# Does Offense-Defense Theory Have a Future?

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## Does Offense-Defense Theory Have a Future?

SEAN M. LYNN-JONES

#### Introduction

Does offense-defense theory have a future?<sup>1</sup> Its proponents would vigorously answer "yes" and point to the theory's contributions to the field of international relations. In various forms, offense-defense

<sup>1.</sup> I use the term "offense-defense theory" to refer to a collection of hypotheses about variations in the effects of the offense-defense balance. Strictly speaking, offense-defense theory is not a theory, but a variation of structural-realist (neorealist) theory and a key component of the approach that has come to be known as "defensive realism." "Offense-defense theory" aptly describes this body of work, however, and scholars who have explored the consequences of variations in the offense-defense balance have used the term. As I argue below, it may make more sense to refer to "offense-defense theories," because there are now many different approaches to offense and defense in the international system. Important works on offense-defense theory include Robert Jervis, "Cooperation Under the Security Dilemma," Vol. 30, No. 2 (January 1978), pp. 167-214; Stephen Van Evera, "Offense, Defense, and the Causes of War," International Security, Vol. 22, No. 4 (Spring 1998), pp. 5-43; Stephen Van Evera, Causes of War: Power and the Roots of Conflict (Ithaca, N.Y.: Cornell University Press, 1999); Charles L. Glaser and Chaim Kaufmann. "What Is the Offense-Defense Balance and Can We Measure It?" International Security, Vol. 22, No. 4 (Spring 1998), pp. 44-82; and George Quester, Offense and Defense in the International System (New York: Wiley, 1977).

theory has been used to explain many types of international phenomena, ranging from the causes of war and peace to the importance that states attach to relative gains. Proponents also suggest that the theory has much relevance to security policy.

Critics of offense-defense theory doubt whether it is a useful approach to international politics. They argue that the concept of the offense-defense balance is unclear, excessively complex, and impossible to operationalize and measure. Other critics argue that factors other than the offense-defense balance are more powerful explanations of international politics, foreign and military policy, and the outcomes of wars.

The debate over offense-defense theory has raged for over two decades, but proponents and critics often have talked past one another. Reading the literature, one gets the sense that proponents of offense-defense theory regard it as an established theory that should take its place alongside deterrence theory, balance-of-power theory, and other major theories in international security studies. The writings of the critics, on the other hand, give the impression that offense-defense theory is dead or dying, and convey a sense of surprise and bewilderment that the theory has any advocates at all.

To provide an opportunity for proponents and critics of offense-defense theory to confront one another and to debate the merits of the theory, Harvard University's Belfer Center for Science and International Affairs and Georgetown University's Center for Peace and Security Studies held a conference on "Offense-Defense Theory: Retrospectives and Future Directions" on September 21-22, 2000, at Harvard's John F. Kennedy School of Government. The conference also included presentations of some of the latest wave of research on offense-defense theory and general discussions of the future of the theory. Participants included many of the most prominent advocates and skeptics of offense-defense theory.<sup>2</sup> This paper is not an official

<sup>2.</sup> Participants included Ivan Arreguín-Toft, Robert Art, Spencer Bakich, Richard Betts, Stephen Biddle, Rafael Bonoan, Thomas Christensen, Dale Copeland, David Edelstein, Colin Elman, Robert Farley, Bernard Finel, Christopher Frain, Charles Glaser, Michael Glosny, Stacie Goddard, Ted Hopf, Andrew Kydd, Jack Levy, Peter Liberman, Keir Lieber, Jennifer Lind, Kristin Lord, Sean Lynn-Jones, David McIntyre, Steven Miller, Karl Mueller, Barry Posen, Robert Powell, Daryl Press, George Quester, Dan Reiter, William Rose, Richard Russell, Jeffrey Taliaferro, Monica Toft, Chris Twomey, Alexander Vacca, Stephen Van Evera, and Stephen Walt. Unfortunately, Robert Jervis, whose "Cooperation Under the Security Dilemma" has

report of that conference, but presentations and discussions at the conference influenced many of the ideas presented here.<sup>3</sup>

In this paper, I argue that offense-defense theory should be reconsidered and reformulated. Many of the standard criticisms of offense-defense theory are unpersuasive. Nevertheless, the continuing debates over defining, operationalizing, and measuring the offense-defense balance suggest that scholars should abandon the effort to define "the" offense-defense balance and to agree upon a single version of offense-defense theory. Instead, they should recognize that offense-defense theory actually consists of several theories. These various approaches share a focus on states' incentives to embark on policies of expansion, aggression, and conquest, but they differ along many other dimensions. Different types of offense-defense balances may exist at the global, regional, and dyadic levels. Different variants of offense-defense theory have different independent and dependent variables, as well as different sets of hypotheses and causal mechanisms.

The first section of this paper summarizes the debate over offense-defense theory. The second section looks at some of the reasons why offense-defense theory has such extraordinary appeal and promise. The third considers various definitions of the offense-defense balance and briefly reviews the methodological problems and different hypotheses associated with each definition. The fourth section offers some brief conclusions about the future of offense-defense theory.

The Debate over Offense-Defense Theory

Scholars in the field of security studies reach widely divergent conclusions on the merits of offense-defense theory. On the one hand,

been one of the most influential articles on offense-defense theory, was unable to attend.

<sup>3.</sup> Earlier versions of some parts of this paper appeared in Sean M. Lynn-Jones, "Realism, Security, and Offense-Defense Theories: The Implications of Alternative Definitions of the Offense-Defense Balance," paper prepared for delivery at the 1998 Annual Meeting of the American Political Science Association, Boston, Massachusetts, September 3-6, 1998.

<sup>4.</sup> See Sean M. Lynn-Jones, "Offense-Defense Theory and Its Critics," *Security Studies*, Vol. 4, No. 4 (Summer 1995), pp. 660-691. Although that article was primarily a defense of the narrowly defined technological offense-defense balance, the criticisms I discussed and refuted are even less applicable to other variants of offense-defense theory.

proponents of this approach—and even some skeptics—point out that variations in the offense-defense balance have been used to explain many aspects of international politics and foreign policy. The most general prediction of the theory is that international conflict and war are more likely when offense has the advantage, while peace and cooperation are more probable when defense has the advantage. Offense-defense theory thus has been used to explain the propensity for war (or peace) in various international systems, ranging from ancient China to Europe in the 19th Century.<sup>5</sup> Variants of offense-defense theory also have been used to explain important issues in security studies, including alliance formation, grand strategy and military doctrine, arms racing, the international consequences of revolutions, deterrence and nuclear strategy, and escalation.<sup>6</sup> The theory also has been applied to more general issues in international relations theory: whether relative gains matter to states, and the size

<sup>5.</sup> See Van Evera, "Offense, Defense, and War," pp. 25-37; Van Evera, Causes of War; Quester, Offense and Defense in the International System; and Ted Hopf, "Polarity, the Offense-Defense Balance, and War," American Political Science Review, Vol. 85, No. 2 (June 1991), pp. 475-494.

<sup>6.</sup> On alliances, see Thomas J. Christensen and Jack Snyder, "Chain Gangs and Passed Bucks: Predicting Alliance Patterns in Multipolarity," International Organization, Vol. 44, No. 2 (Spring 1990), pp. 137-168; Thomas J. Christensen, "Perceptions and Alliances in Europe, 1865-1940," International Organization, Vol. 51, No. 1 (Winter 1997), pp. 65-97; and Stephen M. Walt, The Origins of Alliances (Ithaca, N.Y.: Cornell University Press, 1987). On grand strategy and military doctrine, see Van Evera, Causes of War, and Barry R. Posen, The Sources of Military Doctrine: France, Britain, and Germany between the World Wars (Ithaca, N.Y.: Cornell University Press, 1984). On arms racing, see Quester, Offense and Defense in the International System, chap. 17; George W. Downs, David Rocke, and Randolph M. Siverson, "Arms Races and Cooperation," in Kenneth A. Oye, ed., Cooperation Under Anarchy (Princeton, N.J.: Princeton University Press, 1986), pp. 118-146; Robert Powell, "Guns, Butter, and Anarchy," American Political Science Review, Vol. 87, No. 1 (March 1993), pp. 115-132; and Charles L. Glaser, "Political Consequences of Military Strategy: Expanding and Refining the Spiral and Deterrence Models," World Politics, Vol. 44, No. 4 (July 1992), pp. 497-538. On the consequences of revolutions, see Stephen M. Walt, Revolution and War (Ithaca, N.Y.: Cornell University Press, 1996). On deterrence and nuclear strategy, see Charles L. Glaser, Analyzing Strategic Nuclear Policy (Princeton, N.J.: Princeton University Press, 1990); and Shai Feldman, Israeli Nuclear Deterrence: A Strategy for the 1980s (New York: Columbia University Press, 1982). On escalation, see Barry R. Posen, Inadvertent Escalation: Conventional War and Nuclear Risks (Ithaca, N.Y.: Cornell University Press, 1991).

and number of states in the international system.<sup>7</sup> It has been used to explain specific events, such as the outbreak of World War I and the conflicts that erupted in the former Yugoslavia in the 1990s.<sup>8</sup> Offense-defense theory also has been applied to predict that peace is likely to endure in contemporary Europe.<sup>9</sup>

Offense-defense theory has been invoked or endorsed by many scholars who have not participated in its development and initial applications. For example, Kenneth Waltz writes that "Weapons and strategies that make defense and deterrence easier, and offensive strikes harder to mount, decrease the likelihood of war." <sup>10</sup> Robert Keohane

<sup>7.</sup> On relative gains, see Robert Powell, "Absolute and Relative Gains in International Relations Theory," *American Political Science Review*, Vol. 85, No. 4 (December 1991), pp. 1303-1320; Charles L. Glaser, "Realists as Optimists: Cooperation as Self-Help," *International Security*, Vol. 19, No. 3 (Winter 1994/95), p. 79; John J. Mearsheimer, "The False Promise of International Institutions," *International Security*, Vol. 19, No. 3 (Winter 1994/95), pp. 22-24; and Helen Milner, "International Theories of Cooperation Among Nations: Strengths and Weaknesses," *World Politics*, Vol. 44, No. 3 (April 1992), pp. 483-484. On the number and size of states, see Quester, *Offense and Defense in the International System*, p. 8; Robert Gilpin, *War and Change in World Politics* (Cambridge: Cambridge University Press, 1981), p. 61; Richard Bean, "War and the Birth of the Nation State," *Journal of Economic History*, Vol. 33, No. 1 (March 1973), pp. 207-221; and Stanislav Andreski, *Military Organization and Society*, 2nd ed. (London: Routledge and Kegan Paul, 1968), pp. 75-76.

<sup>8.</sup> On World War I, see Stephen Van Evera, "The Cult of the Offensive and the Origins of the First World War," *International Security*, Vol. 9, No. 1 (Summer 1984), pp. 58-107; Van Evera, *Causes of War*, chapter 7; Jack Snyder, "Civil-Military Relations and the Cult of the Offensive," *International Security*, Vol. 9, No. 1 (Summer 1984), pp. 108-146; and Jack Snyder, "Perceptions of the Security Dilemma in 1914," in Robert Jervis, Richard Ned Lebow, and Janice Gross Stein, *Psychology and Deterrence* (Baltimore: Johns Hopkins University Press, 1985), pp. 153-179. On the former Yugoslavia, see Barry R. Posen, "The Security Dilemma and Ethnic Conflict," in Michael E. Brown, ed., *Ethnic Conflict and International Security* (Princeton, N.J.: Princeton University Press, 1993), pp. 103-124. On offense and defense in ethnic conflict more generally, see Chaim Kaufmann, "Possible and Impossible Solutions to Ethnic Civil Wars," *International Security*, Vol. 20, No. 4 (Spring 1996), pp. 147-151; and William Rose, "The Security Dilemma and Ethnic Conflict," *Security Studies*, Vol. 9, No. 4 (Summer 2000), pp. 1-54.

<sup>9.</sup> Stephen Van Evera, "Primed for Peace: Europe After the Cold War," *International Security*, Vol. 15, No. 3 (Winter 1990/91), pp. 11-17.

Kenneth N. Waltz, "The Origins of War in Neorealist Theory," in Robert I. Rotberg and Theodore K. Rabb, eds., The Origin and Prevention of Major Wars (Cambridge: Cambridge University Press, 1989), p. 50. See also Waltz,

and Lisa Martin argue that the importance of relative gains "is *conditional* on factors such as ... whether military advantage favors offense or defense." <sup>11</sup> Other scholars—including some who do not favor the defensive-realist framework into which offense-defense theory fits—also have suggested that the theory can be useful. <sup>12</sup>

The apparent power, wide applicability, and increasing use of offense-defense theory lead its proponents to claim that it is a "good theory" with "wide explanatory range and prescriptive richness" that "should be able to explain many aspects of international politics." <sup>14</sup>

Critics and skeptics argue that offense-defense theory is far less promising than its proponents claim. The standard litany of criticisms includes the arguments that weapons cannot be classified as offensive or defensive, that states fail to perceive the offense-defense balance correctly, that other variables may be more important than the offense-defense balance, that offense-defense theory explains little because the offense-defense balance always favors the defense, and that states manipulate the offense-defense balance to create offensive and defensive advantages to serve their strategic goals. <sup>15</sup>

<sup>&</sup>quot;Toward Nuclear Peace," in Robert J. Art and Kenneth N. Waltz, eds., *The Use of Force: Military Power and International Politics*, 4th ed. (Lanham, Md.: University Press of America, 1993), pp. 528-529, 555.

<sup>11.</sup> Robert O. Keohane and Lisa L. Martin, "The Promise of Institutionalist Theory," *International Security*, Vol. 20, No. 1 (Summer 1995), p. 44. Emphasis in original. See also Charles Lipson, "International Cooperation in Economic and Security Affairs," *World Politics*, Vol. 37, No. 1 (October 1984), pp. 15-16.

See Alexander L. George, "The Transition in U.S.-Soviet Relations, 1985-1990: An Interpretation from the Perspective of International Relations Theory and Political Psychology," *Political Psychology*, Vol. 12, No. 3 (1991), pp. 483-484.

<sup>13.</sup> Van Evera, "Offense, Defense, and the Causes of War," pp. 6, 41-42; and Van Evera, Causes of War, pp. 122, 190-91.

<sup>14.</sup> Lynn-Jones, "Offense-Defense Theory and Its Critics," p. 691.

<sup>15.</sup> For important examples of some of these arguments, see Jack S. Levy, "The Offensive/Defensive Balance of Military Technology: A Theoretical and Historical Analysis," *International Studies Quarterly*, Vol. 28, No. 2 (June 1984), pp. 219-238; John J. Mearsheimer, *Conventional Deterrence* (Ithaca, N.Y.: Cornell University Press, 1983), pp. 24-27; Samuel P. Huntington, "U.S. Defense Strategy: The Strategic Innovations of the Reagan Years," in Joseph Kruzel, ed., *American Defense Annual*, 1987-1988 (Lexington, Mass.: Lexington Books, 1987), pp. 35-37; Jonathan Shimshoni, "Technology, Military Advantage, and World War I: A Case for Military Entrepreneurship,"

More recent criticisms argue that some of the most prominent attempts to define the offense-defense balance are seriously flawed. <sup>16</sup> For example, several critics have suggested that Stephen Van Evera's definition of the offense-defense balance, which includes technological, doctrinal, geographical, domestic, and diplomatic factors, is an inadequate basis for further research. <sup>17</sup> They have suggested that this definition includes too many variables, thereby conflating the offense-defense balance with other factors and making it impossible to measure, and that its primary prediction—that war is more likely when conquest is easy—becomes tautological. <sup>18</sup> The alternative definition of the offense-defense balance offered by Chaim Kaufmann and Charles Glaser has been criticized on the grounds that it ignores interaction effects in warfare and conflates the offense-defense balance with other variables, such as power and skill. <sup>19</sup>

Other critics argue that offense-defense theory lacks empirical support. They have attempted to test whether various definitions of the offense-defense balance can explain the outcomes of battles and the frequency of wars—the most important predictions of the theory—and have concluded that offense-defense theory fails these tests.<sup>20</sup>

International Security, Vol. 15, No. 3 (Winter 1990/91), pp. 187-215; and Colin S. Gray, Weapons Don't Make War: Policy, Strategy, and Military Technology (Lawrence: University Press of Kansas, 1993), chap. 2. I explicate and respond to each argument in Lynn-Jones, "Offense-Defense Theory and Its Critics."

- 16. Similar criticisms of earlier definitions can be found in Levy, "The Offensive/ Defensive Balance of Military Technology."
- 17 Van Evera suggests that the offense-defense balance is synonymous with "the feasibility of conquest." For Van Evera's definition and list of the factors that determine the offense-defense balance, see "Offense, Defense, and the Causes of War," pp. 16-22, and Van Evera, Causes of War, pp. 160-166.
- 18. See Richard K. Betts, "Must War Find a Way? A Review Essay [on Van Evera, Causes of War]," International Security, Vol. 24, No. 2 (Fall 1999), pp. 185-190; Kier A. Lieber, "Grasping the Technological Peace: The Offense-Defense Balance and International Security," International Security, Vol. 25, No. 1 (Summer 2000), pp. 76-77; and the letters from Bernard I. Finel, Stacie E. Goddard, and James W. Davis, Jr., and Van Evera's reply in "Correspondence: Taking Offense at Offense-Defense Theory," International Security, Vol. 23, No. 3 (Winter 1998/99), pp. 179-200.
- 19. See the letters from Finel and Goddard, and the reply from Kaufmann and Glaser, in "Correspondence: Taking Offense at Offense-Defense Theory."
- See James D. Fearon, "The Offense-Defense Balance and War Since 1648," paper prepared for the 1995 Annual Convention of the International Studies Association, Chicago, Illinois, February 21-25, 1995; Stephen Biddle, "Re-

## The Appeal of Offense-Defense Theory

There are strong reasons to believe that offense-defense theory, in one form or another, will remain on the security studies agenda, despite the existence of continuing and forceful criticism. This approach to understanding international politics—especially issues of conflict, war, and peace—has tremendous theoretical and policy-relevant appeal. Even if some of the present versions of offense-defense theory are flawed, the promise of the approach will ensure that it receives continuing attention.<sup>21</sup>

## The Theoretical Promise of Offense-Defense Theory

Offense-defense theory is likely to remain part of the structural-realist research agenda, because it contributes much to structural-realist theory. The different variants of offense-defense theory should be classified as structural-realist (or neorealist) theories. Offense-defense theory resolves many problems in the standard neorealist theory of Kenneth Waltz and enhances its explanatory range and power.

Offense-defense theories share the basic assumptions and approach of structural realism. Like other structural theories, they focus on the international incentives and constraints that states face as they pursue their goals—which often require the threat or use of military capabilities. <sup>22</sup> They share the main assumptions of other structural realist

casting the Foundations of Offense-Defense Theory," paper presented at the 1998 Annual Meeting of the American Political Science Association, Boston, Mass., September 3-6, 1998; and Lieber, "Grasping the Technological Peace." See also James D. Fearon, "Rationalist Expectations for War," *International Organization*, Vol. 49, No. 3 (Summer 1995), pp. 402-403. At the September 21-22 conference on "Offense-Defense Theory: Retrospectives and Future Directions" Dan Reiter argued that the absence of empirical support for offense-defense theory meant that the time has come to give up on the theory.

- 21. I recognize that it is unusual to discuss the reasons for the appeal of a theory, as opposed to assessing its claims on the basis of logic or data. I engage what amounts to an exercise in the "sociology of knowledge" here, however, to explain why offense-defense theory is likely to persist.
- 22. On why offense-defense theory is a structural theory, see Kaufmann and Glaser, "What is the Offense-Defense Balance?" pp. 49, 55; Kaufmann and Glaser, "Kaufmann and Glaser Reply," in "Correspondence: Taking Offense at Offense-Defense Theory"; and Glaser, "Realists as Optimists." For a discussion of how offense-defense theory relates to other realist theories, see Van Evera, Causes of War, pp. 7-11, 256.

theories: states seek to maximize their security  $^{23}$  by employing selfhelp strategies in an anarchic world.  $^{24}$ 

Offense-defense theory offers at least three important theoretical contributions to structural realism. First, it enables realism to explain a wider range of behavior than can be explained by changes in the distribution of power alone. Unlike structural-realist theories that argue that the international distribution of power is the only important element of international structure, offense-defense theories contend that other factors, particularly the offense-defense balance, are important determinants of state behavior. The most parsimonious versions of structural-realist theory offer very general predictions on the basis of changes in the aggregate distribution of capabilities. Waltz's argument that war is more likely in multipolar systems and less likely under bipolarity is the most prominent prediction. Integrating the offense-defense balance into structural realism makes it possible to explain and predict particular wars.<sup>25</sup>

Second, offense-defense theory can serve as a "missing link" in structural realism, filling a logical gap in that theory. Structural realism assumes that states seek security (i.e., they are motivated by a desire to reduce and avoid *threats* to their survival). The theory postulates that states worry about whether power in the hands of other states

<sup>23.</sup> I argue that "security" should be defined as "one minus the probability that a state will be conquered or destroyed." See Lynn-Jones, "Offense-Defense Theory and Its Critics," pp. 664-665. This definition makes security a continuous variable and makes it easier to regard states as "security-maximizing" entities. For another definition that also casts security in probabilistic terms, see Andrew Kydd, "Sheep in Sheep's Clothing: Why Security Seekers Do Not Fight Each Other," *Security Studies*, Vol. 7, No. 1 (Autumn 1997), p. 121.

<sup>24.</sup> Lists of the assumptions of structural realism vary slightly, but these assumptions are prominent and widespread. See Kenneth N. Waltz, *Theory of International Politics* (Reading, Mass.: Addison-Wesley, 1979); Joseph M. Grieco, *Cooperation Among Nations: Europe, America, and Non-Tariff Barriers to Trade* (Ithaca, N.Y.: Cornell University Press, 1990); Robert O. Keohane, "Realism, Neorealism and the Study of World Politics," in Keohane, ed., *Neorealism and its Critics* (New York: Columbia University Press, 1986), pp. 1-26; and Mearsheimer, "The False Promise of International Institutions," pp. 11-13.

<sup>25.</sup> Van Evera calls the offense-defense balance and other related variables the "fine-grained structure of power" and argues that "Realism becomes far stronger when it includes these fine-grained structures and perceptions of them." See Van Evera, *Causes of War*, p. 256.

will be used to pose threats, and that all states use power to counter threats (e.g., by forming alliances). Structural realism does not, however, explain much about the relationship between power and threat. <sup>26</sup> In the context of structural-realist theory, the offense-defense balance can be described as the ease with which power (i.e., resources) can be translated into threat. When the balance favors the defense, it is easy to use resources to counter threats and hard to use them to threaten other states. Specifying how power can be translated into threat enriches structural-realist theory's explanations of international politics and foreign policy. Although some realists and most critics of realism focus on the distribution of aggregate power as the key factor in international politics, states that seek security will be more interested in how resources can be used to provide security. Integrating the offense-defense balance into structural realism corrects this problem.<sup>27</sup>

Third, adding the offense-defense balance to structural-realist theories makes it possible for structural realism to identify the conditions under which peace and cooperation become more likely, thereby countering the pessimism of many realist theories and removing the need to use nonrealist theories to explain such outcomes. Traditionally, realists have been regarded as pessimists who depict international politics as an unending cycle of conflict, hostility, and war. This image of realism now applies only to offensive realists, who generally argue that the international system fosters conflict and aggression.<sup>28</sup> Security is scarce, making international competition and war likely. Rational states often are compelled to adopt offensive strategies in

<sup>26.</sup> The need to consider threat as a major variable in neorealist theory is the central theme of Walt, *Origins of Alliances*.

<sup>27.</sup> For a more detailed discussion of this point, see Glaser, "Realists as Optimists," pp. 60-64.

<sup>28.</sup> For a recent explication of the differences between offensive realists, defensive realists, and neoliberals, see Robert Jervis, "Realism, Neoliberalism, and Cooperation: Understanding the Debate," *International Security*, Vol. 24. No. 1 (Summer 1999), pp. 42-63. Discussions and analyses of defensive realism, offensive realism, and types of realism appear in Jack Snyder, *Myths of Empire: Domestic Politics and International Ambition* (Ithaca, N.Y.: Cornell University Press, 1991), pp. 11-12; Sean M. Lynn-Jones and Steven E. Miller, "Preface," in Michael E. Brown, Sean M. Lynn-Jones, and Steven E. Miller, eds., *The Perils of Anarchy: Contemporary Realism and International Security* (Cambridge, Mass.: MIT Press, 1995), pp. ix-xiii; Benjamin Frankel, "Restating the Realist Case: An Introduction," *Security Studies*, Vol. 5, No. 3 (Spring 1996), pp. xiv-xx; Fareed Zakaria, *From Wealth to Power: The Unusual Origins of America's World Role* (Princeton, N.J.:

their search for security.<sup>29</sup> On the other hand, defensive realists—many of whom embrace offense-defense theory—argue that the international system does not necessarily generate intense conflict and war, and that defensive strategies are often the best route to security.<sup>30</sup>

The Potential Policy-Relevance of Offense-Defense Theory

Offense-defense theory is also appealing because it has the potential to offer a practical basis for security policies.

Limiting "Offensive" Weapons

First, some proponents of offense-defense theory claim that it provides a basis for unilateral or multilateral efforts to control weapons that make offense easier.<sup>31</sup> Limiting or banning such weapons might reduce international tensions and the risk of war. This aspiration was central to some of the earliest writings on offense and defense in international

Princeton University Press, 1998); Sean M. Lynn-Jones, "Realism and America's Rise: A Review Essay," *International Security*, Vol. 23, No. 2 (Fall 1998), pp. 157-182; and Gideon Rose, "Neoclassical Realism and Theories of Foreign Policy," *World Politics*, Vol. 51, No. 1 (October 1998), pp. 144-172

- 29. Offensive realism also has been called "aggressive realism." The clearest statements of offensive realism are John J. Mearsheimer, "Back to the Future: Instability in Europe after the Cold War," *International Security*, Vol. 15, No. 1 (Summer 1990), pp. 5-56; Mearsheimer, "The False Promise of International Institutions"; and John J. Mearsheimer, *Great Power Politics* (New York: Norton, forthcoming in 2001). See also Eric J. Labs, "Beyond Victory: Offensive Realism and the Expansion of War Aims," *Security Studies*, Vol. 6, No. 4 (Summer 1997), pp. 1-49; Gilpin, *War and Change in World Politics*, and Zakaria, *From Wealth to Power*.
- 30. Important examples of defensive realism include Van Evera, *Causes of War*, Walt, *The Origins of Alliances*, Walt, *Revolution and War*, and Posen, *The Sources of Military Doctrine*. For a recent defense of defensive realism, see Jeffrey W. Taliaferro, "Security Seeking under Anarchy: Defensive Realism Revisited," *International Security*, Vol. 25, No. 3 (Winter 2000/01), pp. 128-161.
- 31. As I have argued elsewhere, it is often difficult to classify weapons as offensive or defensive and offense-defense theory does not depend on this distinction. Thus the idea of controlling offensive weapons may not be completely consistent with offense-defense theory. In fact, not all proponents of offense-defense theory are strong advocates of arms control. Nevertheless, the basic notion of reducing the risk of war by reducing the prospects for offensive action is compatible with the main thrust of offense-defense theory.

politics.<sup>32</sup> The 1932 World Disarmament Conference unsuccessfully attempted to limit or prohibit "offensive" weapons. 33 During the 1980s, West European proponents of nonoffensive defense who argued that NATO and the Warsaw Pact should limit themselves to defensive weapons and doctrines embraced this idea.<sup>34</sup> To some extent, both superpowers adopted aspects of this idea. The Soviet Union under Gorbachev attempted to reduce tensions with the West by proclaiming that it had adopted a defensive military doctrine. In the negotiations on Conventional Forces in Europe (CFE), NATO sought to limit weapons with offensive capabilities. Even if it was hard to define which weapons were "offensive," some (e.g., bridging equipment) only would be useful for offensive action.<sup>35</sup> Note that the idea of limiting offensive potential can be pursued multilaterally or unilaterally. States might attempt to limit "offensive" weapons through negotiated agreements with other states, or they might unilaterally adopt defensive postures to signal their benign intent and reduce tensions.<sup>36</sup>

<sup>32.</sup> See, for example, B.H. Liddell Hart, "Aggression and the Problem of Weapons," *English Review*, Vol. 55 (July 1932), pp. 71-78.

<sup>33.</sup> The most comprehensive discussion of the conference is Marion William Boggs, Attempts to Define and Limit "Aggressive" Armament in Diplomacy and Strategy, The University of Missouri Studies, Vol. 16, No. 1 (Columbia: University of Missouri, 1941). See also Marlies ter Borg, "Reducing Offensive Capabilities—the Attempt of 1932," Journal of Peace Research, Vol. 29, No. 2 (1992), pp. 145-160.

<sup>34.</sup> For overviews of nonoffensive defense, see Bjørn Møeller, *Common Security and Nonoffensive Defense* (Boulder, Colo.: Lynne Rienner, 1992); and Stephen J. Flanagan, "Nonprovocative and Civilian-Based Defenses," in Joseph S. Nye, Jr., Graham T. Allison, and Albert Carnesale, eds., *Fateful Visions: Avoiding Nuclear Catastrophe* (Cambridge, Mass.: Ballinger, 1988), pp. 93-109.

<sup>35.</sup> I am indebted to George Quester for reminding me of the virtually unambiguous offensive character of bridging equipment, which is mainly useful for enabling attacking forces to cross rivers inside enemy territory.

<sup>36.</sup> It is unclear whether this approach has ever been implemented successfully. At the September 21-22, 2000, conference on offense-defense theory, several participants suggested that this question deserved further research. If states cannot use defensive postures to communicate their nonaggressive intentions (or if these postures are misunderstood by other states), then offense-defense theory becomes less relevant to policy.

## Preventing Wars by Identifying Defensive Advantages

Second, even if offense-defense theory does not offer a basis for multilateral or unilateral arms control, the theory might be used to reduce the likelihood of war. If defense has an advantage—particularly if that advantage is large—states that understand this fact are likely to conclude that war is unprofitable. In practice, however, states often exaggerate the strength of offense.<sup>37</sup> Offense-defense theory might therefore reduce the likelihood of war by offering accurate assessments of the offense-defense balance and correcting these misperceptions.

## Improving Military Policy

Third, offense-defense theory could be used to guide military policies. If it is possible to assess the offense-defense balance, the results of such assessments could be used to help states adopt optimal military postures. For example, the existence of a large defensive advantage might imply that a given state should avoid offensive action unless it has a very large advantage in capabilities. At the very least, awareness of the offense-defense balance would enable states to avoid gross blunders, such as being overly confident of fighting a successful defensive war when offense is relatively strong. Recently, many analysts have claimed that the Revolution in Military Affairs (RMA) has tilted the offense-defense balance back toward offense. Although other analysts question this conclusion, it is a prime contemporary example of how an element of offense-defense theory can influence defense and military policy.<sup>38</sup>

#### Varieties of Offense-Defense Theories

What are the strengths and weaknesses of different versions of offense-defense theory? In this section, I review four alternative definitions of the offense-defense balance.<sup>39</sup> The first holds that technology determines a global offense-defense balance that has a single value in a given international system. The second argues that technology,

<sup>37.</sup> Van Evera, Causes of War, pp. 191-192, 255.

<sup>38.</sup> For a skeptical view of the RMA, see Stephen Biddle, "Victory Misunderstood: What the Gulf War Tells Us about the Future of Conflict," *International Security*, Vol. 21, No. 2 (Fall 1996), pp. 139-179.

<sup>39.</sup> These four approaches might roughly be classified as (1) narrow global; (2) broad global; (3) broad dyadic; and (4) narrow dyadic.

geography, the domestic structure of states, and other factors shape the offense-defense balance. This definition implies that the balance can be measured at the global, regional, or dyadic level. The third posits that the balance can be measured only between a particular dyad, and that it is determined by technology, geography, nationalism, and the cumulativity of resources. The fourth suggests that levels of military skill and how states use their forces are the most important determinants of the offense-defense balance. Because these are unit-level factors that vary from state to state, this definition implies that the offense-defense balance can only be measured for a given dyad of states. Although frequently regarded as competing definitions within a single offense-defense theory, these four definitions actually generate different theories, with different strengths, weaknesses, and explanatory power.

The (Narrow), Global Technological Balance (Jervis, Quester, Lynn-Jones)

This approach to offense-defense theory argues that the offense-defense balance is the amount of resources that a state must invest in offense to offset an adversary's investment in defense.<sup>40</sup> The offense-defense balance is shaped on a system-wide basis by the technology that is available to states. At any given time, the existing pool of technology determines the relative costs of offensive and defensive strategies. Two types of technological changes affect the offense-defense balance. First, weapons innovation may produce a new type of weapon that makes it possible to pursue a given type of strategy at lower cost. The development of cannons and other siege machinery, for example, reduced the cost of launching offensives against fortified castles. Without such weapons, offensives against castles required long sieges or infantry assaults across moats and battlements. Second, nonmilitary technological innovations may reduce the costs of producing a particular type of weapon. Many observers argue that the development of the tank shifted the offense-defense balance in favor of the offense. If this is true, reductions in the unit costs of tanks will produce a larger offensive advantage.

<sup>40.</sup> See Jervis, "Cooperation Under the Security Dilemma," p. 188; Glaser, "Realists as Optimists," pp. 61-62; and Lynn-Jones, "Offense-Defense Theory and Its Critics," p. 665. This variant of offense-defense theory is tested in Lieber, "Grasping the Technological Peace." Lieber labels it the "core" version of offense-defense theory.

This approach to the offense-defense balance approximates the way in which Robert Jervis and George Quester used the term in works that inspired much of the recent literature and debate on offense and defense in international politics.<sup>41</sup> It also was the approach targeted by most critics of offense-defense theory.<sup>42</sup>

## The Virtues of This Approach

Adopting this definition of the offense-defense balance is appealing for the following reasons. First, the narrow, technological offense-defense balance has, at any given time, one global value that applies to the entire international system. In principle, all states have access to technological innovations. New technologies tend to diffuse fairly rapidly internationally, and major powers often emulate one another. Because the technological offense-defense balance can be used as a systemic variable that influences all states in a given international system, it leads to several hypotheses associated with offense-theory: when technology makes offense cheaper, states adopt offensive strategies and war becomes more likely; alliances form more rapidly and tightly, because small shifts in power are more significant when power converts easily into threat; and states tend to be larger and fewer, because territory is easy to conquer and only large states can survive.

## Problems with This Approach

Although the global, technological approach to offense-defense theory appears to offer a parsimonious and powerful version of offense-defense theory, it suffers from several important problems. In particular, it is difficult to measure the theory's central independent variable—the technological offense-defense balance. Even if it could be measured, however, there are reasons to doubt the theory's explanatory power.

Problems in Measuring the Technological Offense-Defense Balance

One major difficulty with the global, technological offense-defense balance is that it is extremely difficult to measure. This variable probably cannot be measured directly or quantified precisely.

<sup>41.</sup> See Jervis, "Cooperation under the Security Dilemma"; Quester, *Offense and Defense in the International System*.

<sup>42.</sup> Lynn-Jones, "Offense-Defense Theory and Its Critics."

Measuring the global, technological offense-defense is probably a lot like measuring inflation or the fuel efficiency of automobiles. In all three cases, the variable is a measure of a concept that can be readily understood: the offense-defense balance measures whether conquest is easy or hard; inflation measures how rapidly prices are increasing; and fuel efficiency measures how far a vehicle can travel on a tank of gas. In each case, however, measurement is complicated by the fact that changing conditions affect the values of the variables. As a result, we usually have to settle for somewhat arbitrary and "second best" ways of measuring these variables. For example, gas mileage depends on driving conditions, speed, how well a vehicle's engine is maintained, etc. Thus the fuel efficiency figures produced by the U.S. Environmental Protection Agency are based on tests conducted under arbitrary and artificial conditions, but at least they are comparable. Inflation in the United States is measured by the Consumer Price Index (CPI), which is based on changes in the price of a "basket" of goods that most people do not buy regularly. It fails to take into account changes in the quality of goods (e.g., the average personal computer may cost more than it did in 1984, but it is much more powerful). The CPI also varies from region to region within the United States, yet the government publishes a national CPI figure. Despite these problems—which have given rise to many debates over whether the CPI accurately reflects the "true" rate of inflation—we measure and study CPI figures because they at least give us some ideas of trends over time. These figures are also crucial in decisions ranging from annual salary increases to U.S. Federal Reserve Bank policy.

Measuring the global, technological offense-defense balance is probably harder than measuring inflation or fuel efficiency, but it is possible to imagine how an arbitrary standard might be constructed. Each year, one might assemble offensive and defensive military units at the U.S. Army's National Training Center (NTC) at Fort Irwin, California, and assign the defensive force the task of defending a given position.<sup>43</sup> The engagement would be conducted according to the

<sup>43.</sup> Exercises might be conducted with different force levels—for example, at the brigade or divisional level—to determine whether the balance varied with force size. The result might be different categories of balances, just as there are different measures of the money supply in an economy (M1, M2, etc.) or the results could be averaged. The details and the raw numbers would be less important than the generation of a figure that could be compared over time to assess trends and the magnitude of shifts.

usual rules and procedures for realistic training exercises at the NTC. The commanders of the attacking and defending forces would be allowed to "purchase" any existing conventional weapons and military technologies at prevailing prices.44 The defensive commander would be given a fixed sum of money to spend on weapons and troops and would have complete latitude to select what he or she regarded as the optimal set of forces and tactics. The commander of the offensive forces would be allowed to "spend" increasing amounts of money on weapons and/or troops and would have similar latitude in "spending" this sum. The exercise would be repeated until the offensive force won all the time (or 70 percent or 90 percent of the time, as long as the threshold was consistent from year to year). The amount that the offense had to invest in order to defeat the defense with a given frequency would be the offense-defense balance—or more precisely, the defense-offense balance, because a high number would indicate defensive strength. This approach would generate a value for the offense-defense balance that could be compared from year to year to assess trends. By holding most variables constant, it would isolate the impact of technological change on the efficacy of offensive military action.

If the U.S. Army decided not to use their finest training facility to generate data for social scientists, an alternative would be to run a computer simulation along the lines of the exercise described above.

The calculation of a numerical offense-defense balance would not solve all the methodological difficulties associated with a global, technological definition of the offense-defense balance. It would be difficult to calculate the balance for all past eras. More important, it would be impossible to determine how decision-makers in historical cases assessed the balance during their eras. As a result, using a global, technological definition of the balance might, at best, explain general patterns and outcomes of international politics; it would be less useful as an explanation of foreign policies and specific decisions.

In practice, the global, technological offense-defense balance can be measured in a less precise way by asking whether existing technology makes it relatively easy for a state to use an offensive strategy to conquer another state of roughly equal strength. When a technological

<sup>44.</sup> Nuclear weapons would not be included, because they might give the defender an absolute advantage and the purpose of the measurement exercise would be to determine the offense-defense balance for conventional forces.

innovation changes the relative costs of offensive and defensive capabilities, the offense-defense balance shifts.

## Limited Explanatory Power

Even if the global, technological offense-defense balance could be measured with any degree of confidence, it might have limited explanatory or predictive utility. The effects of technology on international politics in general and military doctrines, strategies, and outcomes in particular are notoriously uncertain. In the potential exercises and simulations discussed above, factors other than technology would be held constant; in real life they are not. States often fail to recognize the military implications of new technologies. In many cases they misunderstand or misperceive them, and these beliefs or perceptions must be substituted for the "objective" offense-defense balance. Political and military skill may determine how different states use new weapons and emerging technologies. Relative aggregate power, political culture, and organizational factors all may be more important than technology in shaping military doctrine and the efficacy of the offense.

If other factors often exert a more powerful effect than the global, technological offense-defense balance, it may be that the balance only is important when it takes an extreme value, i.e., when there is a situation that truly can be described as "offense dominance" or "defense dominance."

<sup>45.</sup> See Bernard Brodie, "Technological Change, Strategic Doctrine, and Political Outcomes," in Klaus Knorr, ed., *Historical Dimensions of National Security Problems* (Lawrence: University Press of Kansas, 1976), pp. 263-306; and Steven E. Miller, "Technology and War," *Bulletin of the Atomic Scientists*, Vol. 41, No. 11 (December 1985), pp. 47-48.

<sup>46.</sup> Thus many proponents of offense-defense theory either use perceptions of the offense-defense balance as their independent variable or call for looking at the objective and subjective balances. See Van Evera, *Causes of War*, pp. 121, 169-185, 193-198, 255; and Christensen, "Perceptions and Alliances in Europe, 1865-1940."

<sup>47.</sup> As Barry Posen argues, "the influence of technology is seldom direct, and is usually filtered through organizational biases and statesmen's perceptions of the international system." Posen, *Sources of Military Doctrine*, p. 236.

<sup>48.</sup> I have argued that these terms are usually misleading. "Offense dominance" is often used to describe a situation where there is an offensive advantage, and "defense dominance" is generally applied to a situation of defensive advantage. Because the offense-defense balance is actually a continuous, not a dichotomous variable, these terms should be reserved for situations in which there is a very large advantage for the offense or the defense. See

The nuclear revolution is probably the best example of an actual case that at least comes close to defense dominance.<sup>49</sup> Most proponents of offense-defense theory argue that the nuclear revolution has significantly shifted the offense-defense balance toward the defense. Stephen Van Evera, for example, contends that "the nuclear revolution gave defenders a large military advantage—so large that conquest among great powers became virtually impossible." <sup>50</sup> Charles Glaser maintains that "the superpowers' deployment of large survivable nuclear arsenals established clear defense-dominance." <sup>51</sup>

The nuclear revolution favors the defense because the technologies that make possible invulnerable retaliatory forces make conquest prohibitively costly. A state that conquers a state with a nuclear deterrent force is likely to be destroyed itself. Nuclear deterrence thus makes it possible for relatively weak states to prevent much stronger states from conquering them. The technological change that made military strategies based on assured retaliation possible has made defensive (i.e., nonexpansionist) strategies a very efficient route to security.<sup>52</sup>

- Lynn-Jones, "Offense-Defense Theory and Its Critics," p. 666. Van Evera explains that he uses "offense dominant" to mean that "conquest is fairly easy, and "defense dominant" to describe situations in which "conquest is very difficult." He recognizes that defense is almost always easy than offense. See Van Evera, *Causes of War*, p. 118 note 2.
- 49. There is, of course, much debate over whether nuclear weapons are offensive or defensive weapons, as well as whether national missile defenses are actually offensive in effect. For purposes of this discussion, however, I do not dispute the argument that the nuclear revolution has shifted the offense-defense balance toward defense, because I am assessing whether even the clearest case of a defensive advantage—as seen by offense-defense theorists—has had the effects predicted by offense-defense theory.
- 50. Van Evera, "Offense, Defense, and the Causes of War," p. 33; and Van Evera, Causes of War, chapter 8. Richard Betts criticizes the argument that nuclear weapons are defensive weapons. See Betts, "Must War Find a Way?" pp. 176-183
- 51. Glaser, "Realists as Optimists," p. 87.
- 52. For further discussions of how nuclear deterrence strengthens the defense, see Jervis, "Cooperation Under the Security Dilemma," p. 198; Feldman, Israeli Nuclear Deterrence; and Kenneth N. Waltz, "Nuclear Myths and Political Realities," American Political Science Review, Vol. 84, No. 3 (September 1990), pp. 731-745. Even writers who are skeptical about the concept of an offense-defense balance in general acknowledge that nuclear deterrence has had the effect of creating a large defensive advantage. See Gray, Weapons Don't Make War, p. 15; Mearsheimer, "Back to the Future," pp. 13 n. 14, 20; Shimshoni, "Technology, Military Advantage, and World War I," p. 193; and Lawrence Freedman, Strategic Defence in the Nuclear Age,

Even in the case of the nuclear revolution, however, the evidence for the importance of the offense-defense balance is mixed, at best. To be sure, most observers agree that international politics has been fundamentally changed in the nuclear era: the United States and the Soviet Union avoided direct military conflict during the Cold War; wars of conquest between great powers have become rare or nonexistent; and the Cold War ended peacefully, confounding the expectations of many. Nevertheless, wars between smaller states (or one smaller state and a superpower) were frequent throughout the Cold War era, and the United States and the Soviet Union engaged in a vigorous nuclear and conventional arms race that would seem unnecessary in a defense-dominant world.

In sum, the global, technological offense-defense balance offers a parsimonious explanation of broad patterns in international politics. It logically generates hypotheses about the level of war, tightness of alliances, and number and size of states in an international system. It cannot be measured precisely, however, and it may have less influence than many other factors. A pessimistic assessment would conclude that this variant of offense-defense theory has reached a dead end and must either be reformulated with far more modest predictions, or be integrated into a broader offense-defense theory with more explanatory power.

The "Broad" Systemic Balance (Van Evera)

Broader definitions of the offense-defense balance are based on the argument that technology alone does not determine the offense-defense balance. Instead, many factors must be taken into account. Stephen Van Evera suggests the following list:<sup>54</sup>

MILITARY TECHNOLOGY: In general, technologies that increase mobility or allow for larger forces favor the offense, whereas

Adelphi Paper No. 22 (London: International Institute for Strategic Studies, Autumn 1987), p. 8.

<sup>53.</sup> See Lieber, "Grasping the Technological Peace," pp. 96-102.

<sup>54.</sup> The broader approach to the offense-defense balance is most prominently identified with Stephen Van Evera. See his "Offense, Defense, and the Causes of War"; and *Causes of War*. See also Hopf, "Polarity, the Offense-Defense Balance, and War" and Snyder, *Myths of Empire*, pp. 21-26. The following list and discussion draws on Van Evera, "Offense, Defense, and the Causes of War," pp. 16-22; and Van Evera, *Causes of War*, pp. 160-166.

those that make fortifications stronger, forces smaller, and firepower more lethal favor the defense.<sup>55</sup>

MILITARY DOCTRINE: Innovations in military doctrine may determine the impact of technological change on the offense defense-balance. Blitzkrieg doctrine made mechanized armies a potent offensive force.

MILITARY POSTURE AND FORCE DEPLOYMENTS: Offense becomes easier when troops are deployed in vulnerable positions or locations.

GEOGRAPHY: Offense becomes more difficult and defense easier when states have defensible borders that coincide with geographical barriers such as mountains, rivers, or oceans.

SOCIAL AND POLITICAL ORDER: In the current international system, the existence of popular regimes favors the defense. Such regimes are harder to conquer, because they can organize guerrilla resistance against potential conquerors. Before about 1800, however, popular regimes added to the power of offense, because they could raise large armies and fight aggressive wars. During both periods, the existence of unpopular regimes favored the offense, because such regimes were vulnerable to subversion or "fifth columns" and are thus inviting targets for attack and more likely to attack other states that might subvert them.

COLLECTIVE SECURITY SYSTEMS: When states form a collective security system and promise to wage war against any aggressor that attacks a member of the system, the defense becomes more powerful. The offense benefits when collective security systems do not exist.

DEFENSIVE ALLIANCES: The existence of defensive alliances benefits the defense, much as collective security systems do, and their absence makes offense easier.

WHETHER NEUTRAL STATES BALANCE OR BAND-WAGON: When neutral states bandwagon (i.e., join the stronger or the most threatening of two competing coalitions), offense becomes easier, because aggressors are rewarded with more allies. When they balance (i.e., join the weaker or less threatening side), the defense becomes stronger, because aggressors face larger opposing forces.

<sup>55.</sup> For a more detailed discussion of how particular technological innovations favor the offense, see Kaufmann and Glaser, "What Is the Offense-Defense Balance?" pp. 61-64. See also Jervis, "Cooperation Under the Security Dilemma," pp. 196-198.

Taken together, these factors determine the "feasibility of conquest." <sup>56</sup> Van Evera argues that these factors can be aggregated to create a "composite measure" of the offense-defense balance based on "author's estimates" of the values taken on by the various variables listed above. <sup>57</sup>

## The Strengths of This Approach

Van Evera's approach to offense-defense theory uses many independent variables to explain one central dependent variable: war.<sup>58</sup> Van Evera argues that an offensive advantage will have many other effects, including more intense arms racing, greater secrecy, and fewer negotiated agreements, but these are all intervening phenomena that make war more likely.<sup>59</sup> In his most recent explication of his offense-defense theory, Van Evera does not claim that the theory can explain alliance formation or the tightness of alliances, the optimum size and number of states, sensitivity to relative gains, and other factors that offense-defense theories claim to explain. His theory may or may not yield predictions about these phenomena, but Van Evera does not offer such predictions.

By aggregating many variables to create a composite measure of the feasibility of conquest, Van Evera's theory becomes a more powerful explanation of war. Van Evera presents impressive empirical evidence that suggests that the probability of war rises and falls as the actual and perceived offense-defense balance shifts.<sup>60</sup> His broader definition of the offense-defense balance embraces so many potential factors that may cause war that it necessarily is more powerful than the narrow, technological definition of this variable.

<sup>56.</sup> Van Evera, "Offense, Defense, and War," p. 16; and Van Evera, *Causes of War*, p. 160.

<sup>57.</sup> Ibid., pp. 25-26 note 36; and Van Evera, Causes of War, p. 169 note 177.

<sup>58.</sup> In fact, for Van Evera offense-defense theory is, by definition, entirely about explaining war: "I use `offense-defense theory' to label the hypothesis that war is more likely when conquest is easy, plus explanatory hypotheses that define how this causation operates." Van Evera, "Offense, Defense, and War," p. 6 note 2.

<sup>59.</sup> Ibid., pp. 7-16. See also, Van Evera, "The Cult of the Offensive and the Origins of the First World War," pp. 63-66.

<sup>60.</sup> Van Evera, Causes of War, pp. 168-185.

## Problems with This Approach

There are at least two major potential problems with Van Evera's offense-defense theory. First, it combines variables that operate at the level of an entire international system (e.g., technology) with those that are unique to a particular state (e.g., geography). Some components of the offense-defense balance may thus influence the behavior of all the states in a given international system, whereas others will influence only one or a small group of states. Because the factors that are unique to a particular state will, by definition, vary widely from state to state, it is very difficult to aggregate them into a composite measure of the offense-defense balance. Some states may have strong incentives to engage in aggression, while others in the same system do not.

Second, the number of factors incorporated into the offensedefense balance makes the theory extremely complex.<sup>64</sup> Assessing and

<sup>61.</sup> These problems, as well as other criticisms of Van Evera's approach, were discussed extensively at the September 21-22, 2000, conference on offense-defense theory.

<sup>62.</sup> The extent of this problem is revealed by Van Evera's attempt to aggregate Germany's pre-World War II exaggerated perception of the diplomatic power of the offense and other powers' exaggeration of the military power of the defense. He concludes that the different misperceptions by the various countries cancel one another out and that pre-World War II beliefs about the offense-defense balance can be coded as being close to reality, even though virtually all the beliefs were mistaken. "Offense, Defense, and the Causes of War," Table 1, p. 24; and Van Evera, *Causes of War*, p. 171.

<sup>63.</sup> In some cases, it may even be that a defensive advantage for one state actually contributes to the offensive advantage for another. For example, a geographically secure state may not join defensive alliances if it believes that it cannot be threatened. On how defensive advantages can lead to this type of "buckpassing," see Christensen and Snyder, "Chain Gangs and Passed Bucks."

<sup>64.</sup> This complexity is increased by Van Evera's decision to measure a subjective (perceived) and objective balance. See "Offense, Defense, and the Causes of War," pp. 6, 26. For further discussion of the relationship between the objective and perceived balances, see the contributions of Davis and Van Evera in "Correspondence: Taking Offense at Offense-Defense Theory." Note, however, that looking *only* at perceptions of the offense-defense balance may actually simplify research. In some cases, decision-makers provide direct evidence of their beliefs about the relative efficacy of offense and defense, thereby eliminating the need to measure all the components of the balance. This was the case before World War I. See Van Evera, "The Cult of the Offensive and the Origins of the First World War." For a similar

aggregating these factors may require highly subjective judgments and, as Van Evera points out, "author's estimates." Many critics feel that it would be impossible for other scholars to replicate Van Evera's assessment of the offense-defense balance. Richard Betts argues that Van Evera has created a "bloated concept" or "gross megavariable" that conflates relative power and the offense-defense balance.<sup>65</sup>

## Replies and Potential Reformulations Van Evera's Theory

Van Evera has not replied at length to his critics, but he has challenged them to find errors in his coding of historical shifts in the offense-defense balance. He also has emphasized that his formulation of offense-defense theory passes many empirical tests. If others disagree, they should show how the theory is not supported by the evidence. 66

Although Van Evera has not adopted this approach, recasting the theory can ameliorate some of the potential problems with Van Evera's theory. The first problem might become less severe if the variables aggregated by Van Evera are *not* described as the offense-defense balance. For Instead of being regarded as an alternative definition of *the* offense-defense balance, the broad version of offense-defense theory should be reconceptualized as a theory that relies on *the international incentives for expansion* (independent variable) to explain the foreign policy or grand strategy of a given state (dependent variable). This approach would produce a less problematic link

attempt to measure perceptions of the offense-defense balance at other times in European history, see Christensen, "Perceptions and Alliances in Europe, 1865-1940."

- 65. See Betts, "Must War Find a Way?" pp. 185-190.
- 66. Comments at the September 21-22, 2000, conference on offense-defense theory. See also Van Evera's letter in "Correspondence: Taking Offense at Offense-Defense Theory," pp. 195-200.
- 67. Another possibility would be to describe them as a list of the conditions for the success or failure of conventional deterrence. I thank Charles Glaser for this observation.
- 68. There is, of course, a debate over whether a structural realist theory that relies on explanatory variables at the international level can be used to explain foreign policy. See Colin Elman, "Horses for Courses: Why *Not* Neorealist Theories of Foreign Policy, *Security Studies*, Vol. 6, No. 1 (Autumn 1996), pp. 5-53; Kenneth N. Waltz, "International Politics is Not Foreign Policy," *Security Studies*, Vol. 6, No. 1 (Autumn 1996), pp. 54-57; and Colin Elman, "Cause, Effect, and Consistency: A Response to Kenneth Waltz," *Security*

between independent variables at various levels and a recast dependent variable: the likelihood that a given state will adopt an offensive, expansionist strategy.<sup>69</sup> Instead of being "the offense-defense balance" this set of variables might be described as "the balance of incentives and disincentives for a state to pursue an offensive, expansionist security strategy."

Most of the factors enumerated by Van Evera as components of the offense-defense balance could be regarded as international determinants of a state's grand strategy. These factors influence the costs and/or benefits of adopting an offensive security strategy. A state that is surrounded by geographical barriers that make it hard to conquer is less likely to adopt an offensive security strategy, for example, because it can enjoy a high level of security without investing in large military forces. On the other hand, a state that has indefensible frontiers may adopt an offensive strategy, either to destroy potentially threatening states or to expand to more defensible borders.

Two factors might be added to Van Evera's list to provide a more complete enumeration of the international incentives for expansion: the cumulativity of resources and the relative power of the state in question. $^{71}$ 

The cumulativity of resources shapes the costs and benefits of offensive and defensive strategies.<sup>72</sup> When it is easy to exploit the resources of conquered territories, expansion becomes more rewarding,

Studies, Vol. 6, No. 1 (Autumn 1996), pp. 58-61. See also, Zakaria, From Wealth to Power, and Rose, "Neoclassical Realism and Theories of Foreign Policy."

<sup>69.</sup> Van Evera does, in fact, apply his theory in this manner in the case of the United States since 1789. See "Offense, Defense, and the Causes of War," pp. 37-39, but his other tests focus on the incidence of war in the European and Ancient Chinese international systems.

<sup>70.</sup> Note that some of the factors listed by Van Evera that operate on a system-wide basis (e.g., technology) might still be used to explain systemic patterns, but this would be an application of the narrow, global approach discussed above.

<sup>71.</sup> For a slightly different list of systemic sources of offensive policies, see Snyder, *Myths of Empire*, pp. 21-28.

<sup>72.</sup> Van Evera suggests that "resources are more cumulative when conquest is easy" ("Offense, Defense, and the Causes of War, p. 8). See also Van Evera, Causes of War, chapter 5. This claim appears to make the cumulativity of resources a consequence, not a cause, of the offense-defense balance, whereas I suggest that it is a cause. However, this difference reflects a different use of the term. There are actually three potential meanings attached to the term

for two reasons. First, the profits from exploitation may increase the relative power of the conquering state. Second, the net costs of offensive strategies (and the relative costs vis-à-vis defensive strategies) go down because the plundered resources can be used to pay for investments in offensive capabilities.<sup>73</sup>

The relative power of a state also influences the likelihood that a state will adopt an offensive, expansionist strategy. As Jack Snyder has pointed out: "Much imperial expansion is unproblematic: the strong conquer the weak because it pays." In general, a state's ambitions grow as its capabilities rise. Thus states that have large capabilities may be more likely to adopt offensive strategies. States with growing capabilities will become increasingly assertive.

Regardless of the exact list of systemic incentives for expansion one adopts, most of the factors on the list could be coded as having high, medium, or low values. None could be quantified precisely. This theory could be tested by looking at the security policies of a particular country over time. One would measure the incentives for an offensive strategy and then determine whether the state's security

- 73. On the cumulativity of resources, see Peter Liberman, "The Spoils of Conquest," *International Security*, Vol. 18, No. 2 (Fall 1993), pp. 125-153; and Liberman, *Does Conquest Pay? The Exploitation of Advanced Industrial Societies* (Princeton, N.J.: Princeton University Press, 1996). On how cumulative resources are related to the offense-defense balance, see Hopf, "Polarity, the Offense-Defense Balance, and War," pp. 477-478; and Kaufmann and Glaser, "What is the Offense-Defense Balance?" pp. 67-68.
- 74. Snyder, Myths of Empire, p. 10.
- 75. See Zakaria, *From Wealth to Power*, for a discussion of this proposition and a persuasive application to the United States between 1865-1908.
- 76. Van Evera does not include this variable on his list, but his discussion of the impact of collective security systems and defensive alliances suggests that the distribution of power influences the probability of offensive policies.

<sup>&</sup>quot;cumulative resources": (1) resources exist in a territory and can be exploited by a conqueror, for whatever purpose; (2) exploited resources can be used to defray the cost of conquest; and (3) resources can be used to finance further conquest. The first varies independently of the other two, because it depends on the existence of resources and whether the conquered population can or will resist their exploitation, not on the ease of conquest. Van Evera is using the term "cumulative resources" in the third sense to mean that gains from conquest can be used for further conquest, and so on. When the offense-defense balance favors the offense, small increments of additional resources translate easily into the ability to wage further offensive wars; power can be translated into threat readily.

policies became more offensive when systemic incentives favored offensive strategies and vice versa.

In sum, recasting Van Evera's approach to offense-defense theory as a theory of foreign policy that uses international incentives for expansion to explain the security policies of individual states makes it more manageable while retaining its focus on the important problems of expansion and war. The theory would still rely on a complicated set of factors, but aggregating them for an individual state would be easier than aggregating them to create a composite measure of the balance for an entire international system. The Because this approach offers the potential for identifying and responding to likely expansionist states, it also provides useful prescriptions.

The Broad, Dyadic Balance as Net Assessment (Kaufmann and Glaser)

Chaim Kaufmann and Charles Glaser adopt a broad, dyadic definition of the offense-defense balance. They define the offense-defense balance "as the ratio of the cost of the forces that the attacker requires to take territory to the cost of the defender's forces." The value of this balance depends on the particular military scenario being analyzed between a given pair of states. <sup>79</sup> Kaufmann and Glaser also emphasize that the offense-defense balance should be calculated on the assumption that states make optimal choices about military force postures and

<sup>77.</sup> The problem of measuring, weighting, and aggregating these variables also might be resolved by focusing exclusively on how states perceive the offense-defense balance. It often is easier to measure states perceptions than to assess the "objective" offense-defense balance. Van Evera sometimes adopts this approach, but also measures the actual balance. Christensen, "Perceptions and Alliances in Europe, 1865-1940," relies on perceptions of the offense-defense balance and power. One reason why World War I is often used to support offense-defense theory is that there is ample evidence of how leaders perceived the offense-defense balance and embraced a "cult of the offensive" before 1914. See Van Evera, *Causes of War*, chapter 7; and Snyder, "Perceptions of the Security Dilemma in 1914."

<sup>78.</sup> Kaufmann and Glaser, "What Is the Offense-Defense Balance," p. 46.

<sup>79.</sup> For any pair of states, Kaufmann and Glaser find two "directional balances," depending on which state is the attacker and which is the defender. Because unit-level factors determine the value of an offense-defense balance, the balance is likely to differ depending on which state is the aggressor.

strategies, thereby distinguishing the offense-defense balance from measures of military skill.  $^{80}$ 

Three aspects of the Kaufmann/Glaser definition of the offense-defense balance are notable. First, their definition means that *an* offense-defense balance (as opposed to *the* offense-defense balance, which might apply to an entire international system) can only be measured between a specific pair of states. Assessing an offense-defense balance requires measuring factors that are unique to a specific dyad, such as the attacker's territorial goals, geography, cumulativity of resources, and nationalism. For Kaufmann and Glaser, an offense-defense balance is entirely a dyadic variable, not a global one.<sup>81</sup> In this sense, the Kaufmann/Glaser version of the offense-defense balance is very similar to a measure of the intensity of the security dilemma across a given dyad of states.

Second, the Kaufmann/Glaser definition of the offense-defense balance is broad. In their view, measuring an offense-defense balance requires assessing military technologies, geography, the cumulativity of resources, nationalism in the states in question. Resulting Kaufmann and Glaser do, however, exclude aggregate power and levels of skill from their definition of the offense-defense balance. They also specifically exclude the nature of international alliance behavior and first-move advantages from the list of factors that must be considered in measuring the balance.

<sup>80.</sup> Ibid., pp. 55-57.

<sup>81.</sup> Kaufmann and Glaser recognize that their approach measures dyadic, not global, offense-defense balances, but they suggest offense-defense theory may make predictions for the entire international system when one component takes on an extreme value that applies across all dyads (e.g., nuclear weapons technology and its impact on the strength of the defense). "What Is the Offense-Defense Balance?" pp. 57-58.

<sup>82.</sup> Kaufmann and Glaser, "What Is the Offense-Defense Balance?" pp. 60-68. Note that Kaufmann and Glaser use a narrower definition of the cumulativity of resources than I use above in suggesting that the broad definition of the offense-defense balance be transformed into an assessment of the international incentives for expansion. They focus on whether captured resources from conquered territories can be used to defray the costs of conquest, whereas I also include whether resources can be exploited after conquest. Only the first influences the offense-defense balance as Kaufmann and Glaser define it. Both belong on a longer list of international incentives for expansion.

<sup>83.</sup> Kaufmann and Glaser, "What Is the Offense-Defense Balance?" pp. 48-49, 55-57.

<sup>84.</sup> Ibid., pp. 68-72.

Third, the approach adopted by Kaufmann and Glaser turns measuring an offense-defense balance into an exercise in net assessment. In this sense, their approach is not fundamentally different than that employed by, for example, John Mearsheimer, a leading critic of offense-defense theory. Mearsheimer argues that the likelihood of war is influenced by the ability of one state to launch a successful blitz-krieg assault on another. He examines factors such as the size of existing military forces, geography, and technology to determine whether a blitzkrieg is possible. See Kaufmann and Glaser argue for adopting a similar procedure, but measuring the offense-defense balance as they define it begins by positing that the defender has a certain level of forces and then asks what the attacker must spend to mount a successful offensive. They also examine a slightly different list of factors.

Kaufmann and Glaser's approach to defining and measuring the offense-defense would appear to be most useful in explaining dyadic interactions, including the likelihood of war, arms races, or other intense security competition between two states. In each case, aggregate levels of power and skill also would have to be taken into account to offer more complete explanations. Although Kaufmann and Glaser suggest that their approach can explain systemic phenomena such as the probability of war or the tightness or looseness of alliances, the dyadic balance is unlikely to shed much light on these issues except when one element takes on a high value across the entire system or when the dyadic balance is used in combination with other variables.<sup>87</sup>

In sum, the approach suggested by Kaufmann and Glaser yields a complex but manageable methodology for measuring dyadic offensedefense balances. This offense-defense theory probably can help to explain some of the phenomena that offense-defense theory is usually held to explain: the likelihood of war, arms races, and the prospects for deterrence. These explanations will generally apply only to specific

<sup>85.</sup> See Mearsheimer, Conventional Deterrence. See also John J. Mearsheimer, "Why the Soviets Can't Win Quickly in Central Europe," International Security, Vol. 7, No. 1 (Summer 1982), pp. 3-39; and John J. Mearsheimer, "Assessing the Conventional Balance: The 3:1 Rule and Its Critics," International Security, Vol. 13, No. 4 (Spring 1989), pp. 54-89.

<sup>86.</sup> On this difference, see Kaufmann and Glaser, "What is the Offense-Defense Balance?" p. 75.

<sup>87.</sup> See Kaufmann and Glaser, "What is the Offense-Defense Balance?" pp. 49, 57-58, 69.

dyads, however, and variables such as relative aggregate power and levels of skill will also influence dyadic outcomes. The Kaufmann/Glaser offense-defense theory has limited utility for explaining patterns of war in the international system, alliance formation, and the optimum size and number of states in the international system, all of which have listed as dependent variables of offense-defense theory.

Force Employment Concepts and Military Skill (Biddle)

Stephen Biddle recently has proposed an additional definition of the offense-defense balance. He argues that the offense-defense balance, i.e., the relative strength of the offense and defense in war, depends on "unit level variations in the operational concepts by which military *use* their forces." 88 On the highly lethal battlefields of modern wars (since the late 19th century), attackers can only succeed when they concentrate disproportionate forces at the point of attack, conceal and disperse their forces, use suppressive fire to reduce the defenders' rate of fire, and exploit breakthroughs rapidly. 89 The probability of a successful offensive also increases if the defender deploys its forces too shallowly or fails to maintain a mobile reserve to block any incipient breakthroughs. 90 In short, Biddle argues that offensive military action succeeds when the attacker understands how to fight a successful breakthrough battle and the defender does not understand how to thwart such an attack. 91 He contends that variations in force employment are

<sup>88.</sup> Biddle, "Recasting the Foundations of Offense-Defense Theory," p. 2. Emphasis in original. See also Stephen Biddle, "Rebuilding the Foundations of Offense-Defense Theory," *Journal of Politics*, forthcoming, and Stephen Biddle, "Testing Offense-Defense Theory: The Second Battle of the Somme, March 21 to April 9, 1918," paper prepared for delivery at the 1999 Annual Meeting of the American Political Science Association, Atlanta, Georgia, September 3-6, 1999. Both papers were presented and discussed at the September 21-22, 2000, conference on offense-defense theory.

<sup>89.</sup> Ibid., pp. 10-11.

<sup>90.</sup> Ibid., pp. 10-12.

<sup>91.</sup> In this sense, Biddle's theory complements the argument that John Mearsheimer advances in *Conventional Deterrence*. Mearsheimer argues that wars—and failures of conventional deterrence—become more likely when one state can mount a successful blitzkrieg attack. Biddle identifies force employment practices as a critical variable in determining whether such an attack is possible.

more important than technology or the size of forces in determining the outcome of military engagements. 92

It remains unclear whether Biddle's approach should be called "offense-defense theory." Unlike the other variants of offense-defense theory, it focuses mainly on battlefield outcomes and it does not address many of the questions that other approaches to offense-defense theory attempt to answer. Many participants in the September 21-22, 2000, conference on offense-defense theory argued that, whatever its merits, Biddle's theory was not an example of offense-defense theory.

Regardless of whether Biddle's theory is classified as a variant of offense-defense theory, five comments are in order. First, Biddle is essentially presenting an explanation of battlefield outcomes. It is not clear from his analysis whether force employment practices can explain more general features of international politics and foreign policy that have been dependent variables in other versions of offense-defense theory. He does not offer any hypotheses about behavior other than battlefield outcomes.

Second, Biddle's focus on force employment practices (essentially skill levels) means that his theory relies primarily on a unit-level variable. It is unlikely that such a variable can explain the broader patterns of international politics that other offense-defense theories have attempted to explain. Biddle's theory appears to be best suited for explaining the foreign and military policies of a particular state. A state with force employment practices that reflect a correct understanding of the principles of modern war, for example, might be more likely to pursue an aggressive and expansionist foreign policy.

Third, Biddle's version of the offense-defense balance might logically be incorporated into measures of the power of an individual state. As Kenneth Waltz argues, a state's capabilities depend on its "size of

<sup>92.</sup> Biddle, "Recasting the Foundations of Offense-Defense Theory," pp. 11-12. In a similar vein, he argues that the lopsided victory of the U.S.-led Coalition over Iraq in the Gulf War can be explained largely by the much higher military skill of Coalition forces. See Biddle, "Victory Misunderstood." For critiques by Thomas Keaney, Thomas Mahnken and Barry Watts, and Daryl Press, and Biddle's response, see "Symposium on the Gulf War and the Revolution in Military Affairs," *International Security*, Vol. 22, No. 2 (Fall 1997), pp. 136-174.

<sup>93.</sup> Biddle recognizes this and argues that his approach suggests that structural realism is a weak theory. "Recasting the Foundations of Offense-Defense Theory," pp. 25-26.

population and territory, resource endowment, economic capability, military strength, political stability, and *competence*." <sup>94</sup> The ability to understand and employ principles of modern warfare could be regarded as a component of competence.

Fourth, Biddle's theory of offense and defense is based on an understanding of modern warfare and, in particular, the way in which modern technologies have increased the lethality of firepower on the battlefield. The theory may not apply to periods before the late 19th century, or to most recent conflicts that cannot be classified as modern wars (e.g., guerrilla wars). In earlier eras, skill differentials may not have played such a crucial role in determining battlefield outcomes. Even if they did, optimal force employment practices would have been different and a different set of criteria would be necessary to assess whether a given state was able to launch a successful offensive.

Finally, the variable that Biddle regards as the key determinant of the offense-defense balance, military force employment practices, may be difficult to measure except on a *post hoc* basis. It is not clear how one would measure this variable in a given state until after that state had tested it force employment practices in at least one war. This suggests that the theory may work best as an explanation of historical outcomes.

In sum, Biddle may have offered an important explanation of victory in modern battles—and the magnitude of victories. It is not clear, however, whether this theory can yield broader predictions that are applicable across time and space or whether should be classified as part of offense-defense theory.

Conclusions: The Future of Offense-Defense Theory

Which definition of the offense-defense balance is best? The answer depends on the objective of the research and the behavior one is seeking to explain. The narrow, global balance of offensive and defensive military technology may be useful explaining overall trends in a given international system: the likelihood of war, whether there are a few large states or many small states, and whether alliances are tight and balancing rapid and vigorous. This variable—and possibly others that operate on a system-wide basis and affect all states—has the potential to offer elegant and parsimonious explanations of broad patterns of

<sup>94.</sup> Waltz, Theory of International Politics, p. 131. Emphasis added.

international politics. However, the global technological offense-defense balance may only have a strong effect when it takes an extreme value, and even then other factors may exert a stronger influence on the foreign policies of individual states.

Broader systemic definitions of the offense-defense balance that include technological, geographical, and diplomatic factors, among others, probably are most effective when they are recast as measurements of a given state's international incentives for offensive action. This approach requires a few modifications to Van Evera's list of factors that influence the efficacy of the offense, but the result is a relatively manageable theory of foreign policy. Only when all or most major powers in an international system face similar real or perceived international incentives for aggression will this approach yield predictions for overall patterns of international politics.

Broad dyadic definitions of the offense-defense balance render the concept more measurable and analytically manageable. This approach may yield important hypotheses on the behavior of pairs of states, but these hypotheses need to be explicated and tested.

Finally, approaches that argue that the efficacy of offensive action is determined by the skill with which states employ their forces require further development and testing. So far, this approach has not yielded the range of hypotheses associated with offense-defense theory; it remains to be seen whether it can or will.

Does offense-defense theory have a future? This brief review of the differences, strengths, weaknesses, and explanatory power of theories associated with alternative definitions of the offense-defense balance suggests that three principles should guide further research. First, offense-defense theory should be disagreggated into separate theories and the proponents of each should clearly specify what their approach can and cannot explain. Second, researchers should select the offense-defense theory most relevant to the phenomena that they seek to explain. Third, offense-defense theorists should abandon the attempt to find a definition of *the* offense-defense balance. Acceptance of these three principles could impose a moratorium on debates over how to define the offense-defense balance and clear the way for further research that *tests* the various theories empirically. The most important challenge to offense-defense theory remains the need to accumulate additional empirical support for at least some of its hypotheses.

Even if offense-defense theory does not live up to its promise as a theory of international relations with broad explanatory power, the essential elements of the theory are likely to remain part of the research agenda in international politics. Many important recent books and articles in international security studies have used concepts borrowed from offense-defense theory, even when they have not used the offense-defense balance as an explanatory variable. For example, Stephen Walt's *Origins of Alliances* employs concepts that are central in offense-defense theory—offensive power and geographical proximity—in constructing the broader concept of "threat." Walt's Revolution and War essentially constructs measures of the severity of the security dilemma between revolutionary states and their actual and potential adversaries. Although he uses other concepts, including the influence of revolutionary ideologies, his analysis includes several dimensions of offense-defense theory. Similarly, T.V. Paul's Asymmetric Conflicts uses the idea of offensive capabilities to explain why states start wars when they are obviously weaker than their adversaries. 95 These examples suggest that offense-defense theory has had a more pervasive influence than its critics admit. It is too early to write an obituary for offense-defense theory.

<sup>95.</sup> T.V. Paul, Asymmetric Conflicts: War Initiation by Weaker Powers (Cambridge: Cambridge University Press, 1984).

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