

## OFFENSE-DEFENSE THEORY AND ITS CRITICS

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IS THERE AN offense-defense balance in international politics? Can it be measured by states or scholars? Does measuring the offense-defense balance depend on being able to distinguish between offensive and defensive weapons? If there is an offense-defense balance, do variations in it affect the probability of war and intense security competitions? This article explores these questions, which are central in the debate over offense-defense theory.

Offense-defense theory argues that there is an offense-defense balance that determines the relative efficacy of offensive and defensive security strategies. Variations in the offense-defense balance, the theory suggests, affect patterns of international politics and foreign policy.<sup>1</sup> Most

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1. 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 variant of structural-realist (neorealist) theory. "Offense-defense theory" aptly describes this body of work, however, and the term has been used by scholars who have explored the consequences of variations in the offense-defense balance. Several writers have called the theory "security dilemma theory," because variations in the offense-defense balance affect the severity of the security dilemma. The seminal work on offense-defense theory is Robert Jervis, "Cooperation Under the Security Dilemma," *World Politics* 30, no. 2 (January 1978): 167–214. For important refinements, explications, and tests of the approach, see Stephen Van Evera, *Causes of War*, vol. 1, *The Structure of Power and the Power and the Roots of War* (Ithaca: Cornell University Press, forthcoming), chaps. 5 and 6. Also important is George Quester, *Offense and Defense in the International System* (New York: Wiley, 1977). See also Robert Gilpin, *War and Change in World Politics* (Cambridge: Cambridge University Press, 1981), 59–63; Stanislav Andreski, *Military Organization and Society*, 2nd ed.

important, offense-defense theory contends 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.<sup>2</sup>

Since it first came to prominence in the late 1970s, offense-defense theory has emerged as an important element in research on international relations and, in particular, international security studies. In addition to shedding light on the causes of war, offense-defense theory has been used to help explain a wide range of international phenomena, including arms races, arms control, the consequences of revolutions, the sources of escalation, the effectiveness of grand strategy, optimal ways of deterring and modifying the behavior of an adversary, alliance formation, and the optimum size of states.<sup>3</sup> The theory also has been used to explain events as diverse as the origins of the First

(London: Routledge and Kegan Paul, 1968), 75–80; Richard Bean, "War and the Birth of the Nation State," *Journal of Economic History* 33, no. 1 (March 1973): 207–21; and Malcolm W. Hoag, "On Stability in Deterrent Races," in Morton A. Kaplan, ed., *The Revolution in World Politics* (New York: Wiley, 1962), 388–410. During the 1970s and 1980s many European writers on "defensive defense" addressed related issues. For a good overview, see Bjørn Møller, *Common Security and Nonoffensive Defense* (Boulder: Lynne Rienner, 1992). For earlier discussions of the offense-defense balance and the distinction between offensive and defensive capabilities, see Quincy Wright, *A Study of War*, vol. 1 (Chicago: University of Chicago Press, 1942), 212, 314, 574, and passim; B. H. Liddell Hart, "Aggression and the Problem of Weapons," *English Review* 55 (July 1932): 71–78; Liddell Hart, *Memoirs* (London: Cassell, 1965), chap. 8; and 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).

2. See Jervis, "Cooperation Under the Security Dilemma"; and Quester, *Offense and Defense in the International System*. For a comprehensive discussion of how offensive and defensive advantages affect the probability of war, see Van Evera, *Causes of War*, vol. 1, *The Structure of Power and the Roots of War*, chap. 5.

3. On arms races and arms control, see Quester, *Offense and Defense in the International System*, chap. 17; George W. Downs, David M. Rocke, and Randolph M. Siverston, "Arms Races and Cooperation," in Kenneth A. Oye, ed., *Cooperation Under Anarchy* (Princeton: Princeton University Press, 1986), 118–46; Robert Powell, "Guns, Butter, and Anarchy," *American Political Science Review* 87, no. 1 (March 1993): 115–32; and Charles L. Glaser, "Political Consequences of Military Strategy: Expanding and Refining the Spiral and Deterrence Models," *World Politics* 44, no. 4 (July 1992): 497–538. On revolutions, see Stephen M. Walt, "Revolution and War," *World Politics* 44, no. 3 (April 1992): 321–68. On escalation, see Barry R. Posen, *Inadvertent Escalation: Conventional War and Nuclear Risks* (Ithaca: Cornell University Press, 1991). On U.S. grand strategy, see Stephen M. Walt, "The Case for Finite Containment: Analyzing U.S. Grand Strategy," *International Security* 14, no. 1 (summer 1989): 5–49 at 22–30. On deterrence, see Glaser, "Political Consequences of Military Strategy"; and Glaser, *Analyzing Strategic Nuclear Policy* (Princeton: Princeton University Press, 1990), esp. chap. 3. On alliances, see Stephen M. Walt, *The Origins of Alliances* (Ithaca: Cornell University Press, 1987), esp. 24–25, n. 31; 165–67; and Thomas J. Christensen and Jack Snyder, "Chain Gangs and Passed Bucks: Predicting Alliance Patterns in Multipolarity," *International Organization* 44, no. 2 (spring 1990): 137–68. On state size, see Quester, *Offense and Defense in the International System*, 8; Bean, "War and the Rise of the Nation State," 204–7; and Andreski, *Military Organization and Society*, 75–76.

World War, the frequency of wars in sixteenth-century Europe, Soviet-American relations, and the outbreak of intense ethnic conflict in the former Yugoslavia.<sup>4</sup>

Offense-defense theory also has played an important role in the ongoing debate over whether states seek absolute or relative gains in international politics. Several writers have argued that the offense-defense balance influences the sensitivity of states to relative gains and losses. To the extent that the offense-defense balance tilts toward the offense, states worry more about relative gains because gaps in gains can be translated more easily into threatening offensive capabilities. Concerns over relative gains diminish as the balance shifts toward defense.<sup>5</sup>

The growing importance of offense-defense theory is further revealed by the extent to which its basic propositions have been adopted by scholars who did not initially develop and apply the theory. The hypothesis that cooperation becomes easier when defense has the advantage is now accepted by many analysts of international security and international political economy.<sup>6</sup>

4. On the origins of the First World War, see Stephen Van Evera, "The Cult of the Offensive and the Origins of the First World War," *International Security* 9, no. 1 (summer 1984): 58-107; 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), 153-79. On war and peace in sixteenth-century Europe, see Ted Hopf, "Polarity, the Offense-Defense Balance, and War," *American Political Science Review* 85, no. 2 (June 1991): 475-94. On U.S.-Soviet relations, see Charles L. Glaser and Ted Hopf, "Models of Soviet American Relations and Their Implications for Future Russian-American Relations," in William Zimmerman, ed., *Beyond the Soviet Threat: Rethinking American Security Policy in a New Era* (Ann Arbor: University of Michigan Press, 1992), 155-84. On the violent disintegration of Yugoslavia, see Barry R. Posen, "The Security Dilemma and Ethnic Conflict," *Survival* 35, no. 1 (spring 1993): 27-57.

5. See, in particular, Robert Powell, "Absolute and Relative Gains in International Relations Theory," *American Political Science Review* 85, no. 4 (December 1991): 1303-20. Powell does not actually use the term "offense-defense balance," but his discussion of how concern over relative gains varies as technology changes the costs of aggression is compatible with offense-defense theory. See also Charles L. Glaser, "Realists as Optimists: Cooperation as Self-Help," *International Security* 19, no. 3 (winter 1994/95): 50-90 at 79; John J. Mearsheimer, "The False Promise of International Institutions," *International Security* 19, no. 3 (winter 1994/95): 5-49 at 22-24; and Helen Milner, "International Theories of Cooperation Among Nations: Strengths and Weaknesses," *World Politics* 44, no. 3 (April 1992): 466-96 at 483-84.

6. Most importantly, see 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), 39-52 at 50. Waltz agrees that "Weapons and strategies that make defense and deterrence easier, and offensive strikes harder to mount, decrease the likelihood of war." See also Waltz, "Toward Nuclear Peace," in Robert J. Art and Kenneth N. Waltz, eds., *The Use of Force: Military Power and International Politics*, fourth edition (Lanham, Md.: University Press of America, 1993), 528-29, 555; 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* 12, no. 3 (1991): 469-86 at

As elements of offense-defense theory have become more prominent, critics have raised important objections to the theory. Many of these criticisms have questioned whether the offense-defense balance is a useful concept that can be used as a powerful explanatory variable. Five criticisms have emerged.<sup>7</sup> First, scholars frequently argue that it is difficult or impossible to classify weapons as offensive or defensive. Second, critics point out that states do not perceive the offense-defense balance correctly. Third, some argue that other variables are much more important causes of war, peace, victory, and security policy. Fourth, it is claimed that the offense-defense balance always favors the defense and thus can explain little because it does not vary. Finally, several scholars have argued that the offense-defense balance easily can be manipulated by states to create the kind of advantages that suit their chosen policies.

This article makes the following contributions to the debate over offense-defense theory. First, it presents a comprehensive rebuttal of the most prominent criticisms of offense-defense theory. Despite the prominence of the theory and the criticisms, proponents of offense-defense theory have not systematically replied to the major arguments against the existence or usefulness of an offense-defense balance. Advocates of offense-defense theory have used the concept of an offense-defense balance as if it were generally accepted, while critics have tended to dismiss the concept out of hand. This article attempts to contribute to this debate by responding fully to the critics. In particular, it rebuts the claim that offense-defense theory depends on whether offensive and defensive weapons can be distinguished.

Second, this article provides a summary and explication of the major criticisms of offense-defense theory. Although these criticisms have been made frequently, few writers have developed them fully, and

483-84; and Charles Lipson, "International Cooperation in Economic and Security Affairs," *World Politics* 37, no. 1 (October 1984): 1-23 at 15-16. Ideas derived from offense-defense theory also have influenced debates about U.S. strategy and defense policy. See, for example, William J. Perry, Ashton B. Carter, and John D. Steinbruner, *A New Concept of Cooperative Security* (Washington, D.C.: Brookings, 1992).

7. 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* 28, no. 2 (June 1984): 219-38; John J. Mearsheimer, *Conventional Deterrence* (Ithaca: Cornell University Press, 1983), 24-27; Samuel P. Huntington, "U.S. Defense Strategy: The Strategic Innovations of the Reagan Years," in Joseph Kruzal, ed., *American Defense Annual, 1987-1988* (Lexington, Mass.: Lexington Books, 1987), 23-43 at 35-37; Jonathan Shimshoni, "Technology, Military Advantage, and World War I: A Case for Military Entrepreneurship," *International Security* 15, no. 3 (winter 1990/91): 187-215; and Colin S. Gray, *Weapons Don't Make War: Policy, Strategy, and Military Technology* (Lawrence: University Press of Kansas, 1993), chap. 2.

comprehensively. This article collects and synthesizes the most prominent criticisms.

Third, the article attempts to refine and explicate offense-defense theory. It argues that the offense-defense balance can and should be incorporated into structural-realist theories of international politics. Offense-defense theory is part of realist theory, not an alternative to it. Including the offense-defense balance as a variable enhances the explanatory power of realist theories of international politics.

My central argument is that the critics of offense-defense theory are wrong. The article develops this argument as follows. The first section explicates the main features of offense-defense theory. It points out that the theory rests on assumptions that underpin other realist theories. After offering a definition of the offense-defense balance, I sketch some of the implications of variations in the balance. The next section of the article summarizes and then rebuts in detail each of the five major criticisms of offense-defense theory.

#### OFFENSE-DEFENSE THEORY: AN OVERVIEW

##### ASSUMPTIONS OF THE THEORY

Offense-defense theory begins with premises that it shares with many other realist theories of international politics.<sup>8</sup> The theory assumes that states pursue security through self-help measures in an anarchical international system.<sup>9</sup> States seek to maximize their security by attempting to minimize the probability that they will be conquered or destroyed by other states.<sup>10</sup> Because states exist in anarchy, they prefer to

8. For discussions of this point, see Christensen and Snyder, "Chain Gangs and Passed Bucks," 138-39, 144; Glaser, "Realists as Optimists," 54-64; and Van Evera, *Causes of War*, vol. 1, *The Structure of Power and the Roots of War*, "Introduction." For a more comprehensive explication of offense-defense theory, including a discussion of its relation to structural realism and the concept of the security dilemma, see Sean M. Lynn-Jones, "Rivalry and Rapprochement: Accommodation Between Adversaries in International Politics," Ph.D. diss., Harvard University, in progress, chaps. 3 and 4.

9. On the assumptions of realism, 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: 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), 1-26; and Mearsheimer, "The False Promise of International Institutions," 11-13.

10. Most definitions of security remain vague, inviting criticisms that their authors assume that states seek nothing more than survival or "minimal security." I define security as one minus the probability that a state will be conquered or destroyed. This definition recognizes that levels of security vary. In addition, instead of assuming that states are or should be satisfied with a predetermined level of "adequate" or "minimal"

rely on their own efforts (self-help) to maximize their security. In international politics, self-help usually takes the form of unilateral acquisition of military capabilities that can be used to ensure a state's security. Although states may sometimes miscalculate or misperceive, they adopt more-or-less rational policies intended to maximize their security. In the competitive international system, states maximize their security by using their resources efficiently. In other words, states attempt to maximize the amount of security gained from the resources they invest in security.

In international politics, states have two basic strategic options for maximizing their security: defensive and offensive.<sup>11</sup> They can adopt a defensive strategy that attempts to defend the territory and resources that they control. A defensive strategy aims to make it impossible for any other state to conquer the defensive state's territory, but it does not seek to expand that territory or to conquer or destroy rival states. On the other hand, offensive strategies use military conquest to attempt to expand a state's resources—and potential military capabilities, to achieve a more impregnable defensive position, or to conquer or intimidate into submission other states that may threaten the state.

##### DEFINING THE OFFENSE-DEFENSE BALANCE

###### *The Offense-Defense Balance of Military Technology*

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>12</sup> It is the offense/defense investment ratio required for the offensive state to achieve victory. If, for example, a state must invest \$3 million in military capabilities in order to mount a successful offensive against

security, I assume that states engage in security-maximizing behavior. States try to obtain the maximum amount of security that their international circumstances permit them to enjoy. This does not mean that they invest all their resources in military capabilities, because security-maximizing states recognize that being too threatening can undermine their security and that long-term security requires maintaining a domestic economic base.

11. Some might argue that deterrence represents a third strategic option available to states. Deterrence strategies, however, aim to prevent conquest and are therefore conceptually similar to defensive strategies. They differ only in that they attempt to prevent conquest by threatening retaliation, whereas defensive strategies attempt to defeat and repel invading forces. On why defensive and deterrent strategies are similar, see Barry R. Posen, *The Sources of Military Doctrine: France, Britain, and Germany Between the World Wars* (Ithaca: Cornell University Press, 1984).

12. For similar definitions of the offense-defense balance, see Jervis, "Cooperation Under the Security Dilemma," 188; and Glaser, "Realists as Optimists," 61-62. For a discussion of various definitions, see Levy, "The Offensive/Defensive Balance of Military Technology," 222-30.

a state that invests \$1 million in its military capabilities and adopts a defensive strategy, the offense-defense balance is 3:1.<sup>13</sup> Because this ratio can, in theory, vary infinitely, the offense-defense balance is a continuum. Thus it is misleading to describe an international system as being either "offense-dominant" or "defense-dominant."

When there is an offensive advantage, an investment in offensive capabilities produces a military force that can defeat the force deployed by a state that has invested an equal amount in defensive capabilities. Under these conditions, states that want to maximize their security will invest in offense, because offensive strategies generate more security when offensive capabilities are less expensive than defensive ones.

The offense-defense balance also can be described as the ease with which power (that is, 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 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>14</sup>

The offense-defense balance is shaped by the technology that is available to states.<sup>15</sup> At any given time, the existing pool of technology de-

13. Note that the offense-defense ratio may change as overall military force levels rise and fall. Past a certain point, additional investments in offense (or defense) may no longer increase security at the same rate.

14. For a more detailed discussion of this point, see Glaser, "Realists as Optimists," 60-64. Adding the offense-defense balance to realist theories has two additional implications. First, it makes it possible for 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. Second, it enables realism to explain a wider range of state behavior than can be explained by changes in the distribution of power alone.

15. Although some writers have argued that the ability to distinguish between offensive and defensive capabilities is as important as the technological determinants of the offense-defense balance, I focus on technology, for four reasons. First, the distinguishability of offense and defense is largely a function of the perceptual capabilities of states, which in turn depend on many political, organizational, and psychological factors. Whether states perceive the offense-defense balance correctly will depend largely on these factors, not on whether offensive and defensive capabilities are inherently distinguishable or not. Second, only when the balance between offense and defense is absolutely equal will offensive and defensive capabilities be objectively indistinguishable. Third, even when states fail to distinguish between offensive and defensive capabilities, the consequences of their behavior will be influenced by the objective offense-defense balance. Finally, the emphasis on distinguishability probably has contributed to the

termines 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.

In practice, the offense-defense balance can be assessed 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 innovation changes the relative costs of offensive and defensive capabilities, the offense-defense balance shifts. Because the offense-defense balance is a continuum, the magnitude and direction of such shifts are more important than whether the balance simply favors the offense or the defense. The offense-defense balance is most likely to be significant in international politics when it changes dramatically or when it confers a very large advantage on the offense or defense.

Most proponents of offense-defense theory argue that the nuclear revolution has significantly shifted the offense-defense balance toward defense. The technologies that make possible invulnerable nuclear retaliatory forces make conquest prohibitively costly. A state that attempts to conquer a state with a nuclear deterrent force is likely to be destroyed itself. Nuclear deterrence makes it possible for relatively weak states to prevent much stronger states from conquering them. The technological change that made assured retaliation military strategies possible has made defensive (that is, nonexpansionist) strategies a very efficient route to security.<sup>16</sup>

mistaken belief that offense-defense theory classifies weapons as offensive or defensive. As I point out below, the theory does not depend on such a distinction.

16. For discussions of how nuclear deterrence strengthens the defense, see Jervis, "Cooperation Under the Security Dilemma," 198; Shai Feldman, *Israeli Nuclear Deterrence* (New York: Columbia University Press, 1982); and Kenneth N. Waltz, "Nuclear Myths and Political Realities," *American Political Science Review* 84, no. 3 (September 1990): 731-45. 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*, 15; John J.



### *Broader Conceptions of the Offense-Defense Balance*

Some writers offer broader definitions of the offense-defense balance. They argue that the balance should incorporate geography, the cumulativeness of resources (that is, whether it is easy to exploit conquered territory for profit), and beliefs about the likelihood that states will engage in bandwagoning (alignment with threatening states) instead of balancing (alignment against threatening states).<sup>17</sup>

This article does not adopt this broad definition, for three reasons. First, most writers mean the offensive/defensive balance of military technology when they refer to the offense-defense balance. Second, virtually all of the major criticisms of offense-defense theory have focused on the offense-defense balance of military technology. Because I am countering these criticisms, I limit my discussion to the traditional definition of the offense-defense balance. Finally, broader definitions of the offense-defense balance confuse variables of different types. Technology is, in principle, available to all states in a given international system and therefore is a systemic variable. Geographical circumstances and the cumulativeness of resources, on the other hand, vary from state to state. For the sake of conceptual clarity, I focus on the technological offense-defense balance that influences the international system as a whole, not the situational factors that shape security and strategy in a given dyad or group of states.

The variables incorporated into the broader definition of the offense-defense balance are, however, important factors that help to determine the incentives that international conditions offer for states to adopt offensive or defensive strategies.<sup>18</sup> Each of these variables influences 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 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.

Cumulative resources also shape the costs and benefits of offensive and defensive strategies. When it is easy to exploit the resources of conquered territories, expansion becomes more rewarding. 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. In addition, the profits from exploitation may be sufficient to increase the relative power of the state and to make it less vulnerable to other powerful states.<sup>19</sup>

Expansion also becomes more appealing if a state believes that other states will bandwagon with it if it adopts an offensive strategy. If an offensive strategy attracts friends and allies, its security benefits are likely to be greater. This effect, however, may not be the result of *beliefs* about bandwagoning, but a consequence of the distribution of power in a given international system. Bandwagoning is more likely when a weak, isolated state faces a threat from a powerful state.<sup>20</sup> It makes sense for a small state with no allies to bandwagon with a powerful threat instead of offering futile resistance. A more powerful state therefore tends to develop more incentives to expand as its relative power grows, partly because it acquires the ability to coerce weak and isolated states to become its allies.<sup>21</sup> Thus beliefs about the likelihood of bandwagoning may reflect more objective international conditions, such as the relative position of a state in the international system.

A comprehensive theory of international politics would try to include all of the variables that influence the relative costs and benefits of offensive and defensive strategies. These variables, including the offense-defense technological balance, the distribution of power, whether states have geographically defensible borders, whether conquest pays, and others, would operate together to determine whether states would increase their security by adopting offensive strategies and whether the international system was characterized by intense or mild security

Mearsheimer, "Back to the Future: Instability in Europe After the Cold War," *International Security* 15, no. 1 (summer 1990): 5-56 at 13 n. 14; 20; and Lawrence Freedman, *Strategic Defence in the Nuclear Age*, Adelphi Papers no. 224 (London: International Institute for Strategic Studies, autumn 1987), 8.

17. Hopf, "Polarity, the Offense-Defense Balance, and War." See also Jack Snyder, *Myths of Empire: Domestic Politics and International Ambition* (Ithaca: Cornell University Press, 1991), 21-26.

18. These factors could be regarded as determinants of the severity of the security dilemma across a particular dyad. A security dilemma exists when state A's efforts to increase its security reduce security for state B. The severity of the security dilemma can be defined as the amount by which each unit of resources that state A invests in efforts to increase its security reduces security for state B. When technological, geographical, or other factors increase both states' incentives to seek security through an offensive strategy, the security dilemma between state A and state B becomes more severe.

19. For discussions of this issue, see Peter Liberman, "The Spoils of Conquest," *International Security* 18, no. 2 (fall 1993): 125-53; and Van Evera, *Causes of War*, vol. 1, *The Structure of Power and the Roots of War*, chap. 4.

20. See Walt, *The Origins of Alliances*, 29-30. Relative weakness may not be the only cause of bandwagoning, but it is probably the most important.

21. See Robert Gilpin, *War and Change in World Politics*, 94-95; Kenneth N. Waltz, "The Emerging Structure of International Politics," *International Security* 18, no. 2 (fall 1993): 44-79 at 64-66; and Fareed Zakaria, "Realism and Domestic Politics: A Review Essay," *International Security* 17, no. 1 (summer 1992): 177-98 at 185-91.

competition. Some of these variables may not operate on a system-wide basis, but they could be measured more easily across dyads.

#### CONSEQUENCES OF VARIATIONS IN THE OFFENSE-DEFENSE BALANCE

Offense-defense theory predicts that international politics will become more competitive and less peaceful when the offense-defense balance shifts toward the offense. The theory argues that in a world where there is an offensive advantage expansionist grand strategies will be more common, states will adopt offensive military doctrines, arms races will emerge, foreign policies will be more confrontational, crises will be frequent, states will be more sensitive to relative-gains concerns, balancing will be more rapid and vigorous, whether by internal or external means, and states will shroud their capabilities in secrecy to conceal military and economic vulnerabilities. In general, war will become more probable. Preventive and preemptive strikes will become more likely paths to war. The greater the offensive advantage, the more severe these consequences will be.<sup>22</sup>

When there is a defensive advantage, offense-defense theory predicts that international peace and cooperation will be more likely. In general, the opposites of the consequences of an offensive advantage will emerge. If the offense-defense balance shifts toward the defense, security competition will tend to diminish. The magnitude of the change in international politics will depend on the magnitude of the shift in the offense-defense balance. The consequences of defensive advantages and shifts toward the defense are not mirror images of the effects of offensive advantages. Most offense-defense theorists have concentrated on the effects of offensive advantages, but they generally argue that shifts in favor of the defense have benign effects. The effects of offensive and defensive advantages may not be symmetrical, however, because defensive advantages must be seen as significant and enduring before they cause lasting peace and cooperation. If defensive advantages are minor or transitory, states will act on the basis of potential future offensive advantages. A temporary shift toward offense thus tends to increase the probability of conflict and war, but a temporary shift toward defense does not cause lasting peace to break out.

22. For more complete discussions of the consequences of offensive advantages and the causal logic underlying these outcomes, see Jervis, "Cooperation Under the Security Dilemma"; Van Evera, *Causes of War*, vol. 1, *The Structure of Power and the Roots of War*, chap. 5; Van Evera, "The Cult of the Offensive and the Origins of the First World War," 63-66; Christensen and Snyder, "Chain Gangs and Passed Bucks"; and Quester, *Offense and Defense in the International System*.

Offense-defense theory can be employed as a theory of international politics or as a theory of foreign policy. Theories of international politics make broad predictions about patterns and outcomes in international life, but do not explain the foreign policy of any particular state. As a theory of international politics, offense-defense theory would predict that a significant offensive advantage would tend to make international politics more competitive. Wars would become more probable, even if the theory did not predict the outbreak of any specific wars. The offensive advantage would enable states that adopted offensive strategies to expand. States that adopted offensive strategies would tend to succeed in international politics, whereas those that adopted defensive strategies would tend to fail. By definition, defensive strategies are more costly routes to security when offense has the advantage. States that adopted such strategies would have to spend more on military capabilities, which would tend to weaken them over time. They also would risk defeat at the hands of states that adopted offensive strategies. The opposite consequences would emerge when there is a significant and enduring defensive advantage.

Theories of foreign policy try to explain the behavior of particular states. Offense-defense theory yields better predictions about foreign policy when it uses a given state's *perceptions* of the offense-defense balance as its explanatory variable. When used as a theory of foreign policy, offense-defense theory argues that states formulate their security strategies on the basis of their perceptions of the offense-defense balance. The theory may not be able to explain the eventual outcomes of a state's policies, because outcomes depend on international systemic conditions. A state may adopt an offensive strategy, for example, because it believes that there is an offensive advantage, but the strategy may backfire if there is actually a defensive advantage. A theory of foreign policy can explain the decision, but not the consequence.

#### RESPONSES TO CRITICISMS OF OFFENSE-DEFENSE THEORY

**M**ANY SCHOLARS and other analysts have argued that the concept of the offense-defense balance – the conceptual linchpin of offense-defense theory – is deeply problematic.<sup>23</sup> They have claimed that: (1) it is impossible to draw a distinction between offensive and defensive

23. A different set of arguments claims that states sometimes *should* pursue offensive strategies. For prominent recent examples, see Scott D. Sagan, "1914 Revisited: Allies, Offense, and Instability," *International Security* 11, no. 2 (fall 1986): 151-76; Samuel P. Huntington, "Conventional Deterrence and Conventional Retaliation in Europe,"

weapons; (2) states frequently fail to perceive the offense-defense balance correctly; (3) the offense-defense balance is a far less important explanatory variable in international politics than other causes of war, peace, victory, and security policy; (4) the offense-defense balance always favors the defense and thus is not a useful explanatory variable because it never varies; and (5) the offense-defense balance is manipulated by the efforts of states to create the offensive or defensive advantages that their strategies require. Because these arguments sometimes are blurred in the literature and, to my knowledge, never have been systematically explicated, analyzed, and refuted, I will summarize and respond to each in considerable detail.<sup>24</sup> Some of the arguments raise important issues and, possibly, valid objections to some versions of offense-defense theory, but none of them poses insurmountable problems for the theory as I have explicated it.

#### WEAPONS CANNOT BE CLASSIFIED AS OFFENSIVE OR DEFENSIVE

##### *The Argument*

Critics of offense-defense theory often begin by claiming that it is impossible to distinguish between offensive and defensive weapons. John Mearsheimer, for example, writes that "I do not think weapons can be usefully categorized as either offensive or defensive."<sup>25</sup> Samuel Hunt-

*International Security* 8, no. 3 (winter 1983-84): 32-56; Huntington, "Playing to Win," *The National Interest* 3 (spring 1986): 8-16; and Huntington, "U.S. Defense Strategy," 23-43. For a comprehensive response to these arguments, see Stephen Van Evera, "Offense, Defense, and Strategy: When Is Offense Best?" Paper prepared for delivery at the annual meeting of the American Political Science Association, Chicago, Illinois, September 1987; and Van Evera, *Causes of War*, vol. 1, *The Structure of Power and the Roots of War*, chap. 5. See also Jack Snyder and Scott D. Sagan, "Correspondence: The Origins of Offense and the Consequences of Counterforce," *International Security* 11, no. 3 (winter 1986-87): 187-98; and Glaser, "Political Consequences of Military Strategy."

24. For earlier attempts to respond to claims that it is impossible to distinguish between offense and defense, see Boggs, *Attempts To Define and Limit "Aggressive" Armament in Diplomacy and Strategy*, 79-93; Jack Snyder, "Limiting Offensive Conventional Forces: Soviet Proposals and Western Options," *International Security* 12, no. 4 (spring 1988): 48-77 at 67-71; and David Goldfischer, *The Best Defense: Policy Alternatives for U.S. Nuclear Security from the 1950s to the 1990s* (Ithaca: Cornell University Press, 1993), chap. 1. In addition to rebutting arguments that offense and defense are indistinguishable, Goldfischer persuasively points out that many critics of the offense-defense distinction make their arguments mainly to discourage the pursuit of arms control. I assess the arguments used to criticize the concept of the offense-defense balance on their merits, however, without making assumptions about the political preferences and motives of the critics.

25. John J. Mearsheimer, *Liddell Hart and the Weight of History* (Ithaca: Cornell University Press, 1988), 36 n. 61. Elsewhere Mearsheimer argues that "it is very difficult to distinguish between offensive and defensive weapons." Mearsheimer, *Conventional*

ington argues that "Weapons may be usefully differentiated in a variety of ways, but the offense/defense distinction is not one of them."<sup>26</sup> These critics claim that any specific weapons system is useful on both the offensive and the defensive. Colin Gray argues that "Even the most apparently inoffensive of weapons and military architectural forms may be employed for offensive purposes."<sup>27</sup> Tanks, for example, can provide the mobility and firepower necessary for deep offensive penetrations, but they also can endow the defense with the mobility necessary to respond to attacks at various points along a defensive perimeter.<sup>28</sup> Between 1943 and 1945, Germany employed its tank forces defensively to delay and impose heavy costs on advancing Soviet forces on the eastern front.<sup>29</sup> In addition, even apparently defensive technologies, such as fortifications, can aid the offense by enabling an aggressor to defend one stretch of its borders while attacking on another front.<sup>30</sup>

*Deterrence*, 25. Mearsheimer, "The False Promise of International Institutions," p. 23, reiterates this argument.

26. Huntington, "U.S. Defense Strategy," 36. See also Gray, *Weapons Don't Make War*, chap. 2; Gray, *House of Cards: Why Arms Control Must Fail* (Ithaca: Cornell University Press, 1992), 28, 66-68; Gray, "New Weapons and the Resort to Force," *International Journal* 30, no. 2 (spring 1975): 238-58 at 240-41; Martin van Creveld, *Technology and War: From 2000 B.C. to the Present* (New York: Free Press, 1989), quoted in Gray, *Weapons Don't Make War*, 29; Shimshoni, "Technology, Military Advantage, and World War I," 190-97; Albert Wohlstetter, "The Political and Military Aims of Offense and Defense Innovation," in Fred S. Hoffman, Albert Wohlstetter, and David S. Yost, eds., *Swords and Shields* (Lexington, Mass: D. C. Heath, 1987), 4; and many others. See Boggs, *Attempts To Define and Limit "Aggressive" Armament in Diplomacy and Strategy*, chap. 4, esp. 79-81, for an overview of earlier arguments against the distinction between offensive and defensive weapons. For a general discussion of the conceptual problems of defining "defense" and "defensive capabilities," see Freedman, *Strategic Defence in the Nuclear Age*, particularly 12-27. Even those who argue that the offense-defense balance is an important variable recognize that misperceptions often make it difficult to distinguish between offensive and defensive capabilities. See Robert Jervis, "Realism, Game Theory, and Cooperation," *World Politics* 40, no. 3 (April 1988): 317-49 at 332; and Barry R. Posen, "The Security Dilemma and Ethnic Conflict," 29.

27. Gray, "New Weapons and the Resort to Force," 240. Gray further argues that "offensive and defensive are ascriptions that flow from political judgment: they do not inhere in certain categories of weapons." *Ibid.*, 241. Emphasis in original. Note, however, that Gray's writings sometimes refer to "offensive" and "defensive" weapons and attempt to estimate the offense-defense balance for land, sea, and air warfare. See Gray, *Weapons Don't Make War*, 14-15.

28. Mearsheimer, *Conventional Deterrence*, 25-26; and Mearsheimer, *Liddell Hart and the Weight of History*, 44. Colin Gray argues that even shields were offensive weapons when, for example, they were used by Viking raiders who wielded a sword in their other hand. See Gray, *House of Cards*, 28.

29. Mearsheimer, *Conventional Deterrence*, 26.

30. Huntington, "U.S. Defense Strategy," 36; Gray, *Weapons Don't Make War*, 31-32; Gray, *House of Cards*, 28; and Shimshoni, "Technology, Military Advantage, and World War I," 191-92. See also Quester, *Offense and Defense in the International System*, 63.

If it is impossible to distinguish between offensive and defensive weapons, the critics argue, then the offense-defense balance cannot be measured, rendering the concept theoretically useless.<sup>31</sup> Jack Levy argues that "the concept of the offensive/defensive balance is too vague and encompassing to be useful in theoretical analysis."<sup>32</sup>

### Responses

Arguments that weapons cannot be categorized as offensive or defensive do not undermine offense-defense theory, for three reasons. First, offense-defense theory does not depend on the idea that individual types of weapons can be classified as either entirely defensive or entirely offensive.<sup>33</sup> Mearsheimer is thus wrong when he states that the "theory assumes that specific weapons can be classified as either offensive or defensive in nature."<sup>34</sup> Instead, the theory (properly specified) argues that at any given time the set of existing and available military technologies determines the relative costs (in terms of defense investments) of offensive and defensive security strategies. Recall that the offense-defense balance is defined in terms of the amount of resources that a state must invest in offense (or defense) to offset an adversary's investment in defense (or offense). When defense has the advantage, states will require larger investments in offense in order to mount successful offensives. Defense will be the most efficient route to security, because when there is a defensive advantage power translates easily into security against attack, whereas it is hard to translate power into the ability to threaten others.

Most critics who argue that it is impossible to draw a distinction between offensive and defensive weapons overlook the role that weapons technologies play in determining the relative cost of offensive and defensive strategies.<sup>35</sup> When there is an offensive advantage, it means that available technologies make it less expensive for states to seek security

by adopting offensive military postures and strategies. When defense has the advantage, it means that available technologies ensure that defensive military postures and strategies will yield more security per dollar invested. Assuming that states prefer to produce security for themselves in the most efficient manner possible, offensive postures will make more sense and states will be more likely to adopt them when there is an offensive advantage, and states will prefer defensive postures when defense has the advantage.<sup>36</sup> Critics of the offense-defense balance concept adopt precisely this kind of reasoning, even though they claim that the indistinguishability of offensive and defensive weapons makes the offense-defense balance concept useless. Samuel Huntington, who argues that it is impossible to draw a distinction between offensive and defensive weapons, accepts that offensive and defensive military capabilities, military strategies, and overall foreign policy goals can be distinguished.<sup>37</sup> He argues that offense usually has the advantage<sup>38</sup> and that a U.S. offensive capability for invading Eastern Europe would have been a more efficient strategy during the cold war.<sup>39</sup> Similar considerations have been invoked by strategists who must make defense policy for states. In 1952, for example, members of the U.S. State Department's Policy Planning Staff argued that "the side with the best air and civil defense systems will be the side with the largest net capability and that greater increases in net capability can be obtained at some point by additional investments in air and civil defenses than by additional investments in offensive power."<sup>40</sup>

Individual weapons systems almost invariably combine technologies that can be labeled offensive or defensive. The pool of available tech-

36. See Goldfischer, *The Best Defense*, 24–25.

37. Huntington, "U.S. Defense Strategy," 36–37. Colin Gray agrees: "One can distinguish offensive from defensive policies and strategies, but those distinctions have little or no meaning for operations, tactics, individual weapons, or weapon technologies." Gray, *House of Cards*, 67.

38. Huntington, "Conventional Deterrence and Conventional Retaliation in Europe," 38, 46–48; and Huntington, "The Renewal of Strategy," in Huntington, ed., *The Strategic Imperative: New Policies for American Security* (Cambridge, Mass.: Ballinger, 1982), 29–30. Commenting on Huntington's argument, Stephen Walt observes: "A clearer example of the belief in offense dominance would be hard to find." Walt, "The Case for Finite Containment," 24 n. 55.

39. Huntington points out that tests in a "U.S. Army war game" revealed that conventional offensive retaliation in Europe "required less military force to implement successfully than did a linear forward defense strategy." Huntington, "U.S. Defense Strategy," 35.

40. "Paper Drafted by the Policy Planning Staff" (undated) in U.S. Department of State, *Foreign Relations of the United States, 1952–1954*, vol. 2, *National Security Affairs* (Washington, D.C.: U.S. Government Printing Office, 1984), pt. 1, 66. Quoted in Goldfischer, *The Best Defense*, 24.

31. See Mearsheimer, *Liddell Hart and the Weight of History*, 36 n. 61.

32. Levy, "The Offensive/Defensive Balance of Military Technology," 235.

33. Other scholars and analysts – particularly proponents of arms control – may have contributed to this confusion by claiming that specific weapons are offensive or defensive in character. I avoid their error.

34. Mearsheimer, *Conventional Deterrence*, 25. Many advocates of arms control do, however, call for banning what they regard as offensive weapons, implying that they believe a clear distinction can be drawn.

35. Some critics, however, argue that, for example, offensive strategies sometimes can achieve security at the lowest possible cost for a particular state. This argument implicitly recognizes that in at least some circumstances prevailing technology may influence the relative costs of offensive and defensive capabilities. Thus it rests on precisely the same logic as offense-defense theory.



nologies at any given time determines the cost of building weapons and deploying military capabilities that can be used in support of an offensive or defensive strategy. Silo-based ICBMs, for example, combine a "defensive" technology – the hardened silo – with an "offensive" one – multiple, highly accurate, highly destructive nuclear warheads. The net result, according to offense-defense theory, is that states can deploy invulnerable retaliatory forces at relatively low cost, making conquest virtually impossible.

Second, even if one does focus on particular weapons systems, some types may make offensive action easier and less costly than others.<sup>41</sup> The tank, for example, is useful for offensive and defensive purposes, but without tanks, blitzkrieg offensives would be virtually impossible. Tanks make it possible for states to launch offensives using large armored formations.<sup>42</sup> In other words, they make offensive strategies far less costly than they would have been without tanks. John Mearsheimer acknowledges that the development of the tank "led to a fundamental change in the nature of the battlefield" when the tank was used in support of a blitzkrieg strategy.<sup>43</sup> Similarly, some weapons innovations tend to favor the defense because they make offensive action more costly and therefore less attractive.<sup>44</sup>

Third, the example most frequently cited to demonstrate the futility of attempting to distinguish between offensive and defensive weapons – the 1932–33 Geneva Disarmament Conference – does not support the claim that offensive and defensive weapons cannot be distinguished.<sup>45</sup> The conference did attempt to limit offensive weapons, and it did fail to reach an agreement, but it failed because some countries

41. Samuel Huntington, who argues against distinguishing between offensive and defensive weapons, nevertheless agrees that "Some forms of military capability may be more useful for offensive strategies and other forms for defensive ones." Huntington, "U.S. Defense Strategy," 36.

42. See Liddell Hart, "Aggression and the Problem of Weapons."

43. Mearsheimer, *Conventional Deterrence*, 26–27. Mearsheimer does not factor in the relative costs of offensive strategies compared to defensive ones, but the importance of relative costs is implicit in his argument. Tanks made possible the blitzkrieg strategy, which meant that offense could achieve victory at lower cost than if infantry attacks were employed. Mearsheimer's basic argument in *Conventional Deterrence* is that a "blitzkrieg provides the means to score a rapid and decisive victory" (63), allowing states to avoid costly attrition warfare.

44. Mearsheimer adopts this line of argument in claiming that precision-guided munitions make blitzkrieg attacks less feasible and less likely. See Mearsheimer, *Conventional Deterrence*, 189–202.

45. The conference was officially known as the "League of Nations Conference for the Reduction and Limitation of Armaments." For examples of how the record of the conference is used to support the argument that offensive and defensive weapons cannot be distinguished, see Huntington, "U.S. Defense Strategy," 36; and Shimshoni, "Technology, Military Advantage, and World War I," 191 n. 6.

wanted to retain their offensive capabilities and to prevent reductions in their arsenals, not because it was impossible to tell the difference between offensive and defensive forces.<sup>46</sup>

#### STATES FAIL TO PERCEIVE THE OFFENSE-DEFENSE BALANCE CORRECTLY

##### *The Argument*

Many writers have noted that states frequently fail to perceive the offense-defense balance correctly. They accept that the offense-defense balance exists, at least in theory, but argue that it is rarely measured accurately.<sup>47</sup> Proponents of this view have advanced two general explanations for this tendency to misperceive the offense-defense balance. First, it is inherently difficult to assess the impact of weapons technologies, particularly when they have not been employed in war. States are often slow to recognize the impact of new and untested technologies.<sup>48</sup> Whether weapons innovations favor the offense or the defense may only become clear after the new technologies have been employed in several wars.<sup>49</sup> Even then, understanding of the implications of weapons technologies for the offense-defense balance may lag behind the pace of technological innovation.

Second, the inherent difficulties that states have in perceiving the offense-defense balance correctly are compounded by motivated biases. Bernard Brodie points out that "there is nothing automatic about the influence of weaponry on warfare. That influence has to be exerted initially through the minds of men, who make judgments, first, about the utility of weaponry or other devices, and, second, about the tactical and strategic implications of the general adoption of these new weapons or devices. These judgments can be exceedingly stubborn and may long fly in the face of what to succeeding generations will look like the

46. See Boggs, *Attempts to Define and Limit "Aggressive" Armament in Diplomacy and Strategy*, 41, 48–49, 98–100; and Snyder, "Limiting Offensive Conventional Forces," 67 n. 75. David Goldfischer concludes that while the Geneva Conference "did not founder on an inability to distinguish offense from defense, its failure clearly contributed to subsequent beliefs that such a task was technically impossible." Goldfischer, *The Best Defense*, 32.

47. See, for example, Jervis, "Realism, Game Theory, and Cooperation," 340–41. Jervis optimistically notes that the security dilemma may be easier to resolve if it is rooted in perceptual factors instead of the structure of the international system.

48. 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), 263–306; and Steven E. Miller, "Technology and War," *Bulletin of the Atomic Scientists* 41, no. 11 (December 1985): 47–48.

49. "By definition, new technologies will lack the authoritative aura cast by success in battle," argues Colin Gray. Gray, "New Weapons and the Resort to Force," 257.

most overwhelming contrary evidence.”<sup>50</sup> Three types of biases frequently distort perceptions of the offense-defense balance: biases shaped by policy preferences, military biases in favor of existing doctrines and policies, and military biases in favor of the offensive.

*Biases shaped by policy preferences.* Those who advocate a particular strategy are often inclined to interpret the evidence about the offense-defense balance to suit their preferences.<sup>51</sup> The British military writer B. H. Liddell Hart, for example, claimed that offense had the advantage when he believed that an offensive military doctrine on the European continent served British interests, but later changed his mind and claimed that defense had the advantage when he felt that Britain should avoid a continental commitment.<sup>52</sup>

*Military biases for the status quo.* Military organizations are likely to interpret the offense-defense balance in a way that supports a continuation of current policies. Many observers have argued that this status-quo bias means that “military organizations tend to adapt new technologies to existing doctrinal preferences and practices.”<sup>53</sup>

*Military biases for the offensive.* The offensive orientation of professional militaries creates perceptual biases that are especially likely to distort perceptions of the offense-defense balance. Many scholars argue that military organizations tend to exaggerate the strength of the offensive. Militaries prefer offensive doctrines because such doctrines enable them to increase their budgets and autonomy, as well as enabling them to take the initiative on the battlefield.<sup>54</sup> Thus they tend to exaggerate

50. Brodie, “Technological Change, Strategic Doctrine, and Political Outcomes,” 292

51. Jervis, “Realism, Game Theory, and Cooperation,” 340.

52. See Mearsheimer, *Liddell Hart and the Weight of History*, 6, 44–46, and chap. 5; and Mearsheimer, *Conventional Deterrence*, 29 n. 9 [218].

53. Miller, “Technology and War,” 47. See also Trevor N. Dupuy, *The Evolution of Weapons and Warfare* (Indianapolis: Bobbs-Merrill, 1980), 301–7; Brodie, “Technological Change, Strategic Doctrine, and Political Outcomes,” 299–300; Posen, *The Sources of Military Doctrine*, 1984, 55; and Gray, *Weapons Don’t Make War*, 43. The enduring military preference for horse cavalry in the twentieth century is often cited as evidence of the status-quo bias of military organizations. See Edward L. Katzenbach, Jr., “The Horse Cavalry in the Twentieth Century: A Study in Policy Response,” in Art and Waltz, eds., *The Use of Force*, 161–80. Matthew Evangelista argues that the pattern of grafting new technology onto existing strategies was evident in the Soviet military. See Evangelista, *Innovation and the Arms Race: How the United States and the Soviet Union Develop New Military Technologies* (Ithaca: Cornell University Press, 1988), 7–8.

54. See Posen, *The Sources of Military Doctrine*, 47–51; Jack Snyder, “Civil-Military Relations and the Cult of the Offensive, 1914 and 1984,” *International Security* 9, no. 1 (summer 1984): 108–46 at 119–22; Snyder, *The Ideology of the Offensive: Military Decision Making and the Disasters of 1914* (Ithaca: Cornell University Press, 1984), 24–25,

threats posed by potential offensives conducted by their adversaries, and to overestimate the potency of their own offensive strategies and capabilities. These military organizational biases lead states to exaggerate the extent of any prevailing offensive advantage and to ignore evidence of a defensive advantage.

If states do not perceive the offense-defense balance correctly, critics argue, then the theory may not offer adequate explanations of the origins of war: “The hypothesis that the likelihood of war is increased when the military technology favors the offense is theoretically plausible only on the basis of the rather strong assumption that decision-makers correctly perceive the offensive/defensive balance.”<sup>55</sup>

### Responses

Even if these criticisms are true, they do not undermine the usefulness of the offense-defense balance as an explanatory variable. Offense-defense theory can accommodate these objections in three ways. First, even if states do not understand the offense-defense balance and consistently fail to perceive it correctly, it would still have effects on their behavior. Variables in a system often can affect actors that do not understand them and have no ability to directly measure their value. An example from economics helps to illustrate this point. Individual workers in an economy cannot measure the unemployment rate by themselves. (Of course, in modern societies, government statistics on unemployment are usually available, but they depend on arbitrary definitions and limited sources of data and are sometimes suspect.) Nevertheless, the unemployment rate helps to determine the conse-

210–11; Stephen Van Evera, “Why Cooperation Failed in 1914,” *World Politics* 38, no. 1 (October 1985): 80–117 at 97–98; Stephen Van Evera, “Primed for Peace,” *International Security* 15, no. 3 (winter 1990/91): 7–57 at 18–19; and Scott D. Sagan, “The Perils of Proliferation: Organization Theory, Deterrence Theory, and the Spread of Nuclear Weapons,” *International Security* 18, no. 4 (spring 1994): 66–107 at 76. Long before the recent scholarly examination of the issue, commentators saw a military bias in favor of the offensive. B. H. Liddell Hart, for example, in 1937 argued: “Attack is so deeply rooted in the military tradition that its power to succeed, as a natural result of the offensive spirit properly directed, is the first article of the soldier’s creed.” Quoted in Mearsheimer, *Liddell Hart and the Weight of History*, 108. See also Boggs, *Attempts To Define and Limit “Aggressive” Armament in Diplomacy and Strategy*, 70–71. For arguments that there is not an inherent military bias in favor of the offensive, see Elizabeth Kier, “Culture, Politics, and Military Doctrine: France and Britain Between the Two Wars,” Ph.D. dissertation, Cornell University, 1992, to be published in revised form as *Imagining War: British and French Military Doctrine Before World War II* (Princeton: Princeton University Press, forthcoming, 1995); and Jeffrey Legro, “Military Culture and Inadvertent Escalation in World War II,” *International Security* 18, no. 4 (spring 1994): 108–42.

55. Levy, “The Offensive/Defensive Balance of Military Technology,” 221–22.

quences of the actions of individual workers. An unemployed worker who seeks a good job at a good wage may be repeatedly disappointed when unemployment is high. He or she eventually may have to settle for a less desirable or lower-paying position, or to remain unemployed. The system will "reward" workers who are willing to settle for less by enabling them to find jobs sooner. It will "punish" those who have excessive expectations by leaving them unemployed or forcing them to look for a longer period. These consequences will emerge even if no individual worker can measure the overall unemployment rate.

Variations in the offense-defense balance cause similar patterns to emerge in international politics. If a state does not recognize that defense has a substantial advantage in a given international system, it may adopt an offensive security strategy. It will threaten other states and provoke them to balance against it. Because defensive military capabilities offer a more efficient route to security in a world of a defensive advantage, the state adopting an offensive strategy also will find itself "producing" security less efficiently than other states. All other things being equal, it will deplete its capabilities more rapidly than other states. If it goes to war with another state or other states that have at least roughly equivalent power capabilities, it is likely to be defeated, because it will not have a sufficient advantage in overall power to offset the technological advantage of the defense. Thus states that adopt offensive strategies in a world of a defensive advantage will be "punished" by the system, even if they cannot measure the offense-defense balance. States that adopt defensive strategies are more likely to be "rewarded." Over time, the processes of socialization, competition, and selection may tend to cause states in a world where defense has the advantage to adopt defensive strategies.<sup>56</sup> Even if these processes do not operate, however, offense-defense theory's propositions will explain systemic outcomes. The theory will explain why states that adopt offensive strategies when defense has the advantage (and vice versa) ultimately will be punished. Offense-defense theory will function as a useful theory of international politics – a theory that explains international outcomes and consequences, as opposed to the foreign policies of individual states. As one prominent skeptic of the offense-defense

56. On the processes of socialization, competition, and selection, see Waltz, *Theory of International Politics*, 73–77, 127–28; and Waltz, "Reflections on *Theory of International Politics: A Response to My Critics*," in Keohane, ed., *Neorealism and its Critics*, 322–45 at 330–32. For an application of these concepts to the problem of military doctrine, see Posen, *The Sources of Military Doctrine*, 67–69, 75. For an argument that suggests that there are limits to how much competition, selection, and socialization can change the behavior of states, see Zakaria, "Realism and Domestic Politics," 193–96.

balance concept concedes: "Hypothesis [sic] regarding the consequences of war, on the other hand [as compared to hypotheses about decisions to go to war], are properly defined in terms of the 'objective' [offense-defense] balance."<sup>57</sup>

Second, offense-defense theory can be employed as a theory of foreign policy if the explanatory variable is defined as *perceptions* of the offense-defense balance.<sup>58</sup> Respecifying the theory in these terms turns it into a useful explanation of, for example, decisions to initiate war.<sup>59</sup> Jack Snyder argues that "the addition of perceptual factors makes the security dilemma a more powerful theory of international conflict."<sup>60</sup> Lawrence Freedman agrees that "Beliefs about the relative strengths of the defence and the offence, even if erroneous, can exercise a powerful influence."<sup>61</sup> Many significant applications of the theory rely on perceptions of the offense-defense balance to explain foreign policy.<sup>62</sup> Some might argue that this modification reveals the amorphous nature of the offense-defense balance as a variable, but many central concepts in international relations theory are hard to measure. Power, for example, is extraordinarily difficult for states to measure correctly.<sup>63</sup>

57. Levy, "The Offensive/Defensive Balance of Military Technology," 222.

58. Some might argue that the leaders of states do not even attempt to perceive and measure the offense-defense balance. Instead, they ignore this variable and focus only on determining whether their military strategies will succeed or fail. I am indebted to John Mearsheimer for bringing this criticism to my attention. Even if this criticism is true, international outcomes would still be affected by the objective, if unrecognized, offense-defense balance. Moreover, decisions about which strategies to adopt and whether they will succeed or fail will often be influenced by implicit judgments about the offense-defense balance, even if these judgments do not focus directly on assessing offensive and defensive technologies. Finally, the historical record reveals many examples of leaders making judgments about the offense-defense balance. See Snyder, *The Ideology of the Offensive*; Snyder, *Myths of Empire*; Michael Howard, "Men Against Fire: Expectations of War in 1914," *International Security* 9, no. 1 (summer 1984): 41–57; Van Evera, "The Cult of the Offensive and the Origins of the First World War"; and Christensen and Snyder, "Chain Gangs and Passed Bucks."

59. Jack Levy argues that the theory is flawed without this proper specification: "If the offensive/defensive balance is not defined in terms of the perceptions of decision-makers (and in most conceptualizations it is not so defined), then the hypothesis [that the likelihood of war is increased when the military technology favors the offense] is technically misspecified." Levy, "The Offensive/Defensive Balance of Military Technology," 222.

60. Snyder, "Perceptions of the Security Dilemma in 1914," 164. See also Snyder, *The Ideology of the Offensive*, 214–16; and Van Evera, *Causes of War*, vol. 1, *The Structure of Power and the Roots of War*, conclusions.

61. Freedman, *Strategic Defence in the Nuclear Age*, 6. Quester, *Offense and Defense in the International System*, 11, concurs: "What statesmen believe about war and weapons is crucial."

62. See, for example, Van Evera, "The Cult of the Offensive and the Origins of the First World War"; and Christensen and Snyder, "Chain Gangs and Passed Bucks."

63. On the general ambiguities surrounding the concept of power, see Inis L. Claude, *Power in International Relations* (New York: Random House, 1962); Richard J. Stoll

Scholars who focus on the centrality of power in international relations often operationalize the variable as perceptions of power.<sup>64</sup>

Third, offense-defense theory can yield propositions about foreign policy and international politics if the theory also specifies the conditions under which states are likely to perceive the offense-defense balance correctly. Modifying the theory in this manner involves incorporating additional unit-level variables that help to explain when states are likely to be free of misperceptions. If military organizations, for example, tend to exaggerate the power of the offense, accurate perceptions of the offense-defense balance may become more likely when the domestic influence of the military is reduced. Other domestic-political and organizational factors also may influence perceptions of the offense-defense balance. Much of the recent work that applies offense-defense theory has addressed these questions.<sup>65</sup>

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and Michael D. Ward, eds., *Power in World Politics* (Boulder: Lynne Rienner, 1989); and Michael P. Sullivan, *Power in Contemporary International Politics* (Columbia: University of South Carolina Press, 1990). Some observers argued that power became particularly difficult to measure in the 1970s. See Stanley Hoffmann, "Notes on the Elusiveness of Modern Power," *International Journal* 30, no. 2 (spring 1975): 183-206. Difficulties in measuring power were evident in the debate over American decline in the late 1970s. See Paul M. Kennedy, *The Rise and Fall of the Great Powers: Economic Change and Military Conflict from 1500 to 2000* (New York: Random House, 1987); Samuel P. Huntington, "The U.S.—Decline or Renewal?" *Foreign Affairs* 67, no. 2 (winter 1988/89): 76-96; Aaron L. Friedberg, "The Political Economy of American Strategy," *World Politics* 41, no. 3 (April 1989): 381-406; and Joseph S. Nye, Jr., *Bound to Lead: The Changing Nature of American Power* (New York: Basic Books, 1990). For other discussions of the practical difficulties statesmen confront when they try to measure power, see Aaron L. Friedberg, *The Weary Titan: Britain and the Experience of Relative Decline, 1895-1905* (Princeton: Princeton University Press, 1988); and William Curti Wohlforth, *The Elusive Balance: Power and Perceptions during the Cold War* (Ithaca: Cornell University Press, 1993).

64. See Fareed Rafiq Zakaria, "The Rise of a Great Power: National Strength, State Structure, and American Foreign Policy, 1865-1908" (Ph.D. dissertation, Harvard University, 1993), 39-40, 69; Dale C. Copeland, "Realism and the Origins of Major War" (Ph.D. dissertation, University of Chicago, 1993), 34; and William C. Wohlforth, "The Perception of Power: Russia in the pre-1914 Balance," *World Politics* 34, no. 3 (April 1987): 353-81. Making the argument that scholars should focus on perceptions of power, not "objective," quantitative indicators of aggregate resources, is Wohlforth, "Realism and the End of the Cold War," *International Security* 19, no. 3 (winter 1994/95): 91-129 at 97-98, 107-9, 127.

65. Glaser, "Political Consequences of Military Strategy," 514-19; Snyder, *The Ideology of the Offensive*; and Snyder, *Myths of Empire* emphasize the organizational and domestic political factors produce the flawed national evaluative capabilities that cause misperceptions. Works that emphasize individual psychological biases include Robert Jervis, *Perception and Misperception in International Politics* (Princeton: Princeton University Press, 1976); Richard Ned Lebow, *Between Peace and War: The Nature of International Crisis* (Baltimore: The Johns Hopkins University Press, 1981); and Deborah Welch Larson, *The Origins of Containment: A Psychological Explanation* (Princeton: Princeton University Press, 1985).

#### OTHER VARIABLES ARE MORE IMPORTANT THAN THE OFFENSE-DEFENSE BALANCE

A third set of criticisms argues that other variables are more important than the offense-defense balance in explaining the outbreak of wars, the outcomes of wars, and the strategies that states adopt in preparation for wars. These criticisms are rooted in the more general argument that international security studies, particularly in the United States, has tended to place too much emphasis on military and technological factors.<sup>66</sup> According to this line of argument, war, victory, and strategy can be more effectively explained by at least three other variables: (1) the political intentions and goals of states; (2) the quantitative distribution of power among states; and (3) the domestic political, economic, and social systems of states. These arguments do not claim that the offense-defense balance is a variable that does not exist or that it is never perceived correctly, but instead are implicit arguments for the superiority of other theories in explaining many, if not most, significant international outcomes.

#### *The Arguments*

First, these criticisms suggest that the political intentions of states are more important as explanatory variables than the offense-defense balance. This kind of argument suggests that the course of international politics and foreign policy is shaped by whether states harbor aggressive designs, whether they are status quo or revisionist powers, and whether they embrace expansionist ideologies and beliefs.<sup>67</sup> At the Geneva Disarmament Conference, French foreign minister Tardieu said: "The only way to discover whether arms are intended for purely de-

66. For a thoughtful example of this type of argument, see Marc Trachtenberg, *History and Strategy* (Princeton: Princeton University Press, 1991), 45, 97-99. See also Russell F. Weigley, *The American Way of War: A History of United States Military Strategy and Policy* (New York: Macmillan, 1973), 416.

67. Robert Jervis argues that: "The most far-reaching changes in international politics involve changes in national goals and values." Jervis, "Realism, Game Theory, and Cooperation," 343. In general, this criticism reflects a more general debate over the importance of classifying states as revisionist or status quo powers. Classical realists tended to emphasize this distinction. See Arnold Wolfers, "The Balance of Power in Theory and Practice," in Wolfers, *Discord and Collaboration: Essays on International Politics* (Baltimore: The Johns Hopkins University Press, 1962), 125-26; Henry A. Kissinger, *A World Restored: Castlereagh, Metternich, and the Problem of Peace, 1812-1822* (Boston, Mass.: Houghton Mifflin, 1957); Randall L. Schweller, "Bandwagoning for Profit: Bringing the Revisionist State Back In," *International Security* 19, no. 1 (summer 1994): 72-107; and Schweller, "Tripolarity and the Second World War," *International Studies Quarterly* 37, no. 1 (March 1993): 73-103. The distinction receives little attention in Waltz, *Theory of International Politics*.



fensive purposes or are held in a spirit of aggression is in all cases to inquire into the intentions of the country concerned."<sup>68</sup> Colin Gray bluntly states that "there has never been an aggressive weapon, only aggressive owners and operators of weapons." He emphasizes that "The most important fact to know about a weapon is who owns it" and that "policy intentions can shift far more rapidly than the capabilities of armed forces."<sup>69</sup> This argument suggests that states define their interests, goals, intentions and strategies independently of the offense-defense balance.<sup>70</sup> States with offensive political intentions and revisionist goals adopt offensive strategies and thus choose to acquire offensive military capabilities.<sup>71</sup> In particular, decisions to go to war are much more likely to be influenced by the goals of states instead of by the perceived or actual offense-defense balance. Lawrence Freedman argues that "in decisions on war and peace...it is rare that...a clear-cut view on whether defence or offence is likely to prevail...will be decisive."<sup>72</sup> Colin Gray believes that "States fight for political reasons" and that "Wars are fought for political reasons and on a political timetable: they are not fought because strategic analysts enthuse over the expected effectiveness of new weapons."<sup>73</sup> Several historians argue that the First World War exemplifies how clashes of vital national interests – irreconcilable goals of states – not perceptions of the offense-defense balance or decisions to adopt offensive strategies, cause war.<sup>74</sup>

Second, critics of the explanatory power of offense-defense theory argue that the quantitative difference in overall power between two states is far more likely to determine the outcome of a war than is the

68. Quoted in Boggs, *Attempts To Define and Limit "Aggressive" Armament in Diplomacy and Strategy*, 40.

69. Gray, *Weapons Don't Make War*, 45, 29, and 30. See also *ibid.*, 9, 31, 33, 35, 37, 39, and 4. Gray argues that "Offense and defense are not so much qualities in particular weaponry but rather purposes in the hearts and minds of policymakers." Gray, *House of Cards*, 68. See also *ibid.*, 26–27, and 28–37.

70. Gray, *Weapons Don't Make War*, 28, 37. On the subjectivity of definitions of vital interests, see Bernard Brodie, *War and Politics* (New York: Macmillan, 1973), chap. 8. For a discussion of how domestic political factors generate myths that shape decisions to pursue offensive, expansionist strategies regardless of the offense-defense balance, see Snyder, *Myths of Empire*.

71. Huntington, "U.S. Defense Strategy," 37; and Gray, *Weapons Don't Make War*, 28. Shimshoni, "Technology, Military Advantage, and World War I," 197–201, argues that states *should* create the offensive or defensive military capabilities they need to implement their grand strategies successfully.

72. Freedman, *Strategic Defence in the Nuclear Age*, 15.

73. Gray, "New Weapons and the Resort to Force," 242, 258.

74. See David Kaiser, "Deterrence or National Interest? Reflections on the Origins of Wars," *Orbis* 30, no. 1 (spring 1986): 5–12 at 6; and Trachtenberg, *History and Strategy*, chap. 2. Sagan, "1914 Revisited," adopts a similar interpretation.

offense-defense balance.<sup>75</sup> Scott Sagan argues that "focusing on the effects of military technology on the 'offense-defense balance'...fails to consider adequately the quantity or quality of military forces opposed to one another in a particular campaign."<sup>76</sup> Colin Gray states the argument clearly, claiming that the offense-defense balance does not determine which side wins in war, pointing out that "since wars are not waged between symmetrical 'billiard ball' states, adversaries may overwhelm quality with quantity."<sup>77</sup> He observes that "decision in war has generally been achievable, albeit often at a very high price."<sup>78</sup>

Third, some states may suffer from domestic political, social, and economic constraints that prevent them from utilizing technology that would enable them to adopt an optimal military strategy. Some societies are unable to absorb and use new technologies.<sup>79</sup> Before the Second World War, for example, France was unable to exploit the potential for a blitzkrieg strategy, because its military and political leaders were too incompetent to understand the implications of the tank for modern warfare and because domestic opposition blocked conscription for periods of longer than one year, less than the two years that the military felt would be necessary to maintain a force capable of offensive operations.<sup>80</sup> Egypt and Israel both have had many tanks, but Egypt's domestic constraints have prevented it from using them as an offensive weapon.<sup>81</sup> In some cases, such constraints may make the difference be-

75. Of course, imbalances in aggregate quantitative power also may contribute to the initiation of wars, because states may be more tempted to attack when they have a quantitative advantage.

76. Sagan, "1914 Revisited," 161.

77. Gray, "New Weapons and the Resort to Force," 241.

78. Gray, *Weapons Don't Make War*, 23.

79. Colin Gray argues that "some societies are better able to adjust their military organizations to new weapons than are others." Gray, "New Weapons and the Resort to Force," 238. For a discussion of why some societies cannot apply military doctrines used in other societies, see Michael Howard, *War in European History* (Oxford: Oxford University Press, 1976), 78–79. On the importance of differences in administrative skill, see Klaus Knorr, *The Power of Nations: The Political Economy of International Relations* (New York: Basic Books, 1975), 63–67. For a more general discussion of how social structure influences military effectiveness, see Stephen Peter Rosen, "Military Effectiveness: Why Society Matters," *International Security* 19, no. 4 (spring 1995): 5–31.

80. See Posen, *The Sources of Military Doctrine*, 118–20; and Kier, *Imagining War*.

81. Jonathan Shimshoni argues that: "In modern times, the Israelis have had a considerable advantage in confronting their Arab neighbors because of social-cultural differences. Israeli society, steeped in western liberalism, educated, industrialized, and urban, has an advantage in deploying, using, and maintaining sophisticated mechanical and electronic tools of war, and in operating with the small-unit independence and overall coordination necessary for modern warfare, both offensive and defensive." Shimshoni, "Technology, Military Advantage, and World War I," 194–95, citing Dan Horowitz, "Flexible Responsiveness and Military Strategy: The Case of the Israeli

tween victory and defeat in war, reinforcing the argument that the offense-defense balance does not determine the outcomes of wars.<sup>82</sup> In the 1866 Austro-Prussian War, technology may have influenced the outcome, but so did Austro-Hungarian political, economic, and social weaknesses.<sup>83</sup> In other cases, domestic constraints may shape a country's choice of military doctrine and strategy without having such disastrous consequences.

### Responses

To a considerable extent, offense-defense theorists who argue for the importance of the offense-defense balance in international politics are aware of these potential objections. Arguments that state intentions, aggregate state power, and domestic structure are important explanations of war and peace, victory and defeat, and military doctrine and strategy do not undermine offense-defense theory, for two general reasons. First, these criticisms are only valid against claims that the offense-defense balance is the most important factor in explaining international politics and foreign policy. Few theories – including offense-defense theory as I have explicated it – make such sweeping, monocausal arguments.<sup>84</sup> None of these three variables is incompatible with offense-defense theory. All three could complement the offense-defense balance in a broader theory of international politics. The distribution of power among states, for example, is a systemic variable that is fully compatible with offense-defense theory. The goals and intentions of states, as well as their domestic, political, social, and economic systems, and the competence of their leaderships, are unit-level variables that can be layered on to the offense-defense balance and other systemic variables to provide more precise and detailed explanation of particular events or policies. A state led by a leader with the aggressive designs of a Hitler, for example, is likely to be threatening in any international

Army," *Policy Sciences* 1, no. 2 (summer 1970). See also Mearsheimer, *Conventional Deterrence*, 26, 156.

82. Gray argues that: "Lurking behind every military technological explanation of national success or failure lies a plethora of political and social candidates for explanations" and "the course of war is generally recognized to be influenced by a host of factors apart from technological prowess." Gray, "New Weapons and the Resort to Force," 239, 257. Miller, "Technology and War," argues that "Technological superiority is no guarantee of military success" (47).

83. Gray, "New Weapons and the Resort to Force," 239.

84. Most theorists who have developed and applied the concept of the offense-defense balance have made clear that it is only one variable among many in international politics. They have, however, tried to call attention to the offense-defense balance because they believe that this variable has been neglected or misunderstood.

system, but it will be much more threatening when offense is relatively easy and inexpensive. The distribution of power in the international system always matters, but gross disparities in power matter less when the defense has such a large advantage that power cannot easily be translated into offensive capabilities. A state's domestic structure may impel it to adopt a defensive security strategy, but the consequences of following such a course will depend on the offense-defense balance. If the defense has a large advantage, states that adopt defensive strategies will be more likely to survive.

Second, criticisms that argue that other variables have greater explanatory power than the offense-defense balance can only be assessed empirically. Each of these criticisms is implicitly an alternative theory that could, in principle, be tested against offense-defense theory to reveal which has the greatest explanatory power in particular cases. This exercise would probably be somewhat artificial, because, as I argue above, the variables can be integrated into a more comprehensive and illuminating theory. If one were, however, to test the relative explanatory power of offense-defense theory against the other implicit theories, the result would almost certainly depend on the type of question asked. For explaining very broad patterns of international politics, for example, the distribution of power among states might be the most useful place to start. A state as powerful as Russia, for example, is likely to appear more threatening to Lithuania than Lithuania appears to it, even if there is a large defensive advantage. To explain the outbreak of particular wars, however, the offense-defense balance might be a helpful variable to consider, especially when the two sides are relatively equal.<sup>85</sup> In head-to-head tests, it is not clear that the offense-defense balance would always be the weaker variable. When there is a large offensive advantage, even states with benign intentions may be forced to adopt aggressive policies or to start wars.<sup>86</sup> States with less power sometimes win wars – sometimes by adopting an offensive strategy.<sup>87</sup> Also, the international system may compel states to overcome domestic constraints if they want to survive.<sup>88</sup>

85. According to George Quester: "Defensive advantages drastically reduce the risk of war between two equal powers, and they may even discourage attack when one side noticeably outnumbers the other. (They do not necessarily eliminate war as an option, however, when one side's army is three times as powerful as the other's.)" Quester, *Offense and Defense in the International System*, 122.

86. Jervis, "Cooperation Under the Security Dilemma," 187.

87. Huntington, "Conventional Deterrence and Conventional Retaliation in Europe," 47.

88. Waltz, *Theory of International Politics*, 123–28, emphasizes that international pressures force states to imitate the successful practices of other states if they want to

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## THE OFFENSE-DEFENSE BALANCE ALWAYS FAVORS THE DEFENSE

*The Argument*

A fourth criticism of offense-defense theory says that the offense-defense balance virtually always favors the defense. Many analysts, starting with Clausewitz, have concluded that "*the defensive is intrinsically stronger than the offensive.*"<sup>89</sup> Because the variable is essentially a constant, the offense-defense balance does not explain many international outcomes. Jack Snyder argues that theories of the offense-defense balance "are very weak explanations for international conflict, primarily because defensive military operations are almost always easier than offensive ones."<sup>90</sup> Other variables have greater theoretical promise to explain changes in international politics and foreign policy.

*Responses*

Even if it is true that the defender usually has the advantage in land warfare, this condition does not undermine offense-defense theory, for three reasons. First, variations in the magnitude of the defensive advantage may have important consequences for outcomes in international politics. If there is a very large defensive advantage, states will have to invest very large amounts of resources in offensive capabilities in order to have any prospect of launching a successful offensive. Only when

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survive. States will either make domestic changes or "fall by the wayside" (118). Charles Tilly, ed., *The Formation of the National States in Western Europe* (Princeton: Princeton University Press, 1975), argues that competition between states in early modern Europe forced each to develop a stronger domestic administrative system. See also Brian M. Downing, *The Military Revolution and Political Change: Origins of Democracy and Autocracy in Early Modern Europe* (Princeton: Princeton University Press, 1992), for the argument that an intensifying security competition forced most states in early modern Europe to abandon medieval constitutional forms of government and to embrace autocratic systems that could mobilize domestic resources for war. Barry R. Posen, "Nationalism, the Mass Army, and Military Power," *International Security* 18, no. 2 (fall 1993): 80-124, argues that military defeats by nationalistic Napoleonic France compelled Prussia to adopt domestic reforms designed to inculcate a spirit of nationalism in its people. Andrew F. Krepinevich, "From Cavalry to Computer: The Pattern of Military Revolutions," *The National Interest*, no. 37 (fall 1994): 31-42 at 37 claims that after a military revolution: "Military organizations typically recognize the potentially great penalties for failing to maintain their competitive position."

89. Carl von Clausewitz, *On War*, edited and translated by Michael Howard and Peter Paret (Princeton: Princeton University Press, 1976), 358. Emphasis in original. Clausewitz does, however, emphasize the need for offensive or counteroffensive action to secure victory. See also John J. Mearsheimer, "Assessing the Conventional Balance: The 3:1 Rule and Its Critics," *International Security* 13, no. 4 (spring 1989): 54-89, at 59-62. For other arguments that the defense almost always has the advantage, see Gray, *Weapons Don't Make War*, 14, 20.

90. Snyder, "Perceptions of the Security Dilemma in 1914," 156-57. Snyder therefore argues for giving greater weight to perceptual factors.

there are large disparities in aggregate power will offensive action appear tempting and likely to succeed. Even the most powerful states will deplete their resources if they adopt offensive strategies in a world with a large defensive advantage. Because the offense-defense balance is a continuous variable, not a dichotomous one, terms like "offense-dominance" and "defense-dominance" are misleading.<sup>91</sup> My formulation of offense-defense theory recognizes that the offense-defense balance is a continuum.

Second, the magnitude of the defensive advantage matters because states are more likely to misperceive the offense-defense balance when there is a small defensive or offensive advantage, or when it is ambiguous whether offense or defense has the advantage. Many argue that in 1914 the offense-defense balance favored the defense, but the balance may have been ambiguous enough to invite misperceptions.<sup>92</sup>

Third, the general tendency for defense to have an advantage is less theoretically relevant if the explanatory variable is defined as perceptions of the offense-defense balance. If one uses perceptions of the offense-defense balance as an explanatory variable in a theory of foreign policy - as opposed to using the objective offense-defense balance in a theory of international politics - then a constant objective defensive advantage does not predict the policies that states pursue.

STATES CREATE OFFENSIVE AND DEFENSIVE ADVANTAGES  
TO SERVE THEIR STRATEGIC GOALS*The Argument*

A final criticism of offense-defense theory suggests that the offense-defense balance is not an exogenous variable but is instead shaped by the attempts of states to devise strategies and to create technological and other advantages that will serve their strategic goals. States do not simply accept the existing offense-defense balance of technology; they undertake military-technological innovations that strengthen offense or defense depending on whether they have offensive or defensive national strategies.<sup>93</sup> This argument, in effect, raises the question: where do offensive and defensive advantages come from? Its answer is that the

91. See Sagan, "1914 Revisited," 161.

92. Sagan, for example, argues that the offense/defense balance in 1914 was far from clear, noting that "the Schlieffen Plan came very close to succeeding and the Germans almost did win the short war they had expected to fight." Sagan, "1914 Revisited," 159. See also Mearsheimer, *Liddell Hart and the Weight of History*, 67.

93. This argument is made most prominently in Shimshoni, "Technology, Military Advantage, and World War I," 197-201.



offense-defense balance is a dependent variable that is manipulated by states instead of being an explanatory (independent) variable that influences international outcomes and foreign policies: "Technology and its effective military application are dependent, not independent variables."<sup>94</sup>

### Responses

There may be considerable truth in the argument that states try to shape the offense-defense balance to create the offensive or defensive advantages that they deem necessary for their strategies. Nevertheless, this criticism does not undermine offense-defense theory, for the following reasons. First, some technological changes which influence the offense-defense balance are not the result of state-sponsored attempts at military innovation. New technologies may be developed for civilian purposes and only later applied militarily.<sup>95</sup> The internal combustion engine, the automobile, and manned flight all contributed to dramatic changes in warfare in the twentieth century. None was pioneered for military purposes. The technological advances were exogenous to the pursuit of advantages deemed necessary for a particular strategy.

Second, almost all explanatory variables – including the technological offense-defense balance – can be regarded as dependent variables in some other theory. Offense-defense theory analyzes the consequences of changes in the offense-defense balance. The fact that such variables are caused by something else does not pose problems for the theory unless it can be shown that those causes are endogenous or are more powerful explanations for grand strategy and military policy.

Third, the offense-defense balance is not shaped by the activities of a single state. The technology that can be applied for military purposes is generated by many states. Once military technologies are deployed by one state, others usually find a way to emulate or steal them.<sup>96</sup> Thus the offense-defense balance is not shaped by the efforts of one state to develop advantages that will serve its strategy.

94. Gray, *Weapons Don't Make War*, 39.

95. For an argument that this is actually the most common pattern, see Krepinevich, "From Cavalry to Computer," 39.

96. Jack Levy argues that "the leading powers in the system...are often comparable in terms of power and technology." Levy, "The Offensive/Defensive Balance of Military Technology," 227. See also Krepinevich, "From Cavalry to Computer," 37–38.

### CONCLUSION: THE UTILITY OF OFFENSE-DEFENSE THEORY

IN SUMMARY, none of the widely-repeated criticisms of the concept of the offense-defense balance undermines the logical basis for offense-defense theory. Many of these criticisms rest on false assumptions about the theory: that the theory classifies individual weapons as offensive or defensive, that it claims that all of international politics can be explained by variations in the offense-defense balance, and that it assumes that the offense-defense balance is a dichotomous variable, not a continuous one. As I have explicated the theory, none of these assumptions is true. In particular, it is possible to distinguish between offensive and defensive capabilities and strategies, and many of the critics of the offense-defense balance make such distinctions in their own analysis, either implicitly or explicitly making judgments about the offense-defense balance. The theory does not assume that individual weapons can be classified as offensive or defensive. Instead, it recognizes that new technologies can produce new weapons that reduce the costs of adopting an offensive or defensive strategy.

Some criticisms call attention to the need to explain the foreign policies of particular states by looking at their perceptions of the offense-defense balance. Others stress that the offense-defense balance must be combined with other variables to construct powerful and comprehensive explanations. Offense-defense theory as I have explicated it addresses these problems, rendering the criticisms inapplicable. Proponents of offense-defense theory and their critics should stop arguing over whether weapons can or should be classified as offensive or defensive. The challenge confronting offense-defense theory is to formulate testable hypotheses and to test them empirically. Properly specified, offense-defense theory should be able to explain many aspects of international politics that the distribution of power does not account for.