Polarity, The Offense Defense Balance, and War
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Bipolar systems are inherently more stable than multipolar configurations of power, Kenneth Waltz argues. His empirical justification for this conclusion relies on the multipolar systems that preceded the two world wars and the bipolar Cold War. The weakness of Waltz’s argument is the small number of cases and the failure to consider alternative explanations for different levels of war in the three periods. In another historical period of both multi- and bipolarity—Europe from 1495 to 1559—I have found that polarity cannot account for the constant level of instability across a change in polarity in the system. Instead, the offense–defense balance, which includes the technical military balance, the cumulativeness of power resources, and strategic beliefs, explains instability in the period. Drawing on this alternative theory, I reassess the high level of stability associated with the Cold War and speculate on the level of stability we can expect in the post-Cold War period.

In Theory of International Politics (1979) Kenneth Waltz argues, that a single variable, polarity, can explain the level of instability, or war, in the world. He argues that this instability is associated with great powers’ strategies toward each other and toward their allies. In limiting himself to the single case of post–World War II bipolarity, Waltz weakens the presumptive general validity of his theory. The evidence from sixteenth-century Europe shows that polarity does not explain the level of instability in an international system, though it does partially explain alliance strategy. Instead, the level of instability in multipolar Europe of 1495–1521 and bipolar Europe of 1521–59 can be explained by a comprehensive definition of the offense–defense balance in the period.

The state of the technical offense–defense military balance, the ease with which power resources cumulate, and the nature of strategic beliefs about the international system combine to form a more powerful theory of international politics for the period. But since sixteenth-century Europe also is only a single case and the level of instability does not vary significantly across these two periods of different polarity, it is not possible to assert with confidence that the offense–defense balance is either a necessary or a sufficient condition for the observed outcomes. In sum, while confidence in the validity of polarity as a predictor of important international phenomena is seriously challenged, solid support for the alternative explanations still awaits definitive demonstration.

I shall review the claims Waltz makes for the explanatory power of polarity, propose an alternative explanation, the offense–defense balance, comprising the technical military balance, the cumulativeness of power resources, and strategic beliefs, and test the competing explanations against the historical record of multipolar Europe of 1495–1521 and bipolar Europe of 1521–59. I shall conclude
with a reinterpretation of the long peace and the post–Cold War world based on the findings generated by this case study.

The Predictions of Polarity

International Stability

Waltz argues that a bipolar system is more stable than a multipolar one and defines stability as changes in the number of poles (1979, 135). Waltz, however, also acknowledges that stability is the avoidance of great power war, or war between the poles (p. 202). I use a yet-broader definition of instability, one developed by Jack Levy (1983), because it provides a more comprehensive set of instability indicators against which to test the competing theories than a change in the number of poles or the presence of interpolar war.

Levy identifies four ways to measure instability. These are the frequency, magnitude, duration, and severity of war. Frequency refers to how often war breaks out over a given period; magnitude denotes how many poles are involved in a given war; duration refers to the length of wars; and severity is measured in terms of battle deaths per war-year in proportion to the populations of the involved states.

Alliance Strategies

For Waltz, the relative importance of allies is an intervening variable between polarity and instability. He argues that alliance strategies in a bipolar system have a benign effect on systematic stability, while under multipolarity such strategies lead to wars involving the poles.

In bipolar systems, allies are unimportant, hence there is no destabilizing competition for allies. Moreover, allies' interests are not considered when developing grand strategy; thus, the poles can concentrate on countering the other's power. Under multipolarity, there are too many poles to permit any of them to draw clear and fixed lines between allies and enemies and to be certain of what is happening in the system. But there are too few poles for a state to remain indifferent to the defection of an ally. Hence, there is a tendency to pass the buck (rather than balance against emerging hegemonic challengers) and to make one's strategy hostage to other states (Waltz 1979, 163–71).

An Alternative Theory: The Offense–Defense Balance

The offense–defense balance consists of three elements. The first is the technical offense–defense military balance concerning the relative military advantages enjoyed by the offense or defense on the battlefield, that is, castles versus cannons, machine guns versus trenches, and so on (Queser 1977; Levy 1984, 223–25). The second element is the cumulativity of power resources, or the relative availability of the resources that underlay military capability and the relative ease of their extraction by occupying states. The third element is the set of strategic beliefs held by the leaders of the great powers, their relative concern for their reputation, or credibility.\footnote{Note:}

The Technical Offense–Defense Military Balance

Offensive and defensive advantage should be separated into tactical and strategic categories. Tactical offensive advantage is the ability to seize a piece of an enemy's territory at less cost to oneself than it requires for the defender to protect it or retrieve it. This approximates Mearsheimer's (1983) notion of "limited aims." A strategic offensive advantage is the ability to seize and/or occupy as much of an enemy's territory as is necessary to destroy its military potential at less cost to oneself than is required for the defender to protect its territory or retake it. The
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deduced consequences of the military offense-defense balance for the different elements of instability are shown in Table 1.

In the case of both tactical and strategic offensive advantage, one should expect frequent wars, since a state can expect both short- and long-term gains from initiating the war. But the wars should be short, as the attacker will be able to overrun any opposition quickly. Battle casualties should be high, given the disproportionate losses generally suffered by an army on the attack. There should be a greater incidence of interpolar wars, given the enormous promised gains from victory.

Where there is an advantage for the strategic offensive, but a tactical defensive advantage, wars will still be frequent, given the enormous gains promised by the ease of conquest once the initial resistance is overcome, but not as frequent as in the former, doubly offensive case. Wars will be long, due to that initial resistance; and casualties should therefore be more severe than in the previous case as well. The prospect of high gains will inhere again to greater interpolar warfare.

In the case of strategic defensive advantage and tactical offensive advantage, wars will be frequent, due to the ability to seize and hold territory, but not as frequent as the first two cases, since the incentives for warfare are less. Wars should be short, because as soon as the limited aims are achieved, there is no further advantage to be gained from continuing warfare. Casualties will be low, due to the relative ease of attaining limited territorial gains. Interpolar wars should be less frequent, given the lack of prospective strategic gains from such wars.

Where there is both strategic and tactical defensive advantage, wars will be infrequent due to the double disincentive. What wars do occur will be short, due to the relative futility of trying to press home the attack. Casualties will be low, due to the absence of strategic warfare, but will be higher than the previous case, due to the losses suffered while trying to achieve limited aims against the advantaged defender. There will be still fewer cases of interpolar war than in the previous case, due to the same double disincentive.

The Cumulativity of Power Resources

If military technology were the only determinant of the balance between offense and defense in the international system, Table 1 would be sufficient to predict the level of instability. But the potential value of the conquest itself must be included in a more comprehensive conceptualization of the balance. This cumulativity of power resources includes both the availability and the extractability of power resources.

Available power resources are the material elements that constitute military and economic power in a given historical period. The resources of power and their geographical locales change over time. In the nineteenth century, for example, if Germany were to contemplate attacking another state, it would consider the grain, coal, iron ore, and industrial endowments of that state; it would not consider petroleum, bauxite, and uranium deposits to be

<table>
<thead>
<tr>
<th>Strategic Advantage to the</th>
<th>Offense</th>
<th>Defense</th>
</tr>
</thead>
<tbody>
<tr>
<td>Offense</td>
<td>Frequency</td>
<td>Duration</td>
</tr>
<tr>
<td>High</td>
<td>Short</td>
<td>High</td>
</tr>
<tr>
<td>Defensive</td>
<td>Frequency</td>
<td>Duration</td>
</tr>
<tr>
<td>High</td>
<td>Short</td>
<td>Low</td>
</tr>
</tbody>
</table>

Table 1. Effects of the Offense-Defense Military Balance on Instability
of much relevance. The greater the relevance of another state’s resources to increasing one’s own power, the greater the incentive to go to war. For instance, competing great powers lost interest in Bohemian copper and tin mines after iron replaced bronze in the manufacture of cannon and cannonballs in the late sixteenth century (McNeill 1982, 87–89). In terms of Table 1, all elements of instability should be exacerbated to the degree that resources of power are available in other states in the system.

The extractive power of the potential conquerer includes the relative ease of occupation or administration and the relative ability to transfer whatever power resources are available to the conquering state. One should expect that the lower the costs of occupation and the more readily transferable the resources of power, the greater the instability in the system.

Strategic Beliefs

The ideas held by the ruling elites of great powers about how the international system operates comprise three elements that can vary along the offense–defense continuum. Offensive strategic beliefs assume rulers to be very concerned that if they allow another pole to gain a military victory anywhere in the international arena, these opposing rulers will learn three lessons that will redound to the disadvantage of the defeated state: (1) the rulers of the victorious state will believe that it can successfully challenge the positions of the recently defeated state even in areas of the globe that are strategically vital to the defending state; (2) the defeated state’s allies will begin to question the advisability of relying on the former’s security guarantees, given its recent record, and hence will tend to bandwagon with, rather than balance against, any future efforts at expansion by the recent aggressor; (3) states that are located in the neighborhood of the recent victory will fall like dominoes into the lap of the aggressor, rather than redoubling their efforts to balance against this ascendant threat. Defensive beliefs, on the other hand, assume rulers to be unconcerned about their credibility, confident that allies will balance, not bandwagon, and that dominoes will not fall after their adversary’s victories.

Defining a Pole

Waltz offers two different sets of criteria for identifying a state as a pole. Under conditions of bipolarity, no third power should be able to challenge the top two (Waltz 1979, 98). This implies that Waltz’s unit of value is limited to economic and military capabilities. But he also argues that to qualify as a pole, a state must be measured in terms of size of population and territory, resource endowment, economic capability, military power, political stability, and competence (p. 131).

Military power, however, is the resultant of the other six elements, not an equivalent part of a bundle of power. Indeed, much of Waltz’s theory rests on precisely the assumption that military power is the only capability that merits measurement in determining a state’s candidacy for polar status.² Moreover, it is hard to acquit Waltz of the charge of committing a “reductionist” error in terming political stability and competence as systemic variables.

I adopt Waltz’s core argument that to determine the polarity of an international system, one must measure the distribution of military capabilities among the actors in that system. However, while accepting this sparest of measures, in order to make my definition more comprehensive, I also use population figures and government
revenues to determine a state's polar status.3

Multipolar Europe, 1495–1521

The European system was multipolar from 1495 to 1521. Prior to Charles V's consolidation of the Habsburg Empire, there were six states of relatively equal military power: England, France, Habsburg Austria/Germany, Spain, Venice, and the Ottoman Empire. Table 2 shows the distribution of capabilities for the period of multipolarity. Each of the six states in the multipolar period ranked in the top three in at least one category of power. Austria, while it lagged in military power and treasury receipts, had the third largest population.4 England had a relatively small population, navy, and revenue base, but it fielded the third largest army in the period (Oman 1937, 291–305; Wernham 1971, 62, 87, 93). France, while first in revenue, and second in population and size of army, was near the bottom in terms of the major strategic weapon of the day—the ocean-going warship (Ady 1957, 359–63; Ehrenberg 1928, 74–75, 204–6, 289; Knecht 1984, 20–49; Laffan 1957, 200–207; Oman 1937, 26–174). Spain, with few people, revenues, and soldiers, still deployed the second-largest navy in the period (Batista

Bipolar Europe, 1521–59

The European system was bipolar from 1521 to 1559, the two poles being the Habsburg and Ottoman Empires. Table 3 displays the distribution of capabilities in the period. By 1521, Charles V was the ruler of Spain, the Netherlands, Habsburg Austria and Germany, Sicily, and Naples; and all the rest of Italy paid some form of tribute to him, with the exception of Venice. While the average size of his army totaled 62 thousand men, several times in the period he assembled armies of over 100 thousand.5 The emperor also regu-
larly raised fleets of more than two hundred ships. Perhaps the truest measure of Charles V's power in the period was his ability to raise money on foreign capital markets. From 1521 to 1556, he raised a total of 45 million ducats from German and Genoese bankers.

The Ottomans, as before, deployed the largest armies in Europe. They often exceeded 100 thousand men, the largest being 150 thousand during one of Suleiman's campaigns up the Danube. In addition, the sultan was able to assemble fleets of more than two hundred vessels in the Mediterranean (Merriman 1944, 64–67, 79–112, 155, 213, 238–49; Oman 1937, 657, 690–700; Parry 1958, 514–25).

France slipped to nonpolar status in the period. Its average army was barely half the size of imperial forces. Indeed, it exceeded the imperial average only once, in 1543–44, when Francis I mustered almost 75 thousand men to thwart the combined invasion of Charles V and Henry VIII. Unlike the Habsburg and Ottoman poles, and even nonpolar England and Venice, France lacked any significant naval power (Braudel 1972, 2:904, 921–29, 941; Hale 1958, 490–504; Oman 1937, 37, 46, 65, 79, 175–97, 232, 254–77, 292, 341–46, 700; Wernham 1971, 156–73). Its revenues also declined from the previous period.

England under Henry VIII greatly expanded its military capabilities in the period, fielding armies equal to France's in size. This was accomplished by doubling the Crown's income. Henry VIII also began the first sustained English naval buildup. Though dwarfed by the later efforts of Elizabeth I in the second half of the century, Henry was able to deploy 100 ships by the 1540s.

The Venetian Empire, as before, remained a naval power, its armies being negligible compared to England and France, let alone the Habsburgs and Ottomans. Even its hundred-galley standing reserve was outstripped in the Mediterranean by the naval forces of both the Habsburgs and Ottomans. Though its revenues increased by 50% in the period, they were not nearly sufficient to maintain polar status for Venice (Lane 1934, 107, 141–51; Lane 1973, 318–23; Mallett and Hale 1984, 474–80).

The shift from a multipolar Europe of six powers to a bipolar system dominated by the Habsburg and Ottoman Empires is manifest in several ways: one can (1) compare the total power in the system held by the top two states under the two different types of polarity; (2) consider the gap between the power held by these two states and the power of the next most powerful state in the system; or (3) compare the amount of power held by the Habsburg and Ottoman Empires to that held by the United States and Soviet Union in the postwar period.

### Table 3. The Distribution of Power in Bipolar Europe, 1521–59

<table>
<thead>
<tr>
<th>State</th>
<th>Population</th>
<th>%</th>
<th>Soldiers</th>
<th>%</th>
<th>Ships</th>
<th>%</th>
<th>Revenue</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Habsburg Empire</td>
<td>30.4</td>
<td>40</td>
<td>62</td>
<td>29</td>
<td>200+</td>
<td>32</td>
<td>8.5</td>
<td>32</td>
</tr>
<tr>
<td>Ottoman Empire</td>
<td>21.0</td>
<td>28</td>
<td>74</td>
<td>35</td>
<td>200+</td>
<td>32+</td>
<td>9.5</td>
<td>36</td>
</tr>
<tr>
<td>France</td>
<td>17.0</td>
<td>22</td>
<td>32</td>
<td>15</td>
<td>20</td>
<td>3</td>
<td>5.0</td>
<td>19</td>
</tr>
<tr>
<td>England</td>
<td>6.0</td>
<td>8</td>
<td>31</td>
<td>15</td>
<td>100</td>
<td>16</td>
<td>2.1</td>
<td>8</td>
</tr>
<tr>
<td>Venice</td>
<td>1.6</td>
<td>2</td>
<td>12</td>
<td>6</td>
<td>100</td>
<td>16</td>
<td>1.5</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>76.0</td>
<td>100</td>
<td>211</td>
<td>100</td>
<td>620+</td>
<td>100</td>
<td>26.6</td>
<td>100</td>
</tr>
<tr>
<td>Average</td>
<td>76.0</td>
<td>100</td>
<td>42</td>
<td>20</td>
<td>124</td>
<td>20</td>
<td>5.3</td>
<td>20</td>
</tr>
</tbody>
</table>
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The Top Two States. The shift from multi- to bipolarity is supported by the figures for population and army size and dramatically demonstrated by shares of strategic power. The evidence for revenues, however, is not consistent with such a shift; although, as noted above, the data on Ottoman revenue is only an approximation. In the multipolar period, the two most populous states, France and the Ottoman Empire, accounted for 59% of the system's total population. In the bipolar period, the Ottoman and Habsburg Empires had 68% of the total population. In the earlier period, France and the Ottoman Empire deployed 54% of the system's soldiers, while in the subsequent period, the two dominant empires fielded 64% of the system's armies.

The biggest difference between the two periods is in the area of strategic weaponry. In terms of naval power, although there was no change in the total amount controlled by the top two states, they were not the same two states. In the period of multipolarity, Venice and Spain, not the Ottoman Empire or France, combined to deploy 66% of the system's naval power. In contemporary perspective, this is as if the United States and Soviet Union were dominant in population, GNP, and armies, but France and China deployed two-thirds of the system's nuclear warheads. In the subsequent period, the Habsburgs and Ottomans possessed 64% of the system's warships. Only in terms of revenues were both systems bipolar.

The Third Top State. Another way of measuring the system's bipolarity is to assess the gap in power between the weaker of the top two states and the third most powerful. In a bipolar configuration of power, there should be a very large difference; while under multipolarity, there should be no gap. The data on military power strongly confirm a shift to bipolarity in 1521. Population figures are mildly inconsistent, while the change in the revenue gap is very inconsistent with such a shift.

France's average army of the multipolar period, 35 thousand men, was only 30% bigger than England's army of 27 thousand. In the bipolar period, the Habsburg army of 62 thousand was almost twice as large as its French counterpart. In the multipolar period, Spain's navy of 90 ships was a mere 12.5% larger than the Ottoman Empire's fleet. In contradistinction, the naval power of the Habsburg and Ottoman Empires was fully twice the size of English and Venetian naval forces in the bipolar period.

In the period of multipolarity, Austria's population of 12 million was only 20% less than France's population of 15 million. Subsequently, France's population of 17 million was 19% less than the Ottoman Empire's. In the multipolar era, French revenues were a very large 218% greater than Venetian income of 1.7 million ducats per year. In the subsequent period, Habsburg revenues were only 70% greater than French income.

The Post-World War II System. Finally, one can compare the distribution of capabilities in Europe from 1521–1559, to the degree of bipolarity in the post-World War II world, Waltz's paradigmatic case. In fact, the sixteenth-century case is more bipolar than the postwar system.10 In terms of population, the Habsburg and Ottoman Empires are ranked first and second, respectively. The combined population of the Soviet Union and the United States is only one-half of China's 1.1 billion and only two-thirds of India's 810 million. Habsburg economic power, as measured by government revenues, was 70% more than French income. The Soviet GNP of $2.2 trillion is almost $800 billion (more than 26%) less than Japan's GNP of almost $3 trillion. The average Habsburg army was almost twice the size of the average French army. The U.S.
army of 767 thousand is almost three times smaller than the Chinese army, less than 70% the size of the Indian and Vietnamese armies, 80% the size of Iraq’s army, and only 31% larger than the Turkish army.

The only area in which bipolarity is deeper today than it was in sixteenth-century Europe is in strategic weaponry. While the average Habsburg or Ottoman fleet was more than twice as large as the Venetian or English navies and more than 10 times more powerful than French naval efforts, Soviet strategic nuclear forces today, numbering 12,400 strategic warheads, are 15 times larger than the British forces of 817 warheads and 20 times the size of the French nuclear force. And even here, given the reductions foreseen by START I and II, and the planned deployments of France and Britain over the next decade, the gap between the Soviet Union and the third-ranking nuclear power will get much smaller.

In sum, the European system was multipolar from 1495 to 1521 and bipolar from 1521 to 1559. Moreover, that bipolarity was even deeper in terms of population, economic power, and army size than post–World War II bipolarity. The only exception is in strategic weaponry, though there was still a sizable gap between the Habsburgs or Ottomans and their nearest competitors, and the gap between the Soviet Union and its nuclear counterparts is closing fast.

Testing the Alternative Theories

Multipolar Europe, 1495–1521

The offense–defense balance predicts a significant amount of instability in this period due to tactical offensive military advantages, available power resources, and offensive strategic beliefs. This instability should be mitigated, however, by the facts that the strategic defensive has the advantage and that power resources are not easily extracted. Waltz’s theory of polarity would simply predict greater instability in this period than in the subsequent, bipolar period.

The Technical Military Balance. Levy (1984) concludes that there was a historical consensus that the European system was offense–dominant from 1495 to 1525. He does not, however, distinguish between the strategic and tactical components of this concept. In fact, the system should be characterized as tactically offensive, but strategically defensive. The offense was tactically advantaged for several reasons (Hale 1957, 1958; Mallett and Hale 1984; Nef 1950; Oman 1924, vol. 2; Oman 1937).

Military technology favored the tactical offensive. Artillery demonstrated the weakness of fortifications against metal cannonballs. Bastioned fortifications, affording defensive advantage, did not become commonplace until the early seventeenth century. The defensive advantage of the pike square gave way to the offensive combination of field artillery, arquebuses, and heavy cavalry assaults. Artillery was also useful in driving an opponent from his fixed position into cavalry assaults.

There were many reasons why this period was characterized by strategic defensive advantage (Hale 1958; Laffan 1957; Lockyer 1974; McNell 1982; Merriman 1944; Parry 1958; Petrie 1949). The first concerns the character of mercenary armies. The latter often refused to fight after being refused pay increases on the battlefield. Beyond their unreliability, mercenary armies also hindered strategic gains by their method of financing. The promise of plunder and loot was the cheapest way to pay for mercenaries’ services. It was hard to press any attack when one’s soldiers disintegrated in search of booty, rather than taking advantage of a strategic breakthrough. Such plundering of the countryside so alienated the victimized
populations that the strategic strength of armies was dissipated by the need to leave garrisons for policing duties along all axes of advance.

In addition, the need to besiege fortified towns drained state treasuries quickly, since each episode was a lengthy affair. So, even if cannonfire ultimately could reduce the walls of any town, it was an enormous burden on the finances of the warring state and significantly reduced the length of time any army could sustain a campaign.

The other time factor that contributed to the advantage of strategic defense was the change of seasons. Winter was perhaps the greatest obstacle to any definitive defeat of another pole. The Ottoman wars in this period are graphic examples of this insurmountable disadvantage. A major offensive up the Danube was hard enough, with rivers to be forded and swamps to be traversed. Vast stores of food had to be brought along to guard against starvation caused by the onset of winter and the scorched earth tactics of the defenders. Each campaign in this period had to be broken off due to these supply problems, no matter how close to strategic victory the sultan’s forces might be. This is why Ottoman campaigns generally lasted only three to four months a year, hardly sufficient time to score a strategic victory. This world of advantages to the tactical offensive, but also to the strategic defensive, predicts frequent, though short, wars with low levels of casualties and of great power involvement.

The Cumulativity of Power Resources. In terms of the ease with which power resources cumulated, this period was mixed. Power resources were available, but their extraction was a difficult and costly matter. It was generally believed that money was interchangeable with military power (Mattingly 1955). And money could be acquired by conquest simply by becoming the new depository of a defeated population’s tax payments. An attacking state could also receive money directly from its victim in exchange for allowing the latter to survive. Charles VIII, for example, was paid 250 thousand ducats by the Firenzans to spare their city; and Ferdinand V was paid 500 thousand ducats by the residents of Oran for the same favor. If one recalls that Spain’s average revenue was 1.5 million ducats per year, one can understand the enormous attraction of prospective gains from war. The great powers were also attracted by the prospect of gaining control over important grain producers, a factor that fueled the lengthy French–Spanish struggle over Abruzzi and Apulia.

While there were significant power resources available in the system to create incentives for war, the occupation and administration of these territories were difficult. Excessively harsh or exploitative rule gave rise to unrest, which invited other states to try to replace the present occupier. Though the French are widely regarded as having been the least adept at holding on to their gains, Spain too suffered revolts.

Brutal occupation policies had a two-edged effect on the offense–defense balance in the system. It made strategic gains far less likely, but it also made wars aimed at supplanting present rulers far more fruitful gambits.

In overall terms, the cumulativity of power resources in this period can provide only indeterminate predictions about the level of instability in the system. On the one hand, material power resources themselves were abundant, available, and fungible into wealth and military capability. On the other hand, these gains proved to be ephemeral due to inept and brutal occupation policies by the conquerors, which made extraction very problematic.

Strategic Beliefs. The strategic beliefs held
by statesmen in this period also appear to push the system toward offense-dominance. There is evidence (admittedly quite thin) that there was fear that dominoes would fall and fear that allies would bandwagon, either of which would require a military response.

Max Bergher, lord of Zevenbergen, a Dutch nobleman, wrote to Charles V in 1519 to argue for the acquisition of Württemberg. His reasoning was that if Württemberg were not taken, it would “join with the Swiss Confederation, which could not help but draw in Swabia and the Rhineland as far as Cologne.” Given this, it was equally important to maintain control of Haguenau, for otherwise the Decapolis (a group of Alsatian principalities) would “join with the Swiss and what would then become of Strasbourg may well be conceived” (Brandi 1939, 121). This is a pure image of falling dominoes, starting with Württemberg in present Southwest Germany through contiguous territories up the Rhine River valley to Strasbourg and beyond.

Images of bandwagoning allies are evident in a 1496 letter from Maximilian to Ferdinand in which Maximilian urges the Spanish king to make war against France immediately, since the German princes would follow him if he prospered but would join with Charles VIII of France if he hesitated. As it was put during the period, a prince’s “reputation” was important above all else (Koenigsberger 1975, 157).

According to the technical military balance alone, the multipolar European system from 1495 to 1521 should be characterized by frequent, short wars, with relatively low casualties and relatively few interoplar conflicts. There should be even greater instability than this, however, due to the offensive character of the strategic beliefs held by statesmen in the period. The effects of the nature of power resource cumulation are indeterminate. Polarity simply predicts more systemic instability under these multipolar conditions than in the bipolar conditions prevailing in the subsequent period.

Bipolar Europe, 1521–59

While Waltz would predict much more stability in this bipolar period, the offense-defense balance would not predict any significant change from the multipolar period. This period is one of strategic defensive dominance and growing tactical defensive advantage but also one where power resources are available and extracted with increasing ease. In addition, offensive strategic beliefs are the norm.

The Technical Military Balance. The offense-defense balance shifted marginally toward greater defensive advantage in this period as tactical gains became somewhat more difficult to achieve and strategic positions remained impregnable.

Plunder remained a major obstacle to strategic gains, with soldiers looting, rather than fighting. Better fortifications also quickly dissipated the strategic strength of armies. Moreover, it was necessary to capture each one of these fortified towns along an axis of advance; otherwise, one’s supply lines would be vulnerable. This required leaving more troops to garrison these newly won positions, further depleting the army’s forces. As in the previous period, campaigns were limited by distance and weather. Neither Charles nor Suleiman the Magnificent were able to mount significant operations even one thousand miles from home.

The tactical defensive was strengthened somewhat in the period by using field fortifications and entrenched positions, the object being to induce one’s enemy to attack unwisely against artillery and arque-
bus fire. As Oman put it, "Waiting became a much-used strategy" (1937, 38). In this sense, military technology favored he who had both the money and time to prepare defenses and wait out the attacking forces.

**The Cumulativity of Power Resources.** While military technology contributed to a marginal shift toward increased defensive advantage in this period of bipolarity, it simultaneously became somewhat easier to accumulate power resources. Power resources remained available, and their extraction became a bit less difficult.

How leaders in this period thought of the fruits of conquest is revealed in a letter from Charles V to his brother Ferdinand in Austria. In discussing his plans for Italy he wrote that he would try to reconcile the Venetians to myself by offering to ratify the last treaty that was made with them, as if they had never infringed it, provided they agree to pay me at least 100,000 ducats a year; [I] will place Duke Sforza in possession of Milan on condition he pays me 600,000 ducats and renounces in my favor all right to the Duchy of Bar . . . and that he provides for the distribution of the salt of Milan according to my directions. (Bradford 1850, 142)

The Ottoman campaigns up the Danube gave it access to the fertile plains of the river, increasing its revenues and grain supplies. Money and other power resources are both desired and available in this period.

There is also evidence that the other element of cumulativity, the relative ease and cost of extraction and occupation, began to favor the offense in the period. Apparently having learned the lessons of the previous period in Italy, Charles became quite adept at appointing natives to the public offices in his dominions. Visitors to Sicily were impressed that the local subjects expressed voluntary allegiance to the Habsburg Empire (Koenigsberger 1969).

**Strategic Beliefs.** Fear of bandwagoning allies and falling dominoes continued to be evident in the perceptions of statesmen under bipolarity. As Charles's ambassador to France, de Praet, reported to him in 1526: "As to the Italians who are here, they are talking of becoming as loyal to Your Majesty as they have hitherto been to the King of France, in hopes that each of them will recover his lands and houses" (Bradford 1850, 199). This bandwagoning mentality among the Italians occurred in the wake of the imperial capture of Francis I at Pavia. Charles's imperial councillor Gattinara argued in 1527 that once Charles had established his hegemony over all of Italy, all of his other dominions "would flock to do him service" (Brandi 1939, 257). While victories were perceived to lead to cumulating gains, it was feared that defeats would set off falling dominoes.

Don Diego Mendoza, Charles's ambassador to Venice, wrote to him in 1543 that he must never give up Milan, "[for] if it falls into the hands of France your friends will desert you on the [Italian] Peninsula." In his final testament before abdicating, Charles warned his son Phillip "never to yield an inch to France as they will take an ell [yard]" (Brandi 1939, 479, 584). Charles obviously believed in the need to maintain credibility in the eyes of the French.

According to the technical military balance alone, the period from 1521 to 1559 should see slightly fewer wars than the preceding period, due to the gradual advantages being gained by the tactical defense. However, power resources remained available and their ease of extraction increased. Strategic beliefs additionally contributed to offensive advantage. In overall terms, the offense-defense balance predicts very little, if any, change in the level of instability in the system. Polarity, on the contrary, predicts a marked reduction in war between the poles.
The Empirical Evidence and the Competing Theories

Systemic Instability

The international situation in sixteenth-century Europe became only marginally more stable after the shift from multipolarity to bipolarity. This record completely contradicts the predictions of polarity. This lack of significant change is consistent with the overall state of the offense–defense balance in the system, which changed only marginally and in cross-cutting fashion. The evidence supports the conditions of the technical military balance and strategic beliefs as predictors of stability, but is inconsistent with the greater ease of accumulating power resources in the system. Of course, since this is only one case, I make no claims as to the general validity of the results for the alternative explanations; but polarity's validity as a predictor of systemic instability is clearly put in doubt.

The levels of instability in the two different periods of polarity are presented in Table 4. In the 26 years of multipolarity from 1495 to 1520 there is a maximum of 156 country-years of war (26 years multiplied by six poles). For example, the five years of war between Maximilian and Venice from 1508 to 1513 is actually 10 country-years of war. There were 98 country-years of war in this period, or almost 63% of the maximum possible. There were only two years of international peace in this period, in 1506 and 1520.

In the 39 bipolar years from 1521 to 1559 there is a maximum of 78 country-years of war between the two poles. However, there are also an additional 78 country-years of war that both poles can have with other nonpolar states in the system. Of these 156 possible country-years of war, there were 83 in this period, or somewhat more than one-half the possible frequency. There were only three years of international peace in the period. Hence, wars were only slightly less (16%) frequent under bipolarity than multipolarity.

As to magnitude, 66 of the 98 country-years of war in the multipolar period, or over two-thirds of the total, involved interpolar war, that is, war between two or more poles on one of their territories. The rest involved either wars fought by poles against each other but in third areas, like Milan, or against nonpoles, like Ferdinand’s expeditions in Northern Africa. Fifty of the 83 country-years of war in the bipolar period, or more than 60%, involved interpolar war. Again, these
figures evince only negligibly less (10%) instability across the two types of polarity.

In the multipolar period there were 26 discrete wars, lasting a total of 58 years. So, for this period, the average war lasted a little less than 27 months. In the bipolar period there were 25 separate wars lasting a total of 59 years, yielding an average duration of a little longer than 28 months. The number of casualties per war year and casualties as a ratio of total system population also did not vary significantly (9%) across the two periods.

The measures of instability used in this study did not vary significantly across the change in polarity in the system. The frequency and length of wars, their severity, and their magnitude all appear to be completely unrelated to the distribution of capabilities in the system. This constant level of instability is consistent with the overall unchanged value of the offense-defense balance in the period. While the technical military balance became somewhat more defensive across the two periods, power resources became more cumulative, and strategic beliefs remained offensive. In terms of the specific elements of the offense-defense balance, the evidence of relatively constant, though marginally diminished, instability is consistent with the change in the technical military balance, inconsistent with the change in the cumulativity of power resources, and indeterminate with respect to strategic beliefs.

It should be stressed once again, however, that the evidence from this single case is most powerful in calling into question the causal power of polarity as a predictor of instability, less powerful in validating the offense-defense balance as the alternative explanation, and much less powerful in providing support for individual elements of that balance.14

Alliance Strategies

Multipolar Europe, 1495–1521. Waltz argues that under multipolarity, due to uncertainty and relative equality in military capabilities, the great powers pass the buck, allowing a challenger for hegemony in the system to succeed. There also will be frequent great power wars due to the rigid strategies necessarily adopted by poles solicitous of their allies' concerns.

Waltz's predictions are contradicted by the empirical record of multipolar Europe. The most persistent threat to establish hegemony over the system arose from France and its adventures in Italy. These gambits were repeatedly blocked by various coalitions; and there was great variety, not rigidity, in the composition of alliances.

When Charles VIII invaded Italy in 1494, he was met by the League of Venice, comprising Spain, the Papacy, Austria, and Venice. By the end of 1495, Charles was forced to retreat across the Alps. After Venice defeated Austria in Venezia-Giulia and Friulia and appeared to be making a bid for the domination of a substantial piece of the Italian peninsula, the League of Cambrai was formed in 1508 to counter this effort. It consisted of the Papacy, Austria, France, and Spain, indicative of just how flexible alignments were in the period.

Bipolar Europe, 1521–59. Waltz's predictions for alliance strategy under bipolarity prove correct in this period. Both the Habsburgs and the Ottomans concentrated their military energies on weakening the other, and both treated their allies as desirable but not very important. Some of the more illustrative examples for Charles V are found in his treatment of England. He used Henry VIII's forces in Northern France as a diversion in 1522–23, so that he could clear France out of Northern Italy (Oman 1937, 323). He
opposed Henry VIII’s divorce of Catherine of Aragon, an attitude that drove England into alliance with France in 1527. Charles also made a separate peace with France in 1544 while Henry’s forces were still besieging Boulogne, as Charles had already received his desired French concessions on Artois and Flanders.

Suleiman the Magnificent treated the French much as Charles treated England and Venice. He refused to send forces to help France when requested, while getting France to mount campaigns to divert Charles V during Ottoman marches up the Danube (Fisher 1957, 75; Merriman 1944, 132).

That the Ottomans were given the undivided attention of the Habsburgs is evidenced by the behavior of Charles’s fractious German principalities. They were ever eager to accept French and English military support in their periodic revolts against Charles’s orthodox Catholicism. But when any threat appeared from the East, they refused offers of such aid so as to unite against the common acknowledged threat. Even Martin Luther called on his co-believers to support the Habsburgs against the Ottomans.15

Contrary to Waltz’s concerns about the baleful effects of alliance strategies under multipolar conditions, the great powers in sixteenth-century Europe did not pass the buck when confronted by challenges for hegemony in the system. Instead, they continually balanced against the state that appeared the most threatening at any given moment. The offense-defense balance may help explain this balancing behavior.16

Christensen and Snyder (1990) argue that passing the buck is likely to occur when the system is defense-dominant, since it is clear that no state can feasibly execute a hegemonic strategy. When the system is offense-dominant, however, an equally pernicious strategy prevails—the creation of “chain gangs.” Evocative of the alliance relationships prior to World War I, chain gangs lead to rigid strategies designed to ensure that no ally defects from a coalition. Statesmen are anxious about such defections because in an offense-dominant world, no state can afford to lose any potential ally.

The alliance strategies that dominate in multipolar Europe from 1495 to 1521 cannot be called either passing the buck or forming chain gangs. Instead, they appear to be optimal balancing strategies and exhibit none of the negative qualities associated with either of the other two. The nasty dynamics analyzed by Christensen and Snyder appear to refer to the strategic technical military balance. When the strategic offensive has the advantage, states form chain gangs; when the strategic defensive has the advantage, they pass the buck.

However, when there is strategic defensive advantage, but also tactical offensive advantage, states both avoid the complacency of passing the buck and the overreaction of forming chain gangs. Instead, they adopt sensible and effective balancing strategies.

Great powers operating under such conditions can afford to behave moderately, for their own homelands are not immediately at risk. However, they are also compelled to remain alert, since limited territorial gains that might cumulate are possible. Precisely such a technical military balance characterizes multipolar Europe from 1495–1521, and the alliance strategies pursued by the great powers are consistent with such a balance.

The behavior of the Habsburg and Ottoman empires from 1521 to 1559 validate Waltz’s propositions about alliance strategies under bipolarity. Each pole regularly ignores the interests of its allies and concentrates its energies against the other. However, there is no evidence to support Waltz’s posited connection between these alliance dynamics and reduced instability. Instead, levels of instability remained virtually constant across the two periods of polarity.

Neither is economic interdependence
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(which Waltz argues mediates between polarity and war), a factor here. High levels of economic interdependence, which Waltz associates with multipolarity and greater instability, as well as low levels, are a function of the size of the units, not the distribution of power in the system. Bigger states, like the Habsburg and Ottoman empires, are more independent than the smaller states of Venice and England. In the multipolar period, interdependence correlated perfectly with size as well.17

Reinterpreting the Cold War and Its Aftermath

In light of polarity’s failure to make accurate predictions, a different explanation for the relative stability of the postwar period is required. The offense–defense balance provides such an alternative. Waltz argues that the postwar world has been stable due to bipolarity. In fact, bipolarity has had little to do with the absence of war between the Soviet Union and the United States. Waltz confounds polarity and strategic defense dominance.18 The postwar international system has achieved the ultimate in strategic defensive advantage—the ability to destroy the other no matter what the other chooses to do. While Waltz does entertain the notion that strategic defense dominance is the real cause of postwar stability, he states his preference for a bipolar nuclear world over a tripolar system.19

Waltz argues that the instability that does exist in the world is a consequence of the poles’ bias toward “overreaction” under bipolarity. He further argues that such instability is diminishing as a consequence of the “maturation” of the bipolar system (1979, 172, 203–4). However, the offense–defense balance provides an alternative to both “overreaction” and “maturation.”

The primary impetus for military actions in the postwar world has been strategic beliefs, that is, concern for credibility and fears of falling dominoes and bandwagoning allies. These perceptions are widely and deeply documented, for U.S. decision makers and Soviet leaders expressed similar concerns over possible losses in Vietnam and the Middle East.20 Waltz might call this phenomenon “overreaction”; but he argues that this factor is powerful only under bipolarity, and that under multipolarity, miscalculation and uncertainty cause instability. But this “overreaction” characteristic of strategic beliefs is found in sixteenth-century multipolar Europe and Jack Snyder (n.d.) has found ample examples in nineteenth-century Britain, Wilhelmine Germany, and imperial Japan. If strategic beliefs are found to operate in favor of instability irrespective of the distribution of capabilities, Waltz’s ascription of causality to both polarity and its consequences is unfounded.

The greatest limitation on instability in the postwar period, beyond strategic defense dominance, is not the “maturity” of the system but rather the rather low cumulativity of power resources. The power resources in this system are not at all like those of the sixteenth century or even those of the 1930s. Today, the economic power that undergirds a state’s military capacity is most rapidly advanced through technological innovation and invention and through the exploitation of human capital and ever-finer gradations in the international division of labor. An illustrative example is the U.S. response to the enormous income losses suffered as a result of OPEC petroleum price increases. It is far less costly today to develop alternative sources of oil and to master alternative sources of energy than to occupy and administer oil-rich lands in the Middle East. Twenty-five years ago this might not have been true. In fact, the international political
economic system in general is structured in such a way that it is virtually always cheaper to gain access to necessary raw materials and goods through international trade than through direct military intervention and occupation.21

Soviet size and relative autarky makes it a comparatively disengaged member of the international division of labor, which, in turn, inheres to the stability of the system. In this respect, size assumes a key role in preserving international stability. As Waltz argues (although from his conception of bipolarity), bipolar states increase their power through exploitation of domestic resources, rather than through external expansion.22

In sum, nuclear weapons that provide strategic defense dominance and the relatively noncumulative character of power resources explain postwar stability; bipolarity is irrelevant. Offensive strategic beliefs explain Soviet and U.S. conflict in peripheral areas of the globe; this set of beliefs, not polarity, is the root cause of "overreaction." If the offense--defense balance is the true cause of stability over the last forty-five years, we need not be so anxious about the post--Cold War world.23 A multipolar world is nothing to fear; the defensive advantage conferred by nuclear weapons and the lack of cumulating power resources implies a continuation of postwar stability.

Notes

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1. The term strategic beliefs was developed by Jack Snyder to describe a similar set of assumptions. See Snyder n.d. For theoretical and empirical treatments of such beliefs, see the contributions by Stephen Walt, Deborah Larson, Robert Jervis, and Ted Hopf in Jervis and Snyder 1990. See also Van Evera 1985, 80–117.

2. See, for example, his critique of those who believe that military power has been supplanted as the final arbiter of the international system (Waltz 1979, 183–93).

3. The absence of reliable data on GNP in the period turns out to be a blessing in disguise, since the value of government revenues is a very robust, if indirect, measure of a state's military power in the period. Revenues reflect the ultimate extractive power of the state; whereas GNP could be, and was, distributed among the church, nobility, and other groups that were competing with the sovereign for extractive authority. Moreover, since armies were largely mercenaries in the period, how much money a state could raise is a very good measure of its military power.

4. On Maximilian I's military power, see Sorokin 1962, vol. 3 and Laffan 1957, 212–17. I have converted all the currencies in the period into Spanish gold ducats based primarily on Benecke 1974, 268, 297, 363; Braudel 1972, 2:420, 471, 698; Ehrenberg 1928, 17, 116, 180; Knecht 1984, 47, 107–8. I recognize the rough qualities of all these estimates but do not expect they will have any significant effect on their use as the very broadest comparisons. On Austrian finances, in particular, see Kellenbenz 1976, 180–85.

5. That the data in the table are only "average" army size understates the enormous power differential between the Habsburgs and Ottomans and all the other states in the system. When the maximum armed forces generated by the two poles is compared to the figures for the other powers, it becomes more clear just how deeply bipolar Europe was from 1521 to 1556.


10. All statistics on population, GNP, size of army, and strategic forces are taken from International Institute for Strategic Studies 1989.
11. My discussion of the availability of power resources in this period relies on Ady 1957, 358; Ehrenberg 1928, 204; Fisher 1957, 34, 66; Mattingly 1955, 137, 182.

12. On the extractability of power resources, see Lockyer 1974, 209–10; Mallet and Hale 1984, 222–26; Oman 1937, 20; Parry 1957, 404; Petrie 1949, 16.


14. In order to further invalidate polarity as a necessary cause of either stability and instability and validate the offense–defense balance and each of its three components, it is necessary to test the competing theories in other historical cases. Athens versus Sparta, Rome versus Carthage, and England versus France at the turn of the eighteenth century could provide these additional cases.

15. Brandi 1939, 398–408; Parry 1958, 517. It should be noted that religion was not an important cause of wars from 1495 to 1589 in the European system. It did not become a major factor until Phillip II’s wars in the Netherlands in the last third of the century.

16. For another effort to use the structural variable of offense–defense to make determinate predictions about alliance dynamics under multipolarity, see Christensen and Snyder 1990.

17. On levels of economic interdependence, see Braudel 1972, 583–91; Clay 1984, 94–125, 209–18; Kortepeter 1972, 1–13; Rich and Wilson 1967, 158–71. I am grateful to Chaim Kaufmann for suggesting this argument to me.

18. My argument here takes issue with John Mueller’s (1988) assertion that nuclear weapons have been irrelevant to keeping the postwar peace. For a rejoinder, see Jervis 1988, 1989. For a discussion of the possible relevance of both nuclear weapons and polarity to the “long peace,” see Gaddis 1986.

19. Waltz 1979, 202. In fairness, it seems that Waltz has even further reconsidered his original arguments about polarity and nuclear weapons. He recently suggested that a multipolar world of the Soviet Union, United States, Germany, and Japan would not necessarily be unstable as long as the latter two countries were to acquire nuclear weapons. See Waltz 1990.

20. See, for example, the contributions of MacDonald, Larson, and Hopf in Jervis and Snyder 1990, and Hopf 1990, chaps. 2, 5.


22. Gilpin recognizes the extraordinary importance of Soviet disengagement from the international economic system as an obstacle on the path toward hegemonic war (1981, 239).

23. For an application of Waltz’s systemic theory to the regional subsystem of Europe that generates grave apprehensions about post–Cold War stability, see Mearsheimer 1990.

References


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