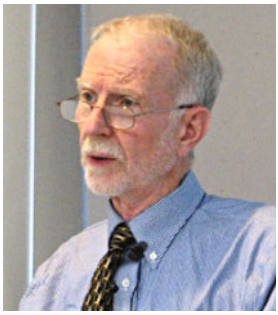
Founded in 1937, the *Department of Political Science* is home to active scholars who span the major fields of the discipline, drawing on a range of methodological approaches, and whose research has appeared in the leading journals. One of the largest departments in the College of Arts & Sciences with more than 800 undergraduate students, the *Department of Political Science* offers two bachelor's degrees—one in political science, the other in international studies—as well as the Master of Public Administration (M.P.A.), the Master of Arts in International Studies (M.A.I.S.), and the Ph.D. Programs include American Politics, International Politics, Comparative Politics, Public Administration, Political Theory, and Methodology.

The MPA Program is the leading program in the state and among the best in the Southeast. Begun in 1968, it was South Carolina's first fully accredited autonomous professional public administration program. The program has graduated hundreds of professional administrators and public leaders. The MAIS Program is designed

for students interested in a professionally-oriented program geared toward service in governmental, nonprofit, or private sectors—both domestic and international. The doctoral program, designed to produce leading scholars in the discipline, has produced many distinguished academics and numerous public leaders, both nationally and abroad.

The department is home to a diverse and distinguished faculty. Faculty members play prominent roles in many professional organizations and on numerous Editorial Boards, serve as resources for the news media and community organizations, and participate in and direct major University initiatives. More at: http://artsandsciences.sc.edu/poli/.

About the Author



Bruce M. Russett is Dean Acheson Research Professor of International Relations and Political Science. He is a Fellow of the American Academy of Arts and Sciences and has honorary doctorates from Uppsala University (2002) and Williams College (2011). He has held visiting appointments at Columbia, Michigan, North Carolina, Harvard, the Free University of Brussels, the Richardson Institute in London, the Netherlands Institute for Advanced Study, the University of Tel Aviv, and Tokyo University Law School. He edited the *Journal of Conflict Resolution* from 1973 through 2009, and with Paul Kennedy staffed the Ford Foundation's 1995 report, *The United Nations in Its Second Half-Century.*

A past president of the International Studies Association and of the Peace Science Society (International), in 2009 he received the Society's third quadrennial Founder's Medal for "significant and distinguished life-long scientific contributions to peace science." Of his 27 books, some of the more recent are *Grasping the Democratic Peace* (1993); *The Once and Future Security Council* (1997); *Triangulating Peace: Democracy, Interdependence, and International Organizations* (2001) with John Oneal; awarded the International Studies Association's prize for Best Book of the Decade (2000-2009); and *Hegemony and Democracy* (2011).

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A website with additional information on Bruce M. Russett, including links to videos and a selection of his major covers is at: http://afes-press-books.de/html/SpringerBriefs_PSP_Russett.htm.

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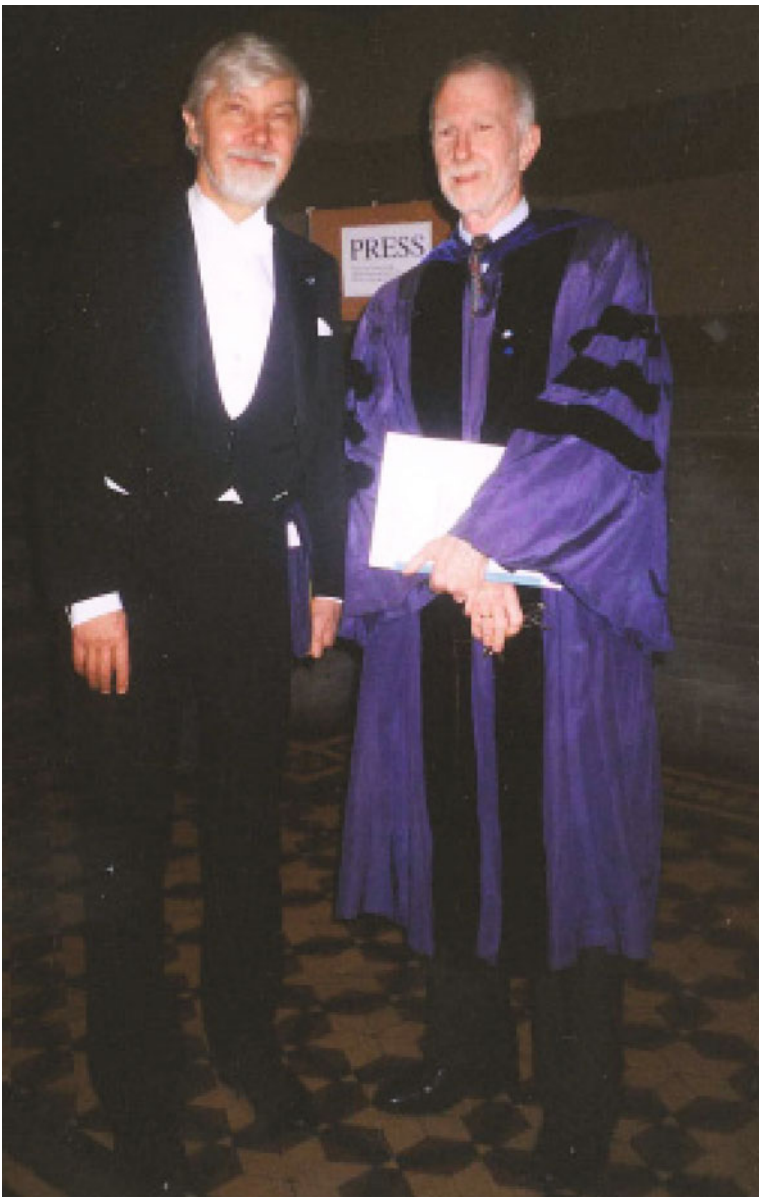

Bruce Russett with Peter Wallensteen on the occasion of the award of an honorary doctorate by the University of Uppsala in Sweden in 2002.

About the Editor

Harvey Starr (Ph.D., Yale University 1971) is the Dag Hammarskjöld Professor in International Affairs in the Department of Political Science. He came to South Carolina in 1989, after 17 years at Indiana University, where he served as department chair from 1984–89. He served as department chair again at South Carolina from 1998–2006, where he is also an Institute Associate of The Walker Institute of International and Area Studies, a Consulting Faculty in the Jewish Studies Program, and a Rule of Law Collaborative Faculty Member. He has taught at the University of Aberdeen, Scotland, and the Australian National University. In 2013–14 he served as President of the International Studies Association. His research interests include theories and methods in the study of international relations, international conflict, geopolitics and diffusion analyses, and domestic influences on foreign policy (revolution; democracy). His current interests include the causes and consequences of failed states; Geographic Information Systems analyses; and the theory and methods of necessary conditions. At the graduate level Professor Starr has regularly taught four seminars: Theories of Political Inquiry; International Relations Theory; International Conflict; and Advanced International Relations Theory. Among his major publications are: (co-authored with Benjamin Most) *Inquiry, Logic and International Relations* (University of South Carolina Press, 1989); *Anarchy, Order, and Integration* (University of Michigan Press, 1997); (Ed.): *Dealing with Failed States: Crossing Analytic Boundaries* (Routledge, 2009); (co-authored with David Kinsella and Bruce Russett): *World Politics: the Menu for Choice* 10th edition (Wadsworth Cengage, 2012); *On Geopolitics: Space, Place, and International Relations* (Paradigm, 2013).

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About the Book

Bruce M. Russett was a founder, and continues to be a pioneer in, the empirical analytic study of international relations and foreign policy. He has produced pioneering work in methodology, data collection, and the application of economics to the field of international relations—especially in the analytical relationships among theory, policy, and a normative concern with morality and ethics. His work has illuminated and driven our knowledge in peace studies by looking at power and conflict, at cooperation, integration and community, at the democratic/Kantian peace, at economic development, dependency, and inequality, and at the relationships between domestic and foreign politics. Russett's scholarly success and stature derives from bringing these areas together as a coherent whole, based on his eclectic ability to 'cross-boundaries' in regard to academic disciplines, sub-disciplines, methods of data-gathering and analysis, broad theoretical perspectives, and basic and applied research.

This book:

- Is the most complete treatment of the work and contributions of Russett, with key examples of his major works.
- Is important for contemporary students of international relations, and their understanding of IR theory and methods.
- Demonstrates an eclectic linking of empirical, normative, and policy approaches to the study of IR.

Contents:
Part I: On Bruce M. Russett: Biography—Bibliography;
Part II: Texts by Bruce M. Russett: The Calculus of Deterrence—Transactions, Community, and International Political Integration—(with John R. Oneal)The Kantian Peace: The Pacific Benefits of Democracy, Interdependence, and International Organizations, 1885-1992—(with Hazem Adam Ghobarah, Paul Huth) Comparative Public Health: The Political Economy of Human Misery and Well-Being—Defense Expenditures and National Well-being—Ethical Dilemmas of Nuclear Deterrence

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