



THE TRAGEDY OF GREAT POWER POLITICS

JOHN J. MEARSHEIMER

"[John Mearsheimer's] target is the optimistic view of geopolitics that grew up after the cold war's end in 1989. He demolishes all the main components of that happy vision."
—The Economist

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Anarchy and the Struggle for Power

Great powers, I argue, are always searching for opportunities to gain power over their rivals, with hegemony as their final goal. This perspective does not allow for status quo powers, except for the unusual state that achieves preponderance. Instead, the system is populated with great powers that have revisionist intentions at their core.¹ This chapter presents a theory that explains this competition for power. Specifically, I attempt to show that there is a compelling logic behind my claim that great powers seek to maximize their share of world power. I do not, however, test offensive realism against the historical record in this chapter. That important task is reserved for later chapters.

WHY STATES PURSUE POWER

My explanation for why great powers vie with each other for power and strive for hegemony is derived from five assumptions about the international system. None of these assumptions alone mandates that states behave competitively. Taken together, however, they depict a world in which states have considerable reason to think and sometimes behave aggressively. In particular, the system encourages states to look for opportunities to maximize their power vis-à-vis other states.

How important is it that these assumptions be realistic? Some social scientists argue that the assumptions that underpin a theory need not conform to reality. Indeed, the economist Milton Friedman maintains that the best theories “will be found to have assumptions that are wildly inaccurate descriptive representations of reality, and, in general, the more significant the theory, the more unrealistic the assumptions.”² According to this view, the explanatory power of a theory is all that matters. If unrealistic assumptions lead to a theory that tells us a lot about how the world works, it is of no importance whether the underlying assumptions are realistic or not.

I reject this view. Although I agree that explanatory power is the ultimate criterion for assessing theories, I also believe that a theory based on unrealistic or false assumptions will not explain much about how the world works.³ Sound theories are based on sound assumptions. Accordingly, each of these five assumptions is a reasonably accurate representation of an important aspect of life in the international system.

Bedrock Assumptions

The first assumption is that the international system is anarchic, which does not mean that it is chaotic or riven by disorder. It is easy to draw that conclusion, since realism depicts a world characterized by security competition and war. By itself, however, the realist notion of anarchy has nothing to do with conflict; it is an ordering principle, which says that the system comprises independent states that have no central authority above them.⁴ Sovereignty, in other words, inheres in states because there is no higher ruling body in the international system.⁵ There is no “government over governments.”⁶

The second assumption is that great powers inherently possess some offensive military capability, which gives them the wherewithal to hurt and possibly destroy each other. States are potentially dangerous to each other, although some states have more military might than others and are therefore more dangerous. A state’s military power is usually identified with the particular weaponry at its disposal, although even if there were

no weapons, the individuals in those states could still use their feet and hands to attack the population of another state. After all, for every neck, there are two hands to choke it.

The third assumption is that states can never be certain about other states' intentions. Specifically, no state can be sure that another state will not use its offensive military capability to attack the first state. This is not to say that states necessarily have hostile intentions. Indeed, all of the states in the system may be reliably benign, but it is impossible to be sure of that judgment because intentions are impossible to divine with 100 percent certainty.⁷ There are many possible causes of aggression, and no state can be sure that another state is not motivated by one of them.⁸ Furthermore, intentions can change quickly, so a state's intentions can be benign one day and hostile the next. Uncertainty about intentions is unavoidable, which means that states can never be sure that other states do not have offensive intentions to go along with their offensive capabilities.

The fourth assumption is that survival is the primary goal of great powers. Specifically, states seek to maintain their territorial integrity and the autonomy of their domestic political order. Survival dominates other motives because, once a state is conquered, it is unlikely to be in a position to pursue other aims. Soviet leader Josef Stalin put the point well during a war scare in 1927: "We can and must build socialism in the [Soviet Union]. But in order to do so we first of all have to exist."⁹ States can and do pursue other goals, of course, but security is their most important objective.

The fifth assumption is that great powers are rational actors. They are aware of their external environment and they think strategically about how to survive in it. In particular, they consider the preferences of other states and how their own behavior is likely to affect the behavior of those other states, and how the behavior of those other states is likely to affect their own strategy for survival. Moreover, states pay attention to the long term as well as the immediate consequences of their actions.

As emphasized, none of these assumptions alone dictates that great powers as a general rule *should* behave aggressively toward each other. There is surely the possibility that some state might have hostile intentions,

but the only assumption dealing with a specific motive that is common to all states says that their principal objective is to survive, which by itself is a rather harmless goal. Nevertheless, when the five assumptions are married together, they create powerful incentives for great powers to think and act offensively with regard to each other. In particular, three general patterns of behavior result: fear, self-help, and power maximization.

State Behavior

Great powers fear each other. They regard each other with suspicion, and they worry that war might be in the offing. They anticipate danger. There is little room for trust among states. For sure, the level of fear varies across time and space, but it cannot be reduced to a trivial level. From the perspective of any one great power, all other great powers are potential enemies. This point is illustrated by the reaction of the United Kingdom and France to German reunification at the end of the Cold War. Despite the fact that these three states had been close allies for almost forty-five years, both the United Kingdom and France immediately began worrying about the potential dangers of a united Germany.¹⁰

The basis of this fear is that in a world where great powers have the capability to attack each other and might have the motive to do so, any state bent on survival must be at least suspicious of other states and reluctant to trust them. Add to this the “911” problem—the absence of a central authority to which a threatened state can turn for help—and states have even greater incentive to fear each other. Moreover, there is no mechanism, other than the possible self-interest of third parties, for punishing an aggressor. Because it is sometimes difficult to deter potential aggressors, states have ample reason not to trust other states and to be prepared for war with them.

The possible consequences of falling victim to aggression further amplify the importance of fear as a motivating force in world politics. Great powers do not compete with each other as if international politics were merely an economic marketplace. Political competition among states is a much more dangerous business than mere economic intercourse; the former can

lead to war, and war often means mass killing on the battlefield as well as mass murder of civilians. In extreme cases, war can even lead to the destruction of states. The horrible consequences of war sometimes cause states to view each other not just as competitors, but as potentially deadly enemies. Political antagonism, in short, tends to be intense, because the stakes are great.

States in the international system also aim to guarantee their own survival. Because other states are potential threats, and because there is no higher authority to come to their rescue when they dial 911, states cannot depend on others for their own security. Each state tends to see itself as vulnerable and alone, and therefore it aims to provide for its own survival. In international politics, God helps those who help themselves. This emphasis on self-help does not preclude states from forming alliances.¹¹ But alliances are only temporary marriages of convenience: today's alliance partner might be tomorrow's enemy, and today's enemy might be tomorrow's alliance partner. For example, the United States fought with China and the Soviet Union against Germany and Japan in World War II, but soon thereafter flip-flopped enemies and partners and allied with West Germany and Japan against China and the Soviet Union during the Cold War.

States operating in a self-help world almost always act according to their own self-interest and do not subordinate their interests to the interests of other states, or to the interests of the so-called international community. The reason is simple: it pays to be selfish in a self-help world. This is true in the short term as well as in the long term, because if a state loses in the short run, it might not be around for the long haul.

Apprehensive about the ultimate intentions of other states, and aware that they operate in a self-help system, states quickly understand that the best way to ensure their survival is to be the most powerful state in the system. The stronger a state is relative to its potential rivals, the less likely it is that any of those rivals will attack it and threaten its survival. Weaker states will be reluctant to pick fights with more powerful states because the weaker states are likely to suffer military defeat. Indeed, the bigger the gap in power between any two states, the less likely it is that the weaker

will attack the stronger. Neither Canada nor Mexico, for example, would countenance attacking the United States, which is far more powerful than its neighbors. The ideal situation is to be the hegemon in the system. As Immanuel Kant said, "It is the desire of every state, or of its ruler, to arrive at a condition of perpetual peace by conquering the whole world, if that were possible."¹² Survival would then be almost guaranteed.¹³

Consequently, states pay close attention to how power is distributed among them, and they make a special effort to maximize their share of world power. Specifically, they look for opportunities to alter the balance of power by acquiring additional increments of power at the expense of potential rivals. States employ a variety of means—economic, diplomatic, and military—to shift the balance of power in their favor, even if doing so makes other states suspicious or even hostile. Because one state's gain in power is another state's loss, great powers tend to have a zero-sum mentality when dealing with each other. The trick, of course, is to be the winner in this competition and to dominate the other states in the system. Thus, the claim that states maximize relative power is tantamount to arguing that states are disposed to think offensively toward other states, even though their ultimate motive is simply to survive. In short, great powers have aggressive intentions.¹⁴

Even when a great power achieves a distinct military advantage over its rivals, it continues looking for chances to gain more power. The pursuit of power stops only when hegemony is achieved. The idea that a great power might feel secure without dominating the system, provided it has an "appropriate amount" of power, is not persuasive, for two reasons.¹⁵ First, it is difficult to assess how much relative power one state must have over its rivals before it is secure. Is twice as much power an appropriate threshold? Or is three times as much power the magic number? The root of the problem is that power calculations alone do not determine which side wins a war. Clever strategies, for example, sometimes allow less powerful states to defeat more powerful foes.

Second, determining how much power is enough becomes even more complicated when great powers contemplate how power will be distributed among them ten or twenty years down the road. The capabilities of

individual states vary over time, sometimes markedly, and it is often difficult to predict the direction and scope of change in the balance of power. Remember, few in the West anticipated the collapse of the Soviet Union before it happened. In fact, during the first half of the Cold War, many in the West feared that the Soviet economy would eventually generate greater wealth than the American economy, which would cause a marked power shift against the United States and its allies. What the future holds for China and Russia and what the balance of power will look like in 2020 is difficult to foresee.

Given the difficulty of determining how much power is enough for today and tomorrow, great powers recognize that the best way to ensure their security is to achieve hegemony now, thus eliminating any possibility of a challenge by another great power. Only a misguided state would pass up an opportunity to be the hegemon in the system because it thought it already had sufficient power to survive.¹⁶ But even if a great power does not have the wherewithal to achieve hegemony (and that is usually the case), it will still act offensively to amass as much power as it can, because states are almost always better off with more rather than less power. In short, states do not become status quo powers until they completely dominate the system.

All states are influenced by this logic, which means that not only do they look for opportunities to take advantage of one another, they also work to ensure that other states do not take advantage of them. After all, rival states are driven by the same logic, and most states are likely to recognize their own motives at play in the actions of other states. In short, states ultimately pay attention to defense as well as offense. They think about conquest themselves, and they work to check aggressor states from gaining power at their expense. This inexorably leads to a world of constant security competition, where states are willing to lie, cheat, and use brute force if it helps them gain advantage over their rivals. Peace, if one defines that concept as a state of tranquility or mutual concord, is not likely to break out in this world.

The “security dilemma,” which is one of the most well-known concepts in the international relations literature, reflects the basic logic of offensive

realism. The essence of the dilemma is that the measures a state takes to increase its own security usually decrease the security of other states. Thus, it is difficult for a state to increase its own chances of survival without threatening the survival of other states. John Herz first introduced the security dilemma in a 1950 article in the journal *World Politics*.¹⁷ After discussing the anarchic nature of international politics, he writes, "Striving to attain security from . . . attack, [states] are driven to acquire more and more power in order to escape the impact of the power of others. This, in turn, renders the others more insecure and compels them to prepare for the worst. Since none can ever feel entirely secure in such a world of competing units, power competition ensues, and the vicious circle of security and power accumulation is on."¹⁸ The implication of Herz's analysis is clear: the best way for a state to survive in anarchy is to take advantage of other states and gain power at their expense. The best defense is a good offense. Since this message is widely understood, ceaseless security competition ensues. Unfortunately, little can be done to ameliorate the security dilemma as long as states operate in anarchy.

It should be apparent from this discussion that saying that states are power maximizers is tantamount to saying that they care about relative power, not absolute power. There is an important distinction here, because states concerned about relative power behave differently than do states interested in absolute power.¹⁹ States that maximize relative power are concerned primarily with the distribution of material capabilities. In particular, they try to gain as large a power advantage as possible over potential rivals, because power is the best means to survival in a dangerous world. Thus, states motivated by relative power concerns are likely to forgo large gains in their own power, if such gains give rival states even greater power, for smaller national gains that nevertheless provide them with a power advantage over their rivals.²⁰ States that maximize absolute power, on the other hand, care only about the size of their own gains, not those of other states. They are not motivated by balance-of-power logic but instead are concerned with amassing power without regard to how much power other states control. They would jump at the opportunity for large gains, even if a rival gained more in the deal. Power, according to this logic, is not a means to an end (survival), but an end in itself.²¹

Calculated Aggression

There is obviously little room for status quo powers in a world where states are inclined to look for opportunities to gain more power. Nevertheless, great powers cannot always act on their offensive intentions, because behavior is influenced not only by what states want, but also by their capacity to realize these desires. Every state might want to be king of the hill, but not every state has the wherewithal to compete for that lofty position, much less achieve it. Much depends on how military might is distributed among the great powers. A great power that has a marked power advantage over its rivals is likely to behave more aggressively, because it has the capability as well as the incentive to do so.

By contrast, great powers facing powerful opponents will be less inclined to consider offensive action and more concerned with defending the existing balance of power from threats by their more powerful opponents. Let there be an opportunity for those weaker states to revise the balance in their own favor, however, and they will take advantage of it. Stalin put the point well at the end of World War II: "Everyone imposes his own system as far as his army can reach. It cannot be otherwise."²² States might also have the capability to gain advantage over a rival power but nevertheless decide that the perceived costs of offense are too high and do not justify the expected benefits.

In short, great powers are not mindless aggressors so bent on gaining power that they charge headlong into losing wars or pursue Pyrrhic victories. On the contrary, before great powers take offensive actions, they think carefully about the balance of power and about how other states will react to their moves. They weigh the costs and risks of offense against the likely benefits. If the benefits do not outweigh the risks, they sit tight and wait for a more propitious moment. Nor do states start arms races that are unlikely to improve their overall position. As discussed at greater length in Chapter 3, states sometimes limit defense spending either because spending more would bring no strategic advantage or because spending more would weaken the economy and undermine the state's power in the long run.²³ To paraphrase Clint Eastwood, a state has to know its limitations to survive in the international system.

Nevertheless, great powers miscalculate from time to time because they invariably make important decisions on the basis of imperfect information. States hardly ever have complete information about any situation they confront. There are two dimensions to this problem. Potential adversaries have incentives to misrepresent their own strength or weakness, and to conceal their true aims.²⁴ For example, a weaker state trying to deter a stronger state is likely to exaggerate its own power to discourage the potential aggressor from attacking. On the other hand, a state bent on aggression is likely to emphasize its peaceful goals while exaggerating its military weakness, so that the potential victim does not build up its own arms and thus leaves itself vulnerable to attack. Probably no national leader was better at practicing this kind of deception than Adolf Hitler.

But even if disinformation was not a problem, great powers are often unsure about how their own military forces, as well as the adversary's, will perform on the battlefield. For example, it is sometimes difficult to determine in advance how new weapons and untested combat units will perform in the face of enemy fire. Peacetime maneuvers and war games are helpful but imperfect indicators of what is likely to happen in actual combat. Fighting wars is a complicated business in which it is often difficult to predict outcomes. Remember that although the United States and its allies scored a stunning and remarkably easy victory against Iraq in early 1991, most experts at the time believed that Iraq's military would be a formidable foe and put up stubborn resistance before finally succumbing to American military might.²⁵

Great powers are also sometimes unsure about the resolve of opposing states as well as allies. For example, Germany believed that if it went to war against France and Russia in the summer of 1914, the United Kingdom would probably stay out of the fight. Saddam Hussein expected the United States to stand aside when he invaded Kuwait in August 1990. Both aggressors guessed wrong, but each had good reason to think that its initial judgment was correct. In the 1930s, Adolf Hitler believed that his great-power rivals would be easy to exploit and isolate because each had little interest in fighting Germany and instead was determined to get someone else to assume that burden. He guessed right. In short, great powers constantly

find themselves confronting situations in which they have to make important decisions with incomplete information. Not surprisingly, they sometimes make faulty judgments and end up doing themselves serious harm.

Some defensive realists go so far as to suggest that the constraints of the international system are so powerful that offense rarely succeeds, and that aggressive great powers invariably end up being punished.²⁶ As noted, they emphasize that 1) threatened states balance against aggressors and ultimately crush them, and 2) there is an offense-defense balance that is usually heavily tilted toward the defense, thus making conquest especially difficult. Great powers, therefore, should be content with the existing balance of power and not try to change it by force. After all, it makes little sense for a state to initiate a war that it is likely to lose; that would be self-defeating behavior. It is better to concentrate instead on preserving the balance of power.²⁷ Moreover, because aggressors seldom succeed, states should understand that security is abundant, and thus there is no good strategic reason for wanting more power in the first place. In a world where conquest seldom pays, states should have relatively benign intentions toward each other. If they do not, these defensive realists argue, the reason is probably poisonous domestic politics, not smart calculations about how to guarantee one's security in an anarchic world.

There is no question that systemic factors constrain aggression, especially balancing by threatened states. But defensive realists exaggerate those restraining forces.²⁸ Indeed, the historical record provides little support for their claim that offense rarely succeeds. One study estimates that there were 63 wars between 1815 and 1980, and the initiator won 39 times, which translates into about a 60 percent success rate.²⁹ Turning to specific cases, Otto von Bismarck unified Germany by winning military victories against Denmark in 1864, Austria in 1866, and France in 1870, and the United States as we know it today was created in good part by conquest in the nineteenth century. Conquest certainly paid big dividends in these cases. Nazi Germany won wars against Poland in 1939 and France in 1940, but lost to the Soviet Union between 1941 and 1945. Conquest ultimately did not pay for the Third Reich, but if Hitler had restrained himself after the fall of France and had not invaded the Soviet Union,

conquest probably would have paid handsomely for the Nazis. In short, the historical record shows that offense sometimes succeeds and sometimes does not. The trick for a sophisticated power maximizer is to figure out when to raise and when to fold.³⁰

HEGEMONY'S LIMITS

Great powers, as I have emphasized, strive to gain power over their rivals and hopefully become hegemons. Once a state achieves that exalted position, it becomes a status quo power. More needs to be said, however, about the meaning of hegemony.

A hegemon is a state that is so powerful that it dominates all the other states in the system.³¹ No other state has the military wherewithal to put up a serious fight against it. In essence, a hegemon is the only great power in the system. A state that is substantially more powerful than the other great powers in the system is not a hegemon, because it faces, by definition, other great powers. The United Kingdom in the mid-nineteenth century, for example, is sometimes called a hegemon. But it was not a hegemon, because there were four other great powers in Europe at the time—Austria, France, Prussia, and Russia—and the United Kingdom did not dominate them in any meaningful way. In fact, during that period, the United Kingdom considered France to be a serious threat to the balance of power. Europe in the nineteenth century was multipolar, not unipolar.

Hegemony means domination of the system, which is usually interpreted to mean the entire world. It is possible, however, to apply the concept of a system more narrowly and use it to describe particular regions, such as Europe, Northeast Asia, and the Western Hemisphere. Thus, one can distinguish between *global hegemons*, which dominate the world, and *regional hegemons*, which dominate distinct geographical areas. The United States has been a regional hegemon in the Western Hemisphere for at least the past one hundred years. No other state in the Americas has sufficient military might to challenge it, which is why the United States is widely recognized as the only great power in its region.

My argument, which I develop at length in subsequent chapters, is that except for the unlikely event wherein one state achieves clear-cut nuclear superiority, it is virtually impossible for any state to achieve global hegemony. The principal impediment to world domination is the difficulty of projecting power across the world's oceans onto the territory of a rival great power. The United States, for example, is the most powerful state on the planet today. But it does not dominate Europe and Northeast Asia the way it does the Western Hemisphere, and it has no intention of trying to conquer and control those distant regions, mainly because of the stopping power of water. Indeed, there is reason to think that the American military commitment to Europe and Northeast Asia might wither away over the next decade. In short, there has never been a global hegemon, and there is not likely to be one anytime soon.

The best outcome a great power can hope for is to be a regional hegemon and possibly control another region that is nearby and accessible over land. The United States is the only regional hegemon in modern history, although other states have fought major wars in pursuit of regional hegemony: imperial Japan in Northeast Asia, and Napoleonic France, Wilhelmine Germany, and Nazi Germany in Europe. But none succeeded. The Soviet Union, which is located in Europe and Northeast Asia, threatened to dominate both of those regions during the Cold War. The Soviet Union might also have attempted to conquer the oil-rich Persian Gulf region, with which it shared a border. But even if Moscow had been able to dominate Europe, Northeast Asia, and the Persian Gulf, which it never came close to doing, it still would have been unable to conquer the Western Hemisphere and become a true global hegemon.

States that achieve regional hegemony seek to prevent great powers in other regions from duplicating their feat. Regional hegemons, in other words, do not want peers. Thus the United States, for example, played a key role in preventing imperial Japan, Wilhelmine Germany, Nazi Germany, and the Soviet Union from gaining regional supremacy. Regional hegemons attempt to check aspiring hegemons in other regions because they fear that a rival great power that dominates its own region will be an especially powerful foe that is essentially free to cause trouble

in the fearful great power's backyard. Regional hegemonies prefer that there be at least two great powers located together in other regions, because their proximity will force them to concentrate their attention on each other rather than on the distant hegemon.

Furthermore, if a potential hegemon emerges among them, the other great powers in that region might be able to contain it by themselves, allowing the distant hegemon to remain safely on the sidelines. Of course, if the local great powers were unable to do the job, the distant hegemon would take the appropriate measures to deal with the threatening state. The United States, as noted, has assumed that burden on four separate occasions in the twentieth century, which is why it is commonly referred to as an "offshore balancer."

In sum, the ideal situation for any great power is to be the only regional hegemon in the world. That state would be a status quo power, and it would go to considerable lengths to preserve the existing distribution of power. The United States is in that enviable position today; it dominates the Western Hemisphere and there is no hegemon in any other area of the world. But if a regional hegemon is confronted with a peer competitor, it would no longer be a status quo power. Indeed, it would go to considerable lengths to weaken and maybe even destroy its distant rival. Of course, both regional hegemonies would be motivated by that logic, which would make for a fierce security competition between them.

POWER AND FEAR

That great powers fear each other is a central aspect of life in the international system. But as noted, the level of fear varies from case to case. For example, the Soviet Union worried much less about Germany in 1930 than it did in 1939. How much states fear each other matters greatly, because the amount of fear between them largely determines the severity of their security competition, as well as the probability that they will fight a war. The more profound the fear is, the more intense is the security competition, and the more likely is war. The logic is straightforward: a scared

state will look especially hard for ways to enhance its security, and it will be disposed to pursue risky policies to achieve that end. Therefore, it is important to understand what causes states to fear each other more or less intensely.

Fear among great powers derives from the fact that they invariably have some offensive military capability that they can use against each other, and the fact that one can never be certain that other states do not intend to use that power against oneself. Moreover, because states operate in an anarchic system, there is no night watchman to whom they can turn for help if another great power attacks them. Although anarchy and uncertainty about other states' intentions create an irreducible level of fear among states that leads to power-maximizing behavior, they cannot account for why sometimes that level of fear is greater than at other times. The reason is that anarchy and the difficulty of discerning state intentions are constant facts of life, and constants cannot explain variation. The capability that states have to threaten each other, however, varies from case to case, and it is the key factor that drives fear levels up and down. Specifically, the more power a state possesses, the more fear it generates among its rivals. Germany, for example, was much more powerful at the end of the 1930s than it was at the decade's beginning, which is why the Soviets became increasingly fearful of Germany over the course of that decade.

This discussion of how power affects fear prompts the question, What is power? It is important to distinguish between potential and actual power. A state's potential power is based on the size of its population and the level of its wealth. These two assets are the main building blocks of military power. Wealthy rivals with large populations can usually build formidable military forces. A state's actual power is embedded mainly in its army and the air and naval forces that directly support it. Armies are the central ingredient of military power, because they are the principal instrument for conquering and controlling territory—the paramount political objective in a world of territorial states. In short, the key component of military might, even in the nuclear age, is land power.

Power considerations affect the intensity of fear among states in three main ways. First, rival states that possess nuclear forces that can survive a

nuclear attack and retaliate against it are likely to fear each other less than if these same states had no nuclear weapons. During the Cold War, for example, the level of fear between the superpowers probably would have been substantially greater if nuclear weapons had not been invented. The logic here is simple: because nuclear weapons can inflict devastating destruction on a rival state in a short period of time, nuclear-armed rivals are going to be reluctant to fight with each other, which means that each side will have less reason to fear the other than would otherwise be the case. But as the Cold War demonstrates, this does not mean that war between nuclear powers is no longer thinkable; they still have reason to fear each other.

Second, when great powers are separated by large bodies of water, they usually do not have much offensive capability against each other, regardless of the relative size of their armies. Large bodies of water are formidable obstacles that cause significant power-projection problems for attacking armies. For example, the stopping power of water explains in good part why the United Kingdom and the United States (since becoming a great power in 1898) have never been invaded by another great power. It also explains why the United States has never tried to conquer territory in Europe or Northeast Asia, and why the United Kingdom has never attempted to dominate the European continent. Great powers located on the same landmass are in a much better position to attack and conquer each other. That is especially true of states that share a common border. Therefore, great powers separated by water are likely to fear each other less than great powers that can get at each other over land.

Third, the distribution of power among the states in the system also markedly affects the levels of fear.³² The key issue is whether power is distributed more or less evenly among the great powers or whether there are sharp power asymmetries. The configuration of power that generates the most fear is a multipolar system that contains a potential hegemon—what I call “unbalanced multipolarity.”

A potential hegemon is more than just the most powerful state in the system. It is a great power with so much actual military capability and so much potential power that it stands a good chance of dominating and

controlling all of the other great powers in its region of the world. A potential hegemon need not have the wherewithal to fight all of its rivals at once, but it must have excellent prospects of defeating each opponent alone, and good prospects of defeating some of them in tandem. The key relationship, however, is the power gap between the potential hegemon and the second most powerful state in the system: there must be a marked gap between them. To qualify as a potential hegemon, a state must have—by some reasonably large margin—the most formidable army as well as the most latent power among all the states located in its region.

Bipolarity is the power configuration that produces the least amount of fear among the great powers, although not a negligible amount by any means. Fear tends to be less acute in bipolarity, because there is usually a rough balance of power between the two major states in the system. Multipolar systems without a potential hegemon, what I call “balanced multipolarity,” are still likely to have power asymmetries among their members, although these asymmetries will not be as pronounced as the gaps created by the presence of an aspiring hegemon. Therefore, balanced multipolarity is likely to generate less fear than unbalanced multipolarity, but more fear than bipolarity.

This discussion of how the level of fear between great powers varies with changes in the distribution of power, not with assessments about each other’s intentions, raises a related point. When a state surveys its environment to determine which states pose a threat to its survival, it focuses mainly on the offensive *capabilities* of potential rivals, not their intentions. As emphasized earlier, intentions are ultimately unknowable, so states worried about their survival must make worst-case assumptions about their rivals’ intentions. Capabilities, however, not only can be measured but also determine whether or not a rival state is a serious threat. In short, great powers balance against capabilities, not intentions.³³

Great powers obviously balance against states with formidable military forces, because that offensive military capability is the tangible threat to their survival. But great powers also pay careful attention to how much latent power rival states control, because rich and populous states usually can and do build powerful armies. Thus, great powers tend to fear states

with large populations and rapidly expanding economies, even if these states have not yet translated their wealth into military might.

THE HIERARCHY OF STATE GOALS

Survival is the number one goal of great powers, according to my theory. In practice, however, states pursue non-security goals as well. For example, great powers invariably seek greater economic prosperity to enhance the welfare of their citizenry. They sometimes seek to promote a particular ideology abroad, as happened during the Cold War when the United States tried to spread democracy around the world and the Soviet Union tried to sell communism. National unification is another goal that sometimes motivates states, as it did with Prussia and Italy in the nineteenth century and Germany after the Cold War. Great powers also occasionally try to foster human rights around the globe. States might pursue any of these, as well as a number of other non-security goals.

Offensive realism certainly recognizes that great powers might pursue these non-security goals, but it has little to say about them, save for one important point: states can pursue them as long as the requisite behavior does not conflict with balance-of-power logic, which is often the case.³⁴ Indeed, the pursuit of these non-security goals sometimes complements the hunt for relative power. For example, Nazi Germany expanded into eastern Europe for both ideological and realist reasons, and the superpowers competed with each other during the Cold War for similar reasons. Furthermore, greater economic prosperity invariably means greater wealth, which has significant implications for security, because wealth is the foundation of military power. Wealthy states can afford powerful military forces, which enhance a state's prospects for survival. As the political economist Jacob Viner noted more than fifty years ago, "there is a long-run harmony" between wealth and power.³⁵ National unification is another goal that usually complements the pursuit of power. For example, the unified German state that emerged in 1871 was more powerful than the Prussian state it replaced.

Sometimes the pursuit of non-security goals has hardly any effect on the balance of power, one way or the other. Human rights interventions usually fit this description, because they tend to be small-scale operations that cost little and do not detract from a great power's prospects for survival. For better or for worse, states are rarely willing to expend blood and treasure to protect foreign populations from gross abuses, including genocide. For instance, despite claims that American foreign policy is infused with moralism, Somalia (1992–93) is the only instance during the past one hundred years in which U.S. soldiers were killed in action on a humanitarian mission. And in that case, the loss of a mere eighteen soldiers in an infamous firefight in October 1993 so traumatized American policymakers that they immediately pulled all U.S. troops out of Somalia and then refused to intervene in Rwanda in the spring of 1994, when ethnic Hutu went on a genocidal rampage against their Tutsi neighbors.³⁶ Stopping that genocide would have been relatively easy and it would have had virtually no effect on the position of the United States in the balance of power.³⁷ Yet nothing was done. In short, although realism does not prescribe human rights interventions, it does not necessarily proscribe them.

But sometimes the pursuit of non-security goals conflicts with balance-of-power logic, in which case states usually act according to the dictates of realism. For example, despite the U.S. commitment to spreading democracy across the globe, it helped overthrow democratically elected governments and embraced a number of authoritarian regimes during the Cold War, when American policymakers felt that these actions would help contain the Soviet Union.³⁸ In World War II, the liberal democracies put aside their antipathy for communism and formed an alliance with the Soviet Union against Nazi Germany. "I can't take communism," Franklin Roosevelt emphasized, but to defeat Hitler "I would hold hands with the Devil."³⁹ In the same way, Stalin repeatedly demonstrated that when his ideological preferences clashed with power considerations, the latter won out. To take the most blatant example of his realism, the Soviet Union formed a non-aggression pact with Nazi Germany in August 1939—the infamous Molotov-Ribbentrop Pact—in hopes that the agreement would at least temporarily satisfy Hitler's territorial ambitions in eastern Europe

and turn the Wehrmacht toward France and the United Kingdom.⁴⁰ When great powers confront a serious threat, in short, they pay little attention to ideology as they search for alliance partners.⁴¹

Security also trumps wealth when those two goals conflict, because “defence,” as Adam Smith wrote in *The Wealth of Nations*, “is of much more importance than opulence.”⁴² Smith provides a good illustration of how states behave when forced to choose between wealth and relative power. In 1651, England put into effect the famous Navigation Act, protectionist legislation designed to damage Holland’s commerce and ultimately cripple the Dutch economy. The legislation mandated that all goods imported into England be carried either in English ships or ships owned by the country that originally produced the goods. Since the Dutch produced few goods themselves, this measure would badly damage their shipping, the central ingredient in their economic success. Of course, the Navigation Act would hurt England’s economy as well, mainly because it would rob England of the benefits of free trade. “The act of navigation,” Smith wrote, “is not favorable to foreign commerce, or to the growth of that opulence that can arise from it.” Nevertheless, Smith considered the legislation “the wisest of all the commercial regulations of England” because it did more damage to the Dutch economy than to the English economy, and in the mid-seventeenth century Holland was “the only naval power which could endanger the security of England.”⁴³

CREATING WORLD ORDER

The claim is sometimes made that great powers can transcend realist logic by working together to build an international order that fosters peace and justice. World peace, it would appear, can only enhance a state’s prosperity and security. America’s political leaders paid considerable lip service to this line of argument over the course of the twentieth century. President Clinton, for example, told an audience at the United Nations in September 1993 that “at the birth of this organization 48 years ago . . . a generation of gifted leaders from many nations stepped forward to organize the world’s efforts on behalf of security and prosperity. . . . Now history has granted to

us a moment of even greater opportunity. . . . Let us resolve that we will dream larger. . . . Let us ensure that the world we pass to our children is healthier, safer and more abundant than the one we inhabit today."⁴⁴

This rhetoric notwithstanding, great powers do not work together to promote world order for its own sake. Instead, each seeks to maximize its own share of world power, which is likely to clash with the goal of creating and sustaining stable international orders.⁴⁵ This is not to say that great powers never aim to prevent wars and keep the peace. On the contrary, they work hard to deter wars in which they would be the likely victim. In such cases, however, state behavior is driven largely by narrow calculations about relative power, not by a commitment to build a world order independent of a state's own interests. The United States, for example, devoted enormous resources to deterring the Soviet Union from starting a war in Europe during the Cold War, not because of some deep-seated commitment to promoting peace around the world, but because American leaders feared that a Soviet victory would lead to a dangerous shift in the balance of power.⁴⁶

The particular international order that obtains at any time is mainly a by-product of the self-interested behavior of the system's great powers. The configuration of the system, in other words, is the unintended consequence of great-power security competition, not the result of states acting together to organize peace. The establishment of the Cold War order in Europe illustrates this point. Neither the Soviet Union nor the United States intended to establish it, nor did they work together to create it. In fact, each superpower worked hard in the early years of the Cold War to gain power at the expense of the other, while preventing the other from doing likewise.⁴⁷ The system that emerged in Europe in the aftermath of World War II was the unplanned consequence of intense security competition between the superpowers.

Although that intense superpower rivalry ended along with the Cold War in 1990, Russia and the United States have not worked together to create the present order in Europe. The United States, for example, has rejected out of hand various Russian proposals to make the Organization for Security and Cooperation in Europe the central organizing pillar of European security (replacing the U.S.-dominated NATO). Furthermore,

Russia was deeply opposed to NATO expansion, which it viewed as a serious threat to Russian security. Recognizing that Russia's weakness would preclude any retaliation, however, the United States ignored Russia's concerns and pushed NATO to accept the Czech Republic, Hungary, and Poland as new members. Russia has also opposed U.S. policy in the Balkans over the past decade, especially NATO's 1999 war against Yugoslavia. Again, the United States has paid little attention to Russia's concerns and has taken the steps it deems necessary to bring peace to that volatile region. Finally, it is worth noting that although Russia is dead set against allowing the United States to deploy ballistic missile defenses, it is highly likely that Washington will deploy such a system if it is judged to be technologically feasible.

For sure, great-power rivalry will sometimes produce a stable international order, as happened during the Cold War. Nevertheless, the great powers will continue looking for opportunities to increase their share of world power, and if a favorable situation arises, they will move to undermine that stable order. Consider how hard the United States worked during the late 1980s to weaken the Soviet Union and bring down the stable order that had emerged in Europe during the latter part of the Cold War.⁴⁸ Of course, the states that stand to lose power will work to deter aggression and preserve the existing order. But their motives will be selfish, revolving around balance-of-power logic, not some commitment to world peace.

Great powers cannot commit themselves to the pursuit of a peaceful world order for two reasons. First, states are unlikely to agree on a general formula for bolstering peace. Certainly, international relations scholars have never reached a consensus on what the blueprint should look like. In fact, it seems there are about as many theories on the causes of war and peace as there are scholars studying the subject. But more important, policymakers are unable to agree on how to create a stable world. For example, at the Paris Peace Conference after World War I, important differences over how to create stability in Europe divided Georges Clemenceau, David Lloyd George, and Woodrow Wilson.⁴⁹ In particular, Clemenceau was determined to impose harsher terms on Germany over the Rhineland than was either Lloyd George or Wilson, while Lloyd George stood out as the hard-liner on German reparations. The Treaty of Versailles, not surprisingly, did little to promote European stability.

Furthermore, consider American thinking on how to achieve stability in Europe in the early days of the Cold War.⁵⁰ The key elements for a stable and durable system were in place by the early 1950s. They included the division of Germany, the positioning of American ground forces in Western Europe to deter a Soviet attack, and ensuring that West Germany would not seek to develop nuclear weapons. Officials in the Truman administration, however, disagreed about whether a divided Germany would be a source of peace or war. For example, George Kennan and Paul Nitze, who held important positions in the State Department, believed that a divided Germany would be a source of instability, whereas Secretary of State Dean Acheson disagreed with them. In the 1950s, President Eisenhower sought to end the American commitment to defend Western Europe and to provide West Germany with its own nuclear deterrent. This policy, which was never fully adopted, nevertheless caused significant instability in Europe, as it led directly to the Berlin crises of 1958–59 and 1961.⁵¹

Second, great powers cannot put aside power considerations and work to promote international peace because they cannot be sure that their efforts will succeed. If their attempt fails, they are likely to pay a steep price for having neglected the balance of power, because if an aggressor appears at the door there will be no answer when they dial 911. That is a risk few states are willing to run. Therefore, prudence dictates that they behave according to realist logic. This line of reasoning accounts for why collective security schemes, which call for states to put aside narrow concerns about the balance of power and instead act in accordance with the broader interests of the international community, invariably die at birth.⁵²

COOPERATION AMONG STATES

One might conclude from the preceding discussion that my theory does not allow for any cooperation among the great powers. But this conclusion would be wrong. States can cooperate, although cooperation is sometimes difficult to achieve and always difficult to sustain. Two factors inhibit cooperation: considerations about relative gains and concern about

cheating.⁵³ Ultimately, great powers live in a fundamentally competitive world where they view each other as real, or at least potential, enemies, and they therefore look to gain power at each other's expense.

Any two states contemplating cooperation must consider how profits or gains will be distributed between them. They can think about the division in terms of either absolute or relative gains (recall the distinction made earlier between pursuing either absolute power or relative power; the concept here is the same). With absolute gains, each side is concerned with maximizing its own profits and cares little about how much the other side gains or loses in the deal. Each side cares about the other only to the extent that the other side's behavior affects its own prospects for achieving maximum profits. With relative gains, on the other hand, each side considers not only its own individual gain, but also how well it fares compared to the other side.

Because great powers care deeply about the balance of power, their thinking focuses on relative gains when they consider cooperating with other states. For sure, each state tries to maximize its absolute gains; still, it is more important for a state to make sure that it does no worse, and perhaps better, than the other state in any agreement. Cooperation is more difficult to achieve, however, when states are attuned to relative gains rather than absolute gains.⁵⁴ This is because states concerned about absolute gains have to make sure that if the pie is expanding, they are getting at least some portion of the increase, whereas states that worry about relative gains must pay careful attention to how the pie is divided, which complicates cooperative efforts.

Concerns about cheating also hinder cooperation. Great powers are often reluctant to enter into cooperative agreements for fear that the other side will cheat on the agreement and gain a significant advantage. This concern is especially acute in the military realm, causing a "special peril of defection," because the nature of military weaponry allows for rapid shifts in the balance of power.⁵⁵ Such a development could create a window of opportunity for the state that cheats to inflict a decisive defeat on its victim.

These barriers to cooperation notwithstanding, great powers do cooperate in a realist world. Balance-of-power logic often causes great powers to

form alliances and cooperate against common enemies. The United Kingdom, France, and Russia, for example, were allies against Germany before and during World War I. States sometimes cooperate to gang up on a third state, as Germany and the Soviet Union did against Poland in 1939.⁵⁶ More recently, Serbia and Croatia agreed to conquer and divide Bosnia between them, although the United States and its European allies prevented them from executing their agreement.⁵⁷ Rivals as well as allies cooperate. After all, deals can be struck that roughly reflect the distribution of power and satisfy concerns about cheating. The various arms control agreements signed by the superpowers during the Cold War illustrate this point.

The bottom line, however, is that cooperation takes place in a world that is competitive at its core—one where states have powerful incentives to take advantage of other states. This point is graphically highlighted by the state of European politics in the forty years before World War I. The great powers cooperated frequently during this period, but that did not stop them from going to war on August 1, 1914.⁵⁸ The United States and the Soviet Union also cooperated considerably during World War II, but that cooperation did not prevent the outbreak of the Cold War shortly after Germany and Japan were defeated. Perhaps most amazingly, there was significant economic and military cooperation between Nazi Germany and the Soviet Union during the two years before the Wehrmacht attacked the Red Army.⁵⁹ No amount of cooperation can eliminate the dominating logic of security competition. Genuine peace, or a world in which states do not compete for power, is not likely as long as the state system remains anarchic.

CONCLUSION

In sum, my argument is that the structure of the international system, not the particular characteristics of individual great powers, causes them to think and act offensively and to seek hegemony.⁶⁰ I do not adopt Morgenthau's claim that states invariably behave aggressively because they have a will to power hardwired into them. Instead, I assume that the prin-

cial motive behind great-power behavior is survival. In anarchy, however, the desire to survive encourages states to behave aggressively. Nor does my theory classify states as more or less aggressive on the basis of their economic or political systems. Offensive realism makes only a handful of assumptions about great powers, and these assumptions apply equally to all great powers. Except for differences in how much power each state controls, the theory treats all states alike.

I have now laid out the logic explaining why states seek to gain as much power as possible over their rivals. I have said little, however, about the object of that pursuit: power itself. The next two chapters provide a detailed discussion of this important subject.

Wealth and Power

Power lies at the heart of international politics, yet there is considerable disagreement about what power is and how to measure it. In this chapter and the next, I define power and offer rough but reliable ways to measure it. Specifically, I argue that power is based on the particular material capabilities that a state possesses. The balance of power, therefore, is a function of tangible assets—such as armored divisions and nuclear weapons—that each great power controls.

States have two kinds of power: latent power and military power. These two forms of power are closely related but not synonymous, because they are derived from different kinds of assets. Latent power refers to the socio-economic ingredients that go into building military power; it is largely based on a state's wealth and the overall size of its population. Great powers need money, technology, and personnel to build military forces and to fight wars, and a state's latent power refers to the raw potential it can draw on when competing with rival states.

In international politics, however, a state's effective power is ultimately a function of its military forces and how they compare with the military forces of rival states. The United States and the Soviet Union were the most powerful states in the world during the Cold War because their military establishments dwarfed those of other states. Japan is not a great

power today, even though it has a large and wealthy economy, because it has a small and relatively weak military, and it is heavily dependent on the United States for its security. Therefore, the balance of power is largely synonymous with the balance of military power. I define power largely in military terms because offensive realism emphasizes that force is the *ultima ratio* of international politics.¹

Military power is based largely on the size and strength of a state's army and its supporting air and naval forces. Even in a nuclear world, armies are the core ingredient of military power. Independent naval forces and strategic air forces are not suited for conquering territory, nor are they much good by themselves at coercing other states into making territorial concessions. They certainly can contribute to a successful military campaign, but great-power wars are won mainly on the ground. The most powerful states, therefore, are those that possess the most formidable land forces.

This privileging of military power notwithstanding, states care greatly about latent power, because abundant wealth and a large population are prerequisites for building formidable military forces. During the Cold War, for example, American leaders worried about Soviet economic growth and were especially alarmed by Soviet scientific achievements (such as the Sputnik satellite launched in 1957), which they saw as signs that the Soviet Union's latent capabilities might one day exceed those of the United States. Today, the United States is increasingly worried about China, not because of its military, which is still relatively weak, but because China has more than 1.2 billion people and a rapidly modernizing economy. Should China become especially wealthy, it could readily become a military superpower and challenge the United States. These examples show that states pay careful attention to the balance of latent power as well as the balance of military power.

The next section discusses why it makes sense to define power in terms of material capabilities rather than outcomes, an approach favored by some scholars. I also explain why the balance of power is not an especially good predictor of military victory. The three sections that follow it focus on latent power. First, I discuss the fundamental importance of wealth for building powerful military forces, and then I describe the measures of wealth that I employ to capture latent power. Second, I use some histori-

cal cases to show that the rise and fall of great powers over the past two centuries has been due in good part to changes in the distribution of wealth among the major actors in the international system. Third, I explain why wealth and military power, although closely connected, are not synonymous, and I show that wealth cannot be used as a substitute measure for military might. Accordingly, I argue, we need separate indicators for latent power and military power.

THE MATERIAL BASIS OF POWER

At its most basic level, power can be defined in two different ways. Power, as I define it, represents nothing more than specific assets or material resources that are available to a state. Others, however, define power in terms of the outcomes of interactions between states. Power, they argue, is all about control or influence over other states; it is the ability of one state to force another to do something.² Robert Dahl, a prominent proponent of this view, maintains that “A has power over B to the extent that [A] can get B to do something that B would not otherwise do.”³ According to this logic, power exists only when a state exercises control or influence, and therefore it can be measured only after the outcome is determined. Simply put, the most powerful state is the one that prevails in a dispute.

It might seem that there is no meaningful difference between these two definitions. After all, when two great powers get into a conflict, should not the side with greater material capabilities prevail? Some students of international politics seem to believe that in war the state with greater resources should win almost all of the time, and that, therefore, the balance of power should do an excellent job of forecasting victory in war. There is a large body of quantitative studies, for example, that employs different measures of power to try to account for the outcome of interstate conflicts.⁴ This belief also underpins Geoffrey Blainey’s famous argument that war breaks out in good part because states cannot agree on the balance of power, but the subsequent fighting then establishes “an orderly ladder of power between victors and losers.”⁵ If the rival states had recognized the true balance beforehand, he argues, there would have been no

war. Both sides would have foreseen the outcome and been motivated to negotiate a peaceful settlement based on existing power realities, rather than fight a bloody war to reach the same end.

But it is impossible to conflate these definitions of power, because the balance of power is not a highly reliable predictor of military success.⁶ The reason is that non-material factors sometimes provide one combatant with a decisive advantage over the other. Those factors include, among others, strategy, intelligence, resolve, weather, and disease. Although material resources alone do not decide the outcome of wars, there is no question that the odds of success are substantially affected by the balance of resources, especially in protracted wars of attrition in which each side is trying to wear down the other by virtue of material superiority.⁷ States certainly want to have more rather than less power over their rivals, because the more resources a state has at its disposal, the more likely it is to prevail in war. Of course, this is why states seek to maximize their share of world power. Nevertheless, increasing the likelihood of success does not mean that success is virtually certain. Indeed, there have been numerous wars where the victor was either less powerful or about as powerful as the loser, yet the victor prevailed because of non-material factors.

Consider strategy, which is how a state employs its forces against an opponent's forces, and which is probably the most important of the non-material factors. Clever strategies sometime allow states that are less powerful or no more powerful than their battlefield rivals to achieve victory.⁸ The Germans, for example, employed a blitzkrieg strategy in the spring of 1940 to defeat the British and French armies, which were roughly of the same size and strength as the Wehrmacht.⁹ The famous Schlieffen Plan, however, failed to produce a German victory against the same opponents in 1914, although a case can be made that the original version of the plan, which was more daring than the version that was finally executed, provided a blueprint for defeating France and the United Kingdom.¹⁰ Strategy sometimes matters a lot.¹¹

Russia's decisive defeat of Napoleon's army in 1812 highlights how these non-material factors can even help an outgunned defender win a war.¹² The French forces that spearheaded the invasion of Russia on June 23,

1812, outnumbered the Russian front-line armies by 449,000 to 211,000.¹³ Counting reserve forces, Napoleon had a total of 674,000 troops at his disposal for the Russian campaign, while the entire Russian army numbered 409,000 regular soldiers at the start of the conflict. Moreover, the French forces were qualitatively superior to the Russian forces. Yet the Russians completely destroyed Napoleon's army during the next six months and won a decisive victory. By January 1, 1813, Napoleon had only 93,000 soldiers left to fight the Russians. A stunning 470,000 French soldiers had perished in Russia and another 100,000 were prisoners of war. The Russians, by contrast, lost a total of only 150,000 soldiers.

Weather, disease, and a smart Russian strategy defeated Napoleon. The Russians refused to engage the invasion force along their western border and instead withdrew toward Moscow, implementing a scorched-earth policy as they moved eastward.¹⁴ The French army tried to catch the retreating Russian army and decisively defeat it in battle, but bad weather thwarted Napoleon's game plan. Torrential rain followed by blistering heat in the early weeks of the invasion slowed the attacking armies and allowed the Russians to escape. Disease and desertion soon became major problems for the French forces. Napoleon finally managed to engage the retreating Russian army in major battles at Smolensk (August 17) and Borodino (September 7). The French army won both battles, but they were Pyrrhic victories: French losses were high, the Russians refused to surrender, and the French army was drawn deeper into Russia. Napoleon occupied Moscow on September 14 but was forced to retreat in mid-October when the Russians still refused to quit the war. The subsequent retreat westward was a disaster for the French army, which disintegrated despite holding its own in battles with the pursuing Russian forces.¹⁵ Weather again played an important role as winter set in on the retreating forces. Despite never winning a major battle in the 1812 campaign, the less powerful Russian army routed the more powerful French army.

It should be apparent that Blainey is wrong to argue that there would be no war if states could accurately measure the balance of power, because less powerful states can sometimes defeat more powerful states.¹⁶ Therefore weaker states are sometimes going to initiate wars against stronger states.

The same logic also applies to states of roughly equal might. Furthermore, weaker states are sometimes going to stand up to stronger states that threaten to attack them, because there are often good reasons for defenders to think that they can fight, although outnumbered, and win.

In essence, then, it is not possible to equate the balance of tangible assets with outcomes, because non-material factors such as strategy sometimes profoundly affect outcomes. When defining power, therefore, one has to choose between material capabilities and outcomes as the basis for definition; the latter effectively incorporate the non-material as well as material ingredients of military success.

There are three reasons not to equate power with outcomes. First, when focusing on outcomes it becomes almost impossible to assess the balance of power before a conflict, since the balance can be determined only after we see which side wins. Second, this approach sometimes leads to implausible conclusions. For example, Russia might have decisively defeated Napoleon's armies in 1812, but Russia was not more powerful than France. Defining power in terms of outcomes, however, would effectively force one to argue that Russia was more powerful than France. Moreover, few would deny that the United States was a vastly more powerful state than North Vietnam, yet the weaker state was able to defeat the stronger in the Vietnam War (1965–72) because non-material factors trumped the balance of power. Third, one of the most interesting aspects of international relations is how power, which is a means, affects political outcomes, which are ends.¹⁷ But there is little to say about the matter if power and outcomes are indistinguishable; there would be no difference between means and ends. We are then left with a circular argument.

POPULATION AND WEALTH: THE SINEWS OF MILITARY POWER

Latent power constitutes the societal resources that a state has available to build military forces.¹⁸ Although there are always a variety of such resources, the size of a state's population and its wealth are the two most

important components for generating military might. Population size matters a lot, because great powers require big armies, which can be raised only in countries with large populations.¹⁹ States with small populations cannot be great powers. For example, neither Israel, with its population of 6 million, nor Sweden, with its population of 8.9 million, can achieve great-power status in a world in which Russia, the United States, and China have populations of 147 million, 281 million, and 1.24 billion, respectively.²⁰ Population size also has important economic consequences, because only large populations can produce great wealth, the other building block of military power.²¹

Wealth is important because a state cannot build a powerful military if it does not have the money and technology to equip, train, and continually modernize its fighting forces.²² Furthermore, the costs of waging great-power wars are enormous. For example, the total direct cost of World War I (1914–18) for all the participants was about \$200 billion.²³ The United States alone spent roughly \$306 billion fighting the Axis powers between 1941 and 1945—roughly three times its gross national product (GNP) in 1940.²⁴ Accordingly, the great powers in the international system are invariably among the world's wealthiest states.

Although population size and wealth are essential ingredients of military power, I use wealth alone to measure potential power. This emphasis on wealth is not because it is more important than population, but because wealth incorporates both the demographic and the economic dimensions of power. As noted, a state must have a large population to produce great wealth. Therefore, it is reasonable to assume that the states with abundant wealth will also have large populations. In short, I am not ignoring population size, just assuming that it will be captured by the indicators I use to measure wealth.

It would be easier to use population size by itself to measure latent power, because a state's population is simpler to measure than its wealth. But it is not feasible to use population size to measure latent power, because population numbers often do not reflect wealth differences among states. Both China and India, for instance, had much larger populations than either the Soviet Union or the United States during the Cold

War, but neither China nor India achieved great-power status because they were nowhere near as wealthy as the superpowers. In essence, a large population does not ensure great wealth, but great wealth does require a large population. Therefore, only wealth can be used by itself as a measure of latent power.

The concept of wealth has various meanings and can be measured in different ways. For my purposes, however, it is essential to choose an indicator of wealth that reflects a state's latent power. Specifically, it must capture a state's mobilizable wealth and its level of technological development. "Mobilizable wealth" refers to the economic resources a state has at its disposal to build military forces. It is more important than overall wealth because what matters is not simply how wealthy a state might be, but how much of that wealth is available to spend on defense. It is also important to have industries that are producing the newest and most sophisticated technologies, because they invariably get incorporated into the most advanced weaponry. The development of steel in the mid-nineteenth century and jet aircraft in the mid-twentieth century, for example, profoundly changed the arsenals of the great powers. It behooved the great powers of the day to be on the cutting edge in those industries, as well as in other industries that contributed to building formidable military forces.

GNP, which represents a state's entire output over one year, is probably the most commonly used indicator of a state's wealth. In fact, I use it to measure wealth after 1960, as discussed below. But GNP is not always a good indicator of latent power, and employing it in the wrong circumstances can give a distorted picture of the balance of latent power. The essence of the problem is that GNP is primarily a measure of a state's overall wealth, and it does not always capture important differences in the mobilizable wealth and technological sophistication of different states.

Nevertheless, GNP does a reasonably good job of measuring these two dimensions of wealth when the relevant great powers are at similar levels of economic development. For example, two highly industrialized economies—such as the United Kingdom and Germany in 1890 or Japan and the United States in 1990—are likely to have similar leading-edge industries and roughly the same ratio of overall wealth to mobilizable

wealth. The same logic applies when comparing two largely agrarian societies, such as Prussia and France in 1750.

But GNP is a poor indicator of latent power when the states being compared are at different levels of economic development. Consider what can happen when GNP is used to assess the potential power of a semi-industrialized state and a highly industrialized state. GNP, which represents the market value of all the goods and services that a state produces in a fixed period of time, is a function of both the size and the productivity of a state's labor force. The size of a state's labor force is directly related to its population size, while the productivity of its labor force is directly linked to the state's level of economic development. It is therefore possible for two states to have similar GNPs but substantially different population sizes and markedly different levels of industrialization. For example, one state might have a weak industrial base, but a relatively large population, a substantial portion of which is employed on farms, while the other state is highly industrialized, but has a considerably smaller population.²⁵

The United Kingdom and Russia fit this profile for the hundred-year period between the fall of Napoleon in 1815 and the start of World War I in 1914. Their GNPs were similar over that period, although the United Kingdom far outdistanced Russia in terms of industrial output, as Table 3.1 makes clear. But Russia was able to hold its own in terms of GNP, because its huge peasant population grew at a robust pace over the nineteenth century.

Differences in industrial might like those between the United Kingdom and Russia, however, have important consequences for the balance of latent power. First, highly industrialized states invariably have considerably more surplus wealth to spend on defense than do semi-industrialized states, mainly because much of the physical product of the peasantry is consumed on the spot by the peasants themselves. Second, only states with the most advanced industries are capable of producing the large quantities of sophisticated weaponry that militaries need to survive in combat.²⁶

Focusing on GNP alone, however, might lead one to think that the United Kingdom and Russia had the most powerful economies in Europe

TABLE 3.1

Indicators of British and Russian Wealth and Population, 1830–1913

	1830	1860	1880	1900	1913
<i>GNP (billions of dollars)</i>					
United Kingdom	8.2	16.1	23.6	36.3	44.1
Russia	10.6	14.4	23.3	32.0	52.4
<i>Relative share of European wealth (percent)</i>					
United Kingdom	53	68	59	37	28
Russia	15	4	3	10	11
<i>Energy consumption (millions of metric tons of coal equivalent)</i>					
United Kingdom	—	73.8	125.3	171.4	195.3
Russia	—	1.0	5.4	30.4	54.5
<i>Iron/steel production (thousands of tons)</i>					
United Kingdom	690	3,880	7,870	4,979	7,787
Russia	190	350	450	2,201	4,925
<i>Relative share of world manufacturing output (percent)</i>					
United Kingdom	9.5	19.9	22.9	18.5	13.6
Russia	5.6	7.0	7.6	8.8	8.2
<i>Total industrial potential (United Kingdom in 1900 = 100)</i>					
United Kingdom	17.5	45.0	73.3	100.0	127.2
Russia	10.3	15.8	24.5	47.5	76.6
<i>Population (millions)</i>					
United Kingdom	23.8	28.8	34.6	41.2	45.6
Russia	57.6	76.0	100.0	135.7	175.1

SOURCES: GNP figures, which are in 1960 U.S. dollars and prices, are from Paul Bairoch, "Europe's Gross National Product: 1800–1975," *Journal of European Economic History* 5, No. 2 (Fall 1976), p. 281. Relative shares of world manufacturing output are from Paul Bairoch, "International Industrialization Levels from 1750 to 1980," *Journal of European Economic History* 11, No. 2 (Fall 1982), p. 296. Figures for total industrial potential, which assign the United Kingdom in 1900 the baseline number of 100, are from *ibid.*, p. 292. The energy consumption figures, the iron/steel production figures, and the population figures are from J. David Singer and Melvin Small, *National Material Capabilities Data, 1816–1985* (Ann Arbor, MI: Inter-University Consortium for Political and Social Research, February 1993). The figures for relative shares of European wealth are from Table 3.3.

between 1815 and 1914, and that they had the wherewithal to build formidable military forces and dominate the region's politics. As a comparison of Table 3.1 with Table 3.2 indicates, the United Kingdom and Russia led the other European great powers in terms of GNP during most of the period. In fact, this conclusion is wrong.²⁷ The United Kingdom certainly had more latent power than any other European state during the nineteenth century, especially in the middle decades of that century, which are often called the "*Pax Britannica*."²⁸ But as discussed below, the Russian economy was in an anemic state from at least the mid-nineteenth century through the 1920s. Russia had relatively little latent power during this period, which explains in good part why its military suffered crushing defeats in the Crimean War (1853–56), the Russo-Japanese War (1904–5), and World War I (1914–17).²⁹ In short, GNP fails to capture the potentially sharp difference in latent power between industrialized and semi-industrialized states.

The same problem arises when GNP is used to compare the latent power of contemporary China with Japan and the United States. Despite its rapid economic development over the past two decades, China is still a semi-industrialized state. Roughly 18 percent of its wealth remains tied up in agriculture.³⁰ Japan and the United States, on the other hand, are highly industrialized states; only 2 percent of their wealth is in agriculture. China, however, has almost five times as many people as the United States and about ten times as many people as Japan. Therefore, the balance of latent power among those three states will be biased in China's favor if GNP is the chosen measure. This problem is likely to go away with time, because China's agricultural base will continue to shrink (it accounted for 30 percent of wealth in 1980) as its economy modernizes. But for now, it must be factored into any analysis that uses GNP to measure China's latent power.

Thus, GNP is sometimes a sound measure of latent power, whereas at other times it is not. In those latter cases, one can either find an alternative indicator that does a better job of capturing latent power, or use GNP but add the appropriate qualifiers.

In measuring the balance of latent power for the long historical period from 1792 to 2000, it is impossible to find one simple but reliable indica-

TABLE 3.2

Indicators of French and Prussian/German Wealth and Population, 1830–1913

	1830	1860	1880	1900	1913
<i>GNP (billions of dollars)</i>					
France	8.6	13.3	17.4	23.5	27.4
Germany	7.2	12.8	20.0	35.8	49.8
<i>Relative share of European wealth (percent)</i>					
France	21	14	13	11	12
Germany	5	10	20	34	40
<i>Energy consumption (millions of metric tons of coal equivalent)</i>					
France	—	13.2	29.1	48.0	62.8
Germany	—	15.0	47.1	113.0	187.8
<i>Iron/steel production (thousands of tons)</i>					
France	270	900	1,730	1,565	4,687
Germany	60	400	2,470	6,461	17,600
<i>Relative share of world manufacturing output (percent)</i>					
France	5.2	7.9	7.8	6.8	6.1
Germany	3.5	4.9	8.5	13.2	14.8
<i>Total industrial potential (United Kingdom in 1900 = 100)</i>					
France	9.5	17.9	25.1	36.8	57.3
Germany	6.5	11.1	27.4	71.2	137.7
<i>Population (millions)</i>					
France	32.4	37.4	37.5	38.9	39.7
Germany	12.9	18.0	45.1	56.0	67.0

NOTE: Figures labeled "Germany" are for Prussia in 1830 and 1860, and for Germany thereafter.

SOURCES: Same as those in Table 3.1.

tor of wealth. For one thing, there is little economic data available for the years between 1792 and 1815. The main place this causes problems is in Chapter 8, when the question arises of whether Napoleonic France had more latent power than its great-power rivals, especially the United Kingdom. I attempt to deal with the problem by describing what historians say about the relative wealth of the United Kingdom and France, and also by looking at population size, the other building block of military power. This information provides a rough but probably accurate picture of the balance of latent power during the Napoleonic years.

I measure latent power between 1816 and 1960 with a straightforward composite indicator that accords equal weight to a state's iron and steel production and its energy consumption. That indicator, which effectively represents a state's industrial might, does a good job of capturing both mobilizable wealth and level of technological development for that lengthy period.³¹ From 1960 to the present, GNP is used to measure wealth. I switched indicators in 1960 for two reasons.³² First, my composite indicator is not useful after 1970, because the role of steel in the major industrial economies began to decline sharply around that time.³³ Thus, a different measure of potential power is needed for the years after 1970; GNP was the obvious alternative. Second, the best available GNP figures for the Soviet Union and the United States, the two great powers in the system at the time, start in 1960 and run through the end of the Cold War.³⁴ So I employ GNP for the last thirty years of the Cold War (1960–90) and the first decade of the post–Cold War era (1991–2000), taking due note of the limits of GNP as an indicator of China's latent power today.³⁵

THE ECONOMIC FOUNDATION OF MILITARY POWER

A brief look at the rise and decline of three European great powers during the last two centuries buttresses my claim that wealth underpins military power and that wealth by itself is a good indicator of latent power. The profound change that took place in the balance of power between France and Germany (Prussia before 1870) during the nineteenth century,

as well as Russia's changing position in the balance of power between 1800 and 2000, shows the crucial role of wealth in determining power.

Napoleonic France was the most powerful state in Europe between 1793 and 1815; in fact, it came close to conquering the entire continent. Prussia was probably the weakest of the great powers at that time. It was decisively defeated by Napoleon's armies in 1806 and was effectively knocked out of the European balance of power until 1813, when it took advantage of France's devastating defeat in Russia to join the balancing coalition that finally finished off Napoleon at Waterloo in June of 1815. By 1900, however, the tables had turned almost completely, and Wilhelmine Germany was emerging as Europe's next potential hegemon, while France needed alliance partners to help check its German neighbor. France and its allies subsequently went to war in 1914 and 1939 to prevent Germany from dominating Europe.

Changes in the relative wealth of France and Germany during the hundred years after Waterloo largely account for the shift in military power between them. As is clear from Table 3.2, France was considerably wealthier than Prussia from 1816 until the late 1860s, when Otto von Bismarck transformed Prussia into Germany. In fact, Germany first gained an edge over France in steel production in 1870, the year that the Franco-Prussian War broke out.³⁶ From that point until the start of World War I, the wealth gap between France and Germany steadily widened in the latter's favor. By 1913, Germany was roughly three times as wealthy as France.

This marked change in the relative wealth of France and Germany was due in part to the fact that Germany industrialized more rapidly than France in the late nineteenth and early twentieth centuries. The main cause, however, was a significant shift in the size of their respective populations, which illustrates how changes in wealth also capture changes in population. The data in Table 3.2 show that France had about a 2.5:1 advantage in population over Prussia in 1830, but that by 1913 Germany had gained roughly a 1.7:1 population advantage over France. This demographic flip-flop was the result of two factors. The French birthrate in the nineteenth century was especially low, while the German birthrate was

among the highest in Europe. Furthermore, the unified German state that Bismarck built around Prussia had a substantially larger population than Prussia itself. For example, Prussia had 19.3 million people in 1865, whereas Germany had 34.6 million people in 1870.³⁷

Russia offers another case of a state whose position in the balance of power has been markedly affected by the fortunes of its economy. Russia was probably Napoleonic France's most formidable military rival. Indeed, the Russian army played the key role in driving Napoleon from power between 1812 and 1815. There was even fear in the wake of France's collapse that Russia might try to dominate Europe.³⁸ But Russia did not make a run at hegemony after 1815. Instead, its position in the European balance of power declined over the next hundred years. As noted, Russia fought three wars against other great powers during that period and suffered humiliating defeats in each: the Crimean War, the Russo-Japanese War, and World War I.

A comparison of Russia's performance in the Napoleonic Wars, World War I, and World War II shows how weak Russia had become by 1914. Each conflict was dominated by a potential hegemon that invaded Russia. Napoleonic France and Nazi Germany were able to concentrate the bulk of their armies against Russia, although each had to maintain some forces in other theaters as well.³⁹ Nevertheless, Russia decisively defeated both of those aggressors. During World War I, however, Germany deployed approximately two-thirds of its fighting forces on the western front against the French and British armies, while the remaining one-third fought against the Russian army on the eastern front.⁴⁰ Although the German army was fighting the Russian army with its best hand tied behind its back, it still managed to defeat Russia and knock it out of the war, a feat that neither Napoleon nor Hitler could accomplish with both hands free.

Russia's decline reached its nadir in the years immediately after World War I, when Poland invaded the newly created Soviet Union and scored major victories.⁴¹ The Red Army briefly turned the tide before the Poles regained the initiative and won a limited victory. Starting in the early 1930s, however, the Soviets began to build a formidable military machine,

which beat the Japanese army in a brief war in 1939, and then defeated the vaunted German Wehrmacht in World War II. The Soviet Union was so powerful after 1945 that only the United States could prevent it from dominating all of Europe. The Soviet Union remained a formidable military power for more than forty years after Hitler's defeat, until it broke apart into fifteen separate states in 1991.

The ups and downs in Russian military power over the past two centuries can be explained in good part by changes in Russia's position in the hierarchy of wealth. Although we do not have much data on the wealth of the great powers between 1800 and 1815, it seems clear that the United Kingdom and France had the most powerful economies in Europe.⁴² Nevertheless, it does not appear that Russia was decidedly less wealthy than either the United Kingdom or France in those years.⁴³ But even if that were the case, the Russian economy was still able to support the Russian military in its fight against Napoleon, although Russia received subsidies from the United Kingdom at various points in the conflict. In short, there is no evidence that the French army had an important advantage over the Russian army because France was wealthier than Russia.⁴⁴

Russia's position in the balance of wealth declined sharply over the seventy-five years following Napoleon's defeat (see Table 3.3), mainly because Russia industrialized much more slowly than did the United Kingdom, France, and Germany. Russia's lack of industrial might had important military consequences. For example, in the two decades before World War I, Russia could not afford to build large railroad networks in its western regions, which made it difficult for Russia to mobilize and move its armies rapidly to the Russo-German border. Germany, on the other hand, had a well-developed railroad system, so it could move its forces quickly to that same border. To rectify that asymmetry, France, which was allied with Russia against Germany, subsidized the building of Russian railroads.⁴⁵ In essence, by the eve of World War I, Russia was a semi-industrialized state about to go to war against a highly industrialized Germany.⁴⁶

Not surprisingly, Russia's war economy could not support its army's needs. Rifle production was so woeful that in 1915, "only part of the army

TABLE 3.3

Relative Share of European Wealth, 1816-1940

	1816	1820	1830	1840	1850	1860	1870	1880	1890	1900	1910	1913	1920	1930	1940
United Kingdom	43%	48%	53%	64%	70%	68%	64%	59%	50%	37%	30%	28%	44%	27%	24%
Prussia/Germany	8%	7%	5%	5%	4%	10%	16%	20%	25%	34%	39%	40%	38%	33%	36%
France	21%	18%	21%	16%	12%	14%	13%	13%	13%	11%	12%	12%	13%	22%	9%
Russia/Soviet Union	19%	18%	15%	9%	7%	4%	2%	3%	5%	10%	10%	11%	2%	14%	28%
Austria-Hungary	9%	9%	7%	6%	7%	4%	5%	4%	6%	7%	8%	8%	—	—	—
Italy	—	—	—	—	—	—	0%	1%	1%	1%	2%	2%	3%	5%	4%

NOTE: "Wealth" here is a straightforward composite indicator that assigns equal weight to iron/steel production and energy consumption. Specifically, I determined the total amount of iron/steel that all the great powers produced for a given year, and then I calculated the percentage of that total accounted for by each great power. I performed a similar calculation for energy consumption. Then I averaged together each state's percentages for iron/steel and energy. However, percentages for 1830-50 are based on iron/steel production alone because energy consumption data is unavailable. Note that the calculations of European wealth used here and throughout this book are based solely on figures for the relevant great powers and do not include minor powers such as Belgium and Denmark. Finally, note that Germany was Prussia before 1870.

SOURCES: All data are from Singer and Small, *National Material Capabilities Data*.

was armed, with others waiting for casualties to get arms.”⁴⁷ Artillery was so lacking by as late as 1917 that Germany had 6,819 heavy pieces, while Russia had only 1,430. Jonathan Adelman estimates that at best only 30 percent of the Russian army’s equipment needs were met during the war. Another way to look at Russia’s problem is to consider the following comparisons for the period from 1914 through 1917:

- 1) Germany produced 47,300 airplanes; Russia produced 3,500.
- 2) Germany produced 280,000 machine guns; Russia produced 28,000.
- 3) Germany produced 64,000 artillery pieces; Russia produced 11,700.
- 4) Germany produced 8,547,000 rifles; Russia produced 3,300,000.

Thus, it is hardly surprising that less than half the German army was able to defeat the entire Russian army in World War I.

Stalin ruthlessly but effectively modernized the Soviet economy in the 1930s, so that by the start of World War II Germany enjoyed only a modest advantage in wealth over the Soviet Union (see Table 3.3).⁴⁸ Thus, the Soviet war economy was able to compete effectively with the German war economy in World War II. Indeed, the Soviets outproduced the Germans in virtually every category of military weaponry for the years from 1941 through 1945:

- 1) The Soviet Union produced 102,600 airplanes; Germany produced 76,200.
- 2) The Soviet Union produced 1,437,900 machine guns; Germany produced 1,048,500.
- 3) The Soviet Union produced 11,820,500 rifles; Germany produced 7,845,700.
- 4) The Soviet Union produced 92,600 tanks; Germany produced 41,500.
- 5) The Soviet Union produced 350,300 mortars; Germany 68,900.⁴⁹

No wonder the Red Army defeated the Wehrmacht on the eastern front.⁵⁰

Although the Soviet economy suffered enormous damage in World War II (see Table 3.4), the Soviet Union emerged from that conflict with the most powerful economy in Europe.⁵¹ Not surprisingly, it had the military might in the late 1940s to dominate the region. But the United States, which was far wealthier than the Soviet Union (see Table 3.5), was determined to prevent the Soviets from becoming a European hegemon. In the first three decades after World War II, the Soviet economy grew rapidly as it recovered from that war, and the wealth gap with its bipolar rival narrowed considerably. It appeared that General Secretary Nikita Khrushchev's boast in 1956 that the Soviet Union would "bury" the United States might prove true.⁵²

	1941	1942	1943	1944
United States	54%	58%	61%	63%
Germany	22%	23%	23%	19%
Soviet Union	12%	7%	7%	9%
United Kingdom	9%	9%	9%	9%
Italy	3%	3%	—	—

NOTE: "Wealth" is measured with the same composite indicator used in Table 3.3, save for the fact that I use energy production here instead of energy consumption. Although the United States is not a European power, it is included in this table because it was deeply involved in the fighting in Europe during World War II.

SOURCES: Energy and steel figures for the United States are from B. R. Mitchell, *International Historical Statistics: The Americas, 1750-1988*, 2d ed. (New York: Stockton Press, 1993), pp. 356, 397. The figures for the United Kingdom and Italy are from B. R. Mitchell, *International Historical Statistics: Europe, 1750-1988*, 3d ed. (New York: Stockton Press, 1992), pp. 457-58, 547. The figures for the Soviet Union are from Mark Harrison, *Soviet Planning in Peace and War, 1938-1945* (Cambridge: Cambridge University Press, 1985), p. 253. The German figures require explanation, because the numbers one uses depend on what territory is considered part of Germany. There are roughly three choices: 1) "older Germany," which covers the pre-1938 borders; 2) "greater Germany," which includes Austria, the Sudetenland, and territories conquered in the war, such as Alsace-Lorraine and the Polish

regions of Olsa and Dombrowa, all of which were incorporated into the Third Reich; and 3) "greater Germany plus the occupied states" that Germany exploited for gain. On these distinctions, see United States Strategic Bombing Survey (USSBS), *The Effects of Strategic Bombing on the German War Economy*, European War Report 3 (Washington, DC: USSBS, October 31, 1945), p. 249. Also see Patricia Harvey, "The Economic Structure of Hitler's Europe," in Arnold Toynbee and Veronica M. Toynbee, eds., *Hitler's Europe* (Oxford: Oxford University Press, 1954), pp. 165–282. For German steel production between 1941 and 1945, I used the relevant figures for the third category above, which are from USSBS, *Effects of Strategic Bombing*, p. 252. However, reliable energy production figures for Germany for the World War II years are difficult to find. See *ibid.*, p. 116. Using Soviet sources, Jonathan Adelman estimates the total amounts of electricity and steel produced by Germany and the Soviet Union during World War II. Adelman, *Prelude to the Cold War: The Tsarist, Soviet, and U.S. Armies in the Two World Wars* (Boulder, CO: Lynne Rienner, 1988), p. 219. Since Adelman's figure for German steel production (133.7 million tons) is close to my total (127 million), I assume his electricity figure is reliable. To apportion energy on a yearly basis, I simply applied the steel ratio for each year. For example, if 27 percent of German steel produced during the war was produced in 1943, I assume that 27 percent of all electricity was produced in that year, as well.

TABLE 3.5

Relative Share of Superpower Wealth, 1945–90

	1945	1950	1955	1960	1965	1970	1975	1980	1985	1990
United States	84%	78%	72%	67%	67%	65%	63%	65%	66%	68%
Soviet Union	16%	22%	28%	33%	33%	35%	37%	35%	34%	32%

NOTE: Figures for 1945, 1950, and 1955 are based on the same composite indicator used in Table 3.3.

SOURCES: All data for 1945–55 are from Singer and Small, *National Material Capabilities Data*. Figures for 1960–90 are based on gross national product (GNP) data from the U.S. Arms Control and Disarmament Agency's *World Military Expenditures and Arms Transfer Database*. It should be noted that there is still uncertainty and disagreement among experts about the actual size of the Soviet Union's GNP during the period 1945–91. In my opinion, however, this is the best available data.

However, the Soviet economy began to falter in the early 1980s because it was not keeping pace with the American economy in developing computers and other information technologies.⁵³ This problem did not manifest itself in an abrupt drop in GNP relative to the United States, although Soviet leaders expected that over the long term. They also recog-

nized that this incipient technological backwardness would eventually hurt the Soviet military as well. Marshal Nikolai Ogarkov was dismissed as the chief of the Soviet general staff in the summer of 1984 for saying publicly that Soviet industry was falling badly behind American industry, which meant that Soviet weaponry would soon be inferior to American weaponry.⁵⁴ Soviet leaders recognized the gravity of the situation and tried to fix the problem. But their economic and political reforms went awry, touching off a crisis of nationalism, which not only allowed the United States to win the Cold War but shortly thereafter led to the dissolution of the Soviet Union.

This discussion of the importance of wealth for building military power might suggest that the distribution of latent power among states should roughly reflect the distribution of military power, and therefore it should be feasible to equate the two kinds of power. My argument that great powers aim to maximize their share of world power might reinforce that notion, since it seems to imply that states will translate their wealth into military power at roughly the same rate. But that is not the case, and thus economic might is not always a sound indicator of military might.

THE GAP BETWEEN LATENT POWER AND MILITARY POWER

The alliance patterns that formed during the Cold War illustrate the problems that arise when wealth is equated with military power. The United States was much wealthier than the Soviet Union from the start to the finish of that conflict, but that was especially true between 1945 and 1955, when the North Atlantic Treaty Organization and the Warsaw Pact were formed (see Table 3.5). Yet the United Kingdom, France, West Germany, and Italy in Europe, and Japan in Asia, opted to join an American-led coalition aimed at containing the Soviet Union. If wealth were an accurate measure of power, those less powerful states should have joined forces with the Soviet Union to check the United States, not the other way around. After all, if wealth is the metric for assessing power, the United States was clearly the mightier superpower.⁵⁵

Power realities do not always reflect the hierarchy of wealth, for three reasons. First, states convert varying portions of their wealth into military might. Second, the efficiency of that transformation varies from case to case, occasionally with important consequences for the balance of power. And third, great powers buy different kinds of military forces, and those choices also have implications for the military balance.

Diminishing Returns

Wealthy states sometimes do not build additional military forces—even though they could in principle afford them—because they recognize that doing so would not give them a strategic advantage over their rivals. Spending more makes little sense when a state's defense effort is subject to diminishing returns (that is, if its capabilities are already on the "flat of the curve") or if opponents can easily match the effort and maintain the balance of power. If launching an arms race is unlikely to leave the initiator in a better strategic position, in short, it will sit tight and wait for more favorable circumstances.

The United Kingdom in the nineteenth century is an example of a state that hit the flat of the curve in terms of the military payoff from additional defense spending. Between 1820 and 1890, the United Kingdom was far and away the wealthiest state in Europe. It never controlled less than 45 percent of great-power wealth during those seven decades, and in the middle two decades of the century (1840–60), it possessed close to 70 percent (see Table 3.3). France, which was the United Kingdom's closest competitor during those twenty years, never controlled more than 16 percent of European industrial might. No other European great power has ever enjoyed such an overwhelming economic advantage over its rivals. If wealth alone was a sound indicator of power, the United Kingdom would probably have been Europe's first hegemonic power, or at least a potential hegemon that the other great powers would have had to balance against.

But it is apparent from the historical record that this was not the case.⁵⁶ Despite its abundant wealth, the United Kingdom did not build a military force that posed a serious threat to France, Germany, or Russia. Indeed,

the United Kingdom spent a much smaller percentage of its wealth on defense between 1815 and 1914 than any of its great-power rivals.⁵⁷ The United Kingdom was just another state in the European balance of power. Consequently, the other great powers never formed a balancing coalition to contain it, as happened with Napoleonic France, Wilhelmine Germany, Nazi Germany, and the Soviet Union.⁵⁸

The United Kingdom did not raise a large army and attempt to conquer Europe because it would have faced huge problems trying to project power across the English Channel and onto the European continent. Large bodies of water, as discussed in the next chapter, tend to rob armies of offensive capability. At the same time, the stopping power of water made it especially difficult for any continental power to cross the channel and invade the United Kingdom. Thus, the United Kingdom wisely concluded that it made no strategic sense to build a large army that was of little utility for offense and unnecessary for defending the homeland.

The United States provides another example from the nineteenth century of a rich state maintaining a relatively small military establishment. The United States was wealthy enough by 1850 to qualify as a great power, but it is generally agreed that it did not achieve that exalted status until 1898, when it began building a muscular military that could compete with those of the European great powers.⁵⁹ This matter is discussed at greater length in Chapter 7. Suffice it to say here that the tiny American army notwithstanding, the United States was a highly expansionist state during the nineteenth century, pushing the European great powers back across the Atlantic Ocean and expanding its borders westward to the Pacific Ocean. The United States was bent on establishing hegemony in the Western Hemisphere, a goal it clearly had achieved by the start of the twentieth century.

The American military remained much smaller than its European counterparts during the latter half of the nineteenth century because it could dominate the hemisphere on the cheap. Local rivals such as the various Native American tribes and Mexico were outgunned by even a small U.S. army, and the European great powers were unable to confront the United States in a serious way. The Europeans not only had to devote sig-

nificant resources to defending their homelands from attack by each other, but projecting power across the Atlantic Ocean onto the North American continent was a difficult task.

Another reason that states sometimes keep a lid on their military budgets is that they conclude that aggressive defense spending is likely to be bad for the economy, which will ultimately undermine state power, since economic might is the foundation of military might. During the 1930s, for example, British policymakers kept a tight rein on defense spending despite facing multiple threats around the globe, because they feared that massive increases would wreck the British economy, which they referred to as the "fourth arm of defence."⁶⁰ Similarly, the administration of President Dwight Eisenhower (1953–61) was dominated by fiscal conservatives who tended to see high levels of defense spending as a threat to the American economy. This was one of the reasons why U.S. defense spending was curtailed in the 1950s and why greater emphasis was placed on nuclear weapons. A nuclear-based strategy, it was believed, would provide the basis for a stable and fiscally viable defense policy for the long haul.⁶¹

Allies also affect the level of resources that a great power devotes to its defense. For sure, any two great powers involved in an intense security competition or fighting a war with each other are going to spend heavily on their military. But if one of those rivals has wealthy allies and the other does not, the state with rich friends will probably have to spend less on defense than its rival. During the Cold War, for example, the Soviet Union committed a larger percentage of its wealth to defense than did the United States.⁶² This asymmetry was due in part to the fact that the United States had wealthy allies such as the United Kingdom, France, Italy, and especially West Germany and Japan. The Soviet Union, on the other hand, had impoverished allies such as Czechoslovakia, Hungary, and Poland.⁶³

Finally, there are those cases in which a wealthy state cannot build powerful military forces because it is occupied by a great power that wants it to remain militarily weak. Austria and Prussia, for example, were each defeated and knocked from the ranks of the great powers by France during the Napoleonic Wars, and France was occupied by Nazi Germany from

mid-1940 until the late summer of 1944, when it was finally liberated by British and American troops. The United States maintained troops in West Germany and Japan during the Cold War, and although it was surely a benevolent occupier, it did not allow either of its allies to build the requisite military might to become a great power. The United States preferred to keep Japan at bay, even though Japan was about as wealthy as the Soviet Union by the mid-1980s, if not sooner. Indeed, the available evidence indicates that Japan had a larger GNP than the Soviet Union's by 1987.⁶⁴ This case shows that although all great powers are wealthy states, not all wealthy states are great powers.

Different Levels of Efficiency

It is also unwise to liken the distribution of economic might with the distribution of military might because states convert their wealth into military power with varying degrees of efficiency. Indeed, there is sometimes a large efficiency gap between rival great powers that has a marked effect on the balance of power. The fight to the death between Nazi Germany and the Soviet Union in World War II illustrates this point.

Germany controlled some 36 percent of European wealth by 1940, while the Soviet Union possessed about 28 percent (see Table 3.3). In the spring of 1940, Germany conquered Belgium, Denmark, France, the Netherlands, and Norway and immediately began exploiting their economies, adding to its wealth advantage over the Soviet Union.⁶⁵ The Wehrmacht then invaded the Soviet Union in June 1941, and within six months Germany controlled almost all Soviet territory west of Moscow, which was prime real estate. By late 1941, the Soviet Union had lost territory that held 41 percent of its railway lines, 42 percent of its electricity-generating capacity, 71 percent of its iron ore, 63 percent of its coal, and 58 percent of its capacity to make crude steel.⁶⁶ In the spring of 1942, the Nazi war machine further extended its reach by driving deep into the oil-rich Caucasus region. The Soviet Union lost roughly 40 percent of its national income between 1940 and 1942.⁶⁷ Germany appears to have held more than a 3:1 advantage in economic might over the Soviet Union by 1942 (see Table 3.4).

Despite Germany's profound advantage in latent power, the Soviet war economy amazingly outproduced the German war economy over the course of the war and helped shift the balance of power in the Red Army's favor. As described earlier, the Soviet Union produced 2.2 times as many tanks as Germany and 1.3 times as many airplanes between 1941 and 1945. What is most astonishing is that the Soviets even outproduced the Germans in the early years of the war, when German control of Soviet territory was at its peak and the Allied bombing campaign was having barely any effect on the German war economy. The Soviet Union, for example, produced 24,446 tanks in 1942; Germany produced 9,200. The ratio of artillery pieces for 1942 was 127,000 to 12,000 in the Soviets' favor.⁶⁸ This asymmetry in weapons production eventually led to a significant Soviet advantage in the balance of ground forces. When Germany invaded the Soviet Union in June 1941, the Soviets had a slight advantage in number of divisions—211:199—the key indicator of military strength. By January 1945, however, there were 473 Soviet divisions and only 276 German divisions, and the average Red Army division was far better equipped with weapons and vehicles than the average Wehrmacht division.⁶⁹

How did the Soviet Union manage to produce so much more weaponry than a far wealthier Nazi Germany? One possible answer is that the Soviet Union spent a larger percentage of its available wealth on the military than did the Third Reich. But in fact Germany devoted a slightly larger percentage of its national income to defense than did the Soviet Union. The German advantage in defense spending over the Soviets in 1942, for example, was 63 to 61 percent; in 1943 it was 70 to 61 percent.⁷⁰ The Allies' strategic bombing campaign might well have hurt German war production in the last months of the war, but as noted above, the Soviet Union was turning out greater numbers of weapons than Germany long before the bombing campaign began to have any significant effect on German output. The Soviet effort was also helped by the U.S. Lend-Lease program, although that aid accounts for only a small percentage of Soviet output.⁷¹ The main reason that the Soviet Union produced so many more weapons than Germany is that the Soviets did a much better job of rationalizing their economy to meet the demands of total war. In particular, the

Soviet (and American) economy was far better organized than the German economy for mass producing weaponry.⁷²

Different Kinds of Military Forces

The final reason why wealth is not a reliable indicator of military might is that states can buy different kinds of military power, and how they build their armed forces has consequences for the balance of power. This matter is discussed at length in the next chapter. The key issue here is whether a state has a large army with significant power-projection capability. But not all states spend the same percentage of their defense dollars on their army, and not all armies have the same power-projection capabilities.

During the period from 1870 to 1914, for example, when great powers spent their defense dollars on either their army or their navy, the United Kingdom earmarked a significantly larger share of its military budget to its navy than did either France or Germany.⁷³ These different patterns of defense spending made good strategic sense, since the United Kingdom was an insular state that needed a large and powerful navy to protect its seaborne commerce and to transport its army across the large bodies of water that separated it from the European continent as well as the vast British empire. France and Germany, on the other hand, were continental powers with much smaller empires, so they were less dependent on their navies than was the United Kingdom. They were also more dependent on their armies than the United Kingdom, however, because they had to worry constantly about an invasion by a neighboring state. The United Kingdom was much less concerned about being attacked, because it was separated from the other European great powers by the English Channel, a formidable barrier to invasion. Consequently, the United Kingdom had a much smaller army than did either France or Germany.

Furthermore, the small British army had little power-projection capability against the other European great powers, because the same geographical obstacle that made it difficult for rivals to invade the United Kingdom made it difficult for the United Kingdom to invade the continent. Kaiser Wilhelm summed up the U.K. military weakness when he

said to a British visitor in 1911, "Excuse my saying so, but the few divisions you could put into the field could make no appreciable difference."⁷⁴ In short, the United Kingdom was not as powerful as either France or Germany during the forty-four years before World War I, even though it was wealthier than France for that entire period, and wealthier than Germany for roughly three-quarters of that time (see Table 3.3).

It should be apparent that there are sometimes important differences in how wealth and power are distributed among the great powers, but that those incongruities are not caused by states passing up opportunities to maximize their share of world power. For sound strategic reasons, states build different kinds of military establishments, and they expend different amounts of their wealth on their fighting forces. Moreover, states distill military power from wealth at varying levels of efficiency. All of these considerations affect the balance of power.

Thus, although wealth is the foundation of military might, it is impossible to simply equate wealth with military might. It is necessary to come up with separate indicators of military power; the next chapter takes on this task.