

From Deterrence to Strategic Morality

A Proposed Paradigm Revolution Addressing the Reintroduction of Aggressive War into the Strategic Environment

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Abstract: This article argues that the strategic community has failed to perceive and identify the failure of the deterrence paradigm as illustrated by the Russian invasion of Ukraine and the Israeli-Hamas war. The article uses philosophy of science literature and historical documents to identify the characteristics of a paradigmatic revolution and explain how the deterrence paradigm was formed and now has failed. It then proposes a new paradigm grounded in the strategic theory of the American military theorist John R. Boyd to replace the materialism of rationality for the strategic decision

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criterion of strategic morality. This original approach would equip the U.S. military and public with a victory-focused strategic grammar, potentially making the U.S. military more effective in its long-term strategic response to the reintroduction of aggressive war into the strategic environment.

Keywords: deterrence, paradigm, limited war, revisionist states, strategic morality, John R. Boyd, Boyd's dialectic, deductive destruction, creative induction, Korean War, moral plane of war

Introduction

British historian Lawrence Freedman argued that the failure of a deterrence strategy would be obvious because a line would have been crossed.¹ These lines that Freedman referred to mark a state's sovereignty and are known as borders. When a state challenges these borders with the intent to conquer a neighbor, it is called aggressive war. Since the establishment of the United Nations (UN) in 1945, these obvious challenges to the territorial integrity of a sovereign state have been limited by the collective action of other states.² This military action is referred to as limited war. Unlike an aggressive war, a limited war is fought to reestablish the violated border of an attacked state.³ The strategic objective in limited war is not to conquer the aggressor state. Short of being conquered, the idea behind fighting a limited war is to increase the costs so that the pursuit of an aggressive war would be deemed irrational. The invention of limited war during the Korean War (1950–53) and its use during the Gulf War (1990–91) confirm Freedman's observation and identify the relationship between limited war and deterrence as a permanent characteristic of the international strategic environment.⁴

When this permanence of the relationship between deterrence and limited war was accepted, the deterrence paradigm was formed.⁵ Under this paradigm, the choice of aggressive war was considered an illogical choice made by irrational regimes. This continues to be the prevailing attitude of leaders in the West, even after Russia invaded Ukraine on 24 February 2022. This article investigates whether the Russian invasion of Ukraine is an anomaly rectified and explained by the deterrence paradigm or a permanent paradigmatic failure of strategic science. If it is the latter, a new strategic theory and paradigm will be necessary to meet the challenges of a changing international environment.

This research is significant if one takes seriously the words of British Army general Patrick Sanders, who said that the Russian invasion of Ukraine gave the West "our 1937 moment," referencing Western Europe's "failure to confront Nazi Germany's territorial expansion in the years preceding World War II."⁶ Later, during the second year of the war, Sanders was criticized by the media, academics, and political leaders when he voiced the need for a citizen's army to meet the Russian threat. Unlike in 1937–39, the failure of deterrence here is not obvious.⁷ Western leaders see every episode of aggression as a separate irrational act that is outside the explanatory power of the current strategic theory and its paradigm rather than recognizing that a concert of interests exists between states that want to see a change in the international framework. These leaders are trying to shift the line of deterrence in the face of Russian aggression in Europe and deter Israel against Iranian proxies so that their nations will not become directly involved in either conflict. When Russia launched its invasion of Ukraine, the West did not deploy the same collective action as was done to defend South Korea in

1950–53 and Kuwait in 1990–91. Instead, these leaders shifted the line of deterrence from membership in the UN, which Ukraine maintains, to membership in the North Atlantic Treaty Organization (NATO), which it does not.⁸

Iran, a main supplier of drones that Russia is currently employing in Ukraine, had its proxy Hamas cross into the territory of Israel on 7 October 2023 in another obvious violation of an international border.⁹ Since these attacks, other Iranian proxies have made direct attacks on the sovereign agents of Western shipping as well as the northern territories of Israel.¹⁰ Other revisionist states are challenging their neighbors' sovereignty with threats to their borders, to include Venezuela and Guyana, Lebanon and Israel, North Korea and South Korea, and China and Taiwan.¹¹ Each of these threats challenges the collective conclusion of earlier generations during the Cold War and post-Cold War eras that aggressive war is irrational. Now, aggressive war may instead become a viable strategic policy option. In answering this research question, this article will examine whether aggressive war is a permanent part of the strategic environment, thereby making the deterrence paradigm a relic of a bygone era.

It will take five steps to answer this research question. First, the article will explain the process of paradigmatic revolutions and how the relationship between accepted theory and the development of a paradigm is more of a political question than an empirical one, according to the authors of the philosophy of science. Second, it will trace how belief in the scientific method by international relations authors contributed to the development of realist theory and the corresponding deterrence paradigm, and how after North Korea invaded South Korea in 1950 the technique of limited war was invented. Third, it will discuss that although challenged by U.S. Army general Douglas MacArthur, commander of the UN Command during the first year of the Korean War, the deterrence paradigm became the template for decisionbased modeling of the U.S. strategic community and determines the ways in which the United States and the West approach warfighting. Fourth, it will explain why the actions of Russia and Iran are demonstrative of paradigmatic failures that are neither obvious nor mere anomalies that can be discounted due to the mental health of the regimes' leaders. Finally, it will present an alternative theory and paradigm that may be more powerful in describing the new strategic environment, which includes the moral plane of war and recognizes aggressive war as a policy choice. This is accomplished by presenting the strategic theory of American military theorist John R. Boyd and the paradigm of strategic morality.

Elements of a Paradigmatic Revolution

Science is defined as a self-contained process of observation, hypotheses, and tests.¹² This process generates a perception of reality called a *paradigm*. A paradigm encapsulates shared assumptions about the nature of reality by those who accept it. These assumptions and perceptions are communicated by members of the paradigm through the development of paradigmatic grammar, which serves as a means through which members of the paradigm create an understanding of the interactions between the phenomenon studied and the environment.

The paradigmatic grammar provides a device through which one can determine hypotheses, conduct tests, and communicate results to others. Those findings that reinforce the explanations provided by the theory are celebrated. In turn, this motivates others to drill down and produce hypotheses and tests that require greater and greater detail. Because of this, anomalies are created that challenge the explanatory power of the theory. These anomalies may be explained away at first, but scientists who continue to test with more detail also continue to produce more anomalies. These anomalies create doubt in some quarters of the community, whose members may begin looking for alternative theories to develop stronger answers to their questions. A debate begins between the dissatisfied scientists and the established scientists. As more catastrophic failures are produced and the persistent resistance to the alternative explanation goes on, a crisis in the field develops, which can only be resolved through a paradigmatic revolution.

Before this process unfolds, one may ask how a paradigmatic community can fail to recognize a catastrophic failure. Historian and philosopher Thomas S. Kuhn answered the question of anomaly perception and identification by referring to the psychological experiments of Jerome S. Bruner and Leo J. Postman. Bruner and Postman conducted their experiments by handing a subject a deck of playing cards. Inside each deck there would be a mixture of normal cards and anomalous cards. The anomalous cards would have an inaccurate color or suit. For example, a black ace of hearts or a red 10 of spades would be identified as an anomaly. The subject was shown both types of cards at random and asked to identify the anomalous cards.¹³ Bruner and Postman found that the subjects were very poor at seeing and mentally processing the anomalous cards. They concluded that the subjects' early exposure to identifying anomalies was "stubbornly misperceived." Kuhn used these findings to conclude that the objectivity of the scientific method is not what scientists claim it to be. He wrote, "In science ... novelty emerges only with difficulty, manifested with resistance, against a background provided by expectations."¹⁴

Philosophy of science literature explains the relationship between theory, paradigm, and grammar. When a community is faced with failed expectations of the explanatory power of its theory and anomalies develop, there is a reluctance to abandon the theory because some of its explanations remain useful. This article argues that the explanatory power of realist theory, the deterrence paradigm, and limited war have failed to explain the Russian invasion of Ukraine and Iran's aggressive attacks against Israel. Furthermore, if Western leaders continue to treat these strategic policy challenges as the same type that were seen during the Cold War and post-Cold War eras, they will continue to be challenged, especially after the Russian elections in March 2024. To demonstrate this paradigmatic failure, the relationship between realist theory, the deterrence paradigm, and limited war must be identified.

Realist Theory, the Deterrence Paradigm, and Limited War

The relationship between theory and paradigm is one of explanation and investigation. Theory provides an explanation for why a phenomenon behaves a certain way in the environment, while the paradigm provides a perception of reality that enables the operationalization of theoretical concepts into investigative variables. These variables can then be measured, tested, and explained in a physical context to reinforce the theory's explanatory power.

Prussian military theorist Carl von Clausewitz popularized the ideas that the phenomenon of war could be scientifically studied and that the decision to pursue aggressive war was a rational choice. His work made the development of both a science of strategy and a paradigm possible.¹⁵ Clausewitz inspired modern authors such as Bernard Brodie, Edward Hallett Carr, and Colin S. Gray to interpret and study the patterns of war from a scientific point of view.¹⁶ These authors, who were pioneers of realism, begin their analyses with the notion that state leaders responsible for decision making have to be rational. Rationality is the foundation of strategic studies, and it is the cost-benefit analysis borrowed from the field of economics that enable realists to model both an aggressor and a victim on the issue of whether one will surrender or resist the aggression. Each party, using rational choice models, calculates and anticipates the behavior of their adversaries by concluding from a material point of view their strengths and weaknesses.

The science of international relations was formally born in 1939, when Carr published *The Twenty Years' Crisis, 1919–1939: An Introduction to the Study of International Relations*. Carr's objective in writing the book was to view war as a phenomenon based on measurable variables in which one could analyze the phenomenon through rationality. He demonstrated this in the book's first sentence: "The science of international politics is in its infancy."¹⁷ He also sought to illustrate the failure of appeasement and the subjectivity of utopian ideals: "In the field of thought, it places its emphasis on the acceptance of facts and on the analysis of these causes and consequences."¹⁸ To initiate this article's examination of the development of the deterrence paradigm, it will define the facts in the spirit of Carr's work.

These facts can be measured by a third party but also may be discounted in importance depending on the perception of the investigator and the shared view of the members inside and outside a paradigm. The first concept that needs to be defined is a *border*. A border is a line, usually seen on a map, that determines where a sovereign state begins and ends. In practice, these lines are typically recognized by other sovereign states. A *sovereign state* is defined as an area of land marked by borders in which an organization, usually a government, has a monopoly of coercion or police powers and enjoys recognition of this power by other sovereign states. Every piece of land in the world (except Antarctica) is claimed by a sovereign state. These states exist in an underlying environment of anarchy or self-help.¹⁹

Although discounted by other schools of thought in the field of international relations, borders, states, and sovereignty constitute the environment of realist theory. Robert Jackson in his book *Sovereignty* described the anarchical environment that is faced by states today and has been understood by realists since the late 1930s:

The political world continues to be an anarchical system composed of independent countries. States are still sovereign in the jurisdictional sense that their bordered territories are spheres of authority exclusive to themselves.²⁰

Therefore, the international strategic environment can be seen as a system of states and borders in which aggressive war is possible if one party in a conflict has the intent to conquer.²¹ This intent to conquer was formally codified by states who proposed a definition for *aggression* to the UN. This article will use this draft proposal as its definition of aggression. The proposed resolution states:

The term "aggression" is applicable without prejudice to a finding of threat to peace or breach of the peace, to the use for in international relations overt or covert, direct or indirect, by a State against the territorial integrity or political independence of any other State, or in any manner inconsistent with the purpose of the United Nations. Any act which would constitute aggression when committed by a State or political entity delimited by international boundaries or international agreed lines of demarcation against any other political entity so delimited and not subject to its authority.²²

This formal articulation of borders, sovereignty, and aggression was made by the victors of World War II to prevent World War III from ever beginning.²³ It was believed that if one had a system designed to clearly identify an aggressor, such an aggressor would be obvious to all other states, and it would therefore be easier to mobilize a collective response. This generation that had already lived through two world wars believed that if one could define the components of aggression, then one could also measure its violation to prevent a third world war. This was done by clearly identifying borders or internationally accepted lines of demarcation and understanding that their violation by a different political entity would identify the aggressor in a conflict. The crossing or violating of a border was an objective fact that one could witness. With this idea in mind, realists soon had the opportunity to operationalize their theory with the outbreak of the Korean War.

The United States in the immediate aftermath of World War II was not a very good occupier of South Korea. The years 1945–50 saw a failure by the United States to recognize the suffering that the Korean people had endured during decades of Japanese colonization. This failure happened almost from the start, when the U.S. government was forced to countermand an announcement by U.S. Army lieutenant general John R. Hodge, commander of U.S. Army Forces in Korea, to temporarily retain Japanese administrative officials at their posts in South Korea following the Japanese surrender.²⁴ The gap between the U.S. occupation forces and the Korean people continued to grow and was a contributing factor in the decision by North Korean leader Kim Il-Sung to invade South Korea.²⁵

That this is known today is thanks to the research of Kathryn Weathersby, who discovered a series of telegrams and other documents establishing that North Korea's invasion of South Korea was not a response to any provocation by South Korea or the United States. Weathersby explained how Kim voiced his argument for invasion to Soviet Union leader Joseph Stalin in a memo:

Kim II Sung made four points to persuade Stalin that the United States would not participate in the war. First, it would be a decisive surprise attack, and the war would be won in three days. Second, there would be an uprising of 200,000 members of the [Korean Workers Party] in South Korea. Third, the guerillas in the southern provinces would support the Korean People's Army [KPA]. And, fourth, the United States would not have time to participate.²⁶

Weathersby's work put an end to speculation about why North Korea pursued aggressive war. It was not a response to any action made by South Korea, a belief still propagated in North Korean today. For the purposes of this article, the demonstrable fact that North Korea violated a line of demarcation that would later become an international border became the first test for the new science of strategy.²⁷ Kim indicated in his memorandum to Stalin that the United States would be facing a *fait accompli*. The West would therefore be confronted by a dilemma of either doing nothing or declaring war. Or was there a third option?

U.S. secretary of state Dean G. Acheson was the primary advocate of having the UN serve as the legitimizing agent for the use of military force in Korea. On first hearing of the North Korean invasion on the afternoon of 25 June 1950, Acheson described his thoughts in his memoirs:

If Korean force proved unequal to the job, as seem probable, only American military intervention could do it. Troops from other sources would be helpful politically and psychologically but unimportant militarily. My two weeks in Europe left little doubt of that.²⁸

The problem facing Acheson and U.S. president Harry S. Truman was that one of the permanent members of the UN Security Council—the Soviet Union—had been a party to the aggression. Stalin may not have been an instigator of the invasion, but he did give his approval for Kim's proposal and promised material support.²⁹

Acheson would use North Korea's violation of the 38th parallel and Stalin's acquiescence to galvanize domestic and Western support to respond to the Communist challenge to the international framework symbolized by the UN Charter. He successfully convinced Truman to bypass Congress in favor of using the Security Council as the vehicle for legitimizing U.S. military force against North Korea. Acheson's logic, expressed years later, was that the UN would give political and psychological legitimacy to U.S. policy. Acheson, being a lawyer, more importantly understood the power of precedents, and that the use of the UN Security Council was not a mere fig leaf to hide American unilateralism but rather an essential requirement for a policy designed to thwart the use of aggressive war. Truman was in full agreement with Acheson when he closed a meeting with his top national security aides on how to react to the invasion, noting that he "worked for the United Nations."³⁰

Gaining the approval of the UN Security Council was a task easier said than done. As with the current Russo-Ukrainian War, the Soviet Union could veto any actions proposed by the Security Council to reestablish South Korea's territorial integrity as guaranteed by the UN Charter. Unlike today, however, the Soviet Union did not participate in the Security Council meeting nor vote on the resolution approving UN military action. Ultimately, by recognizing the de facto power of the UN Security Council to legitimize military action against an aggressor during the Cold War, Acheson's view on the political and psychological benefits of UN action was fulfilled.³¹

There is debate among Korean War scholars as to why the Soviets boycotted the meeting and resolution, making it possible for the UN Security Council to approve direct military action in defense of South Korea and thwarting North Korea's aggressive plans.³² On one side of the issue, authors such as Max Hastings argue that it was a fluke caused by the Soviet Union's attempt to pressure the UN to force the body to seat the People's Republic of China to replace the Republic of China's (Taiwan) seat on the Security Council.³³ On the other side, and supported by interviews and documents obtained following the collapse of the Soviet Union in 1991, Sergei N. Goncharov, John W. Lewis, and Xue Litai have shown that the Soviet absence was part of a precise plan by Stalin. Andrei Gromyko, who became the famous dour face of Soviet-American relations until the rule of Mikhail Gorbachev, said in an interview that he had reminded Stalin of Soviet representative to the UN Yakov Malik's intention of boycotting the meeting. Gromyko said that Stalin responded that "the Soviet Representative must not take part in the Security Council meeting."³⁴

Since this famous meeting, Western scholars have questioned the perceived Soviet lapse and asked why Stalin would have given up an opportunity to veto UN involvement in Korea and foil the UN's future role in thwarting aggression. There is a hint of speculation in answering this question, and there are plausible reasons for Stalin's decision. Looking into Stalin's psyche from the outside, one can surmise that Stalin wanted to avoid a direct U.S.-Soviet conflict while at the same time encouraging a military engagement for the United States in Asia. If the Soviet Union had used its veto power and blocked the UN's legitimization of the use of force, then Truman would have had to go to Congress and ask for a declaration of war against North Korea—and, perhaps, North Korea's allies and enablers, China and the Soviet Union, as well. If this had been the case, the Soviet Union would have been required to activate provisions of the 1950 Sino-Soviet Treaty of Friendship, Alliance, and Mutual Assistance, which obligated the Soviet Union "to immediately render military and other assistance [to China] with all means at its disposal."35 If the Soviet Union had vetoed the UN resolution, the flexibility of Soviet policy in the future (e.g., withholding air support after Chinese intervention in war) would not have been possible. Furthermore, it would not have served Stalin's successors, who used the practice of limited war and the establishment of the deterrence paradigm for their own purposes during the Cold War. The invention of limited war using the UN Security Council to thwart aggression was established on 27 June 1950 through the opportunity offered by the Soviet absence at the meeting.³⁶

After the meeting concluded, the United States began organizing a military response to the North Korean aggression. U.S. Army general Douglas MacArthur, then the supreme commander for the Allied Powers and commander of the U.S. Far East Command, was appointed commander of the UN Command. Years before, President Franklin D. Roosevelt, a distant cousin of MacArthur, said during MacArthur's tenure as Army chief of staff that he was the most dangerous man in the country. World War II had made MacArthur a hero. While the U.S. forces rushed to the defense of South Korea in July 1950 were initially unprepared, MacArthur made a brilliant landing at Inchon in September that put the North Korean invaders on the defensive. The UN forces crossed the 38th parallel and raced to the Yalu River, which lay on the border of North Korea and China.³⁷ The Chinese, perceiving a threat on their border, then intervened in the war, forcing the UN forces back to the 38th parallel. There, a two-year stalemate ensued until the Korean Armistice Agreement was signed on 27 July 1953.³⁸

After the Chinese intervened, Truman fired MacArthur. During this time, MacArthur, the commander of the first limited war, clouded the concept in hopes of propelling his political ambitions, proving Roosevelt's insight into the character of the would-be Napoléon. After reading MacArthur's testimony before the U.S. Senate Committee on Armed Services, it is not surprising that the members of the deterrence paradigm dismissed his strategic advice in favor of Truman's successor as president, retired U.S. Army general Dwight D. Eisenhower. In response to a senator's question on the concept of limited war, MacArthur said, "That policy, as you have read it, seems to me to introduce a new concept into military operations—the concept of appeasement, the concept that when you use force, you can limit that force."³⁹

MacArthur wanted to equate the British and French failure at Munich, Germany, in 1938 to the actions of the United States and the UN. He argued that waging limited war was akin to doing nothing. With this in mind, he went on to discuss the decision-making process and the constitutional control of U.S. military power. MacArthur contended:

The only way I know, when a nations wars on you, is to better her by force. I do not know of any argument that will bring an end to this thing. War in itself, is the application of superior force, and as we chose that path, it seems to me that we must end it some way. Now, there are only three ways that I can see, as I said this morning: Either pursue victory; to surrender to an enemy and end it on his terms; or what I think is the worse of all choices, to go on indefinitely, neither to win or lose, in that stalemate; because what we are doing is sacrificing thousands of men while we are doing it.⁴⁰

MacArthur's testimony would taint the idea of victory from 1950 to today. His argument is rooted in the same cost-benefit matrix of the realists, yet it also ignores the distinction between limited war and aggressive war. This distinction has been blurred by both the far left and far right ideologues since his testimony was given and his fate sealed. Limited war, despite attempts to discount it, was a technique that kept the Cold War cold. It was the multilateral participation in the decision-making process that the UN Charter gave small states to agree to exchange treaties and promises for the procurement of arms.

The End of Limited Wars and the Failure of Deterrence

The deterrence paradigm and the success of limited war expanded after the collapse of the Soviet Union in 1991. Even those who disagreed with realism still regarded the rational basis of the deterrence paradigm as a permanent and useful tool to press other issues for greater prominence on the world stage. Whether it was the environment, trade and development, equity, nuclear energy, chemical weapon nonproliferation, or other issues, this soon sent the question of aggressive war to the background of international consciousness. Theodore Caplow, a scholar confident in the success of the deterrence paradigm and the irrationality of aggressive war, wrote in 2007:

If nuclear weapons could be wielded only by national governments, the present condition of the commonwealth of nations might be celebrated as approaching the fulfillment of an age-old utopian dream—the abolition of international war.⁴¹

Caplow came to this conclusion by identifying three previously unrecognized and unarticulated rules that governed international relations in the nuclear era. These rules are:

- 1. A non-nuclear state must not attack a nuclear state with its national forces.
- 2. A nuclear state must not attack another nuclear state with its national forces.
- 3. Any state may attack a non-nuclear state with its national forces, if the defending state has no nuclear guarantor.⁴²

It can be demonstrated that the perception of the irrationality of aggressive war in the case of Ukraine is a systemic or paradigmatic failure and not a mere anomaly. Ukraine is unique in history because it returned its 4,000 inherited nuclear weapons to Russia after the collapse of the Soviet Union.⁴³ Ukraine chose to be a non-nuclear armed state. It was the deterrence paradigm and the exercise of limited war that convinced the newly independent nation not to be a part of the nuclear club; Ukraine believed that it did not need a nuclear deterrent because it had an overlapping nuclear guarantee. If one recalls Caplow's three rules, the third rule reinforces the need to have a nuclear guarantor. Ukraine, from its point of view, had three: the United States, the United Kingdom, and Russia.⁴⁴ Ukraine could look at the guarantees given by the UN Charter, the Treaty on the Non-Proliferation of Nuclear Weapons, and the Budapest Memorandum on Security Assurances and read territorial guarantees offered by all three countries.⁴⁵

Specifically, Article 2, Section 4 of the UN Charter states:

All members shall refrain in their international relations from the threat or use of force against the territorial integrity or political independence of any state, or in any other manner inconsistent with the purpose of the United Nations.⁴⁶

When Ukraine made this decision about its nuclear arsenal in 1993, it had seen how the UN Security Council had enabled a limited war to liberate Kuwait from Iraqi occupation two years earlier. The UN Charter gave Ukraine the confidence to "de-nuclear" its defense forces. In addition to the reassurances given by the UN Charter, the language of the Treaty on the NonProliferation of Nuclear Weapons also gave Ukraine the sense of having a nuclear guarantor:

Recalling that, in accordance with the Charter of the United Nations, States must refrain in their international relations from the threat or use of force against the territorial integrity or political independence of any State, or in any manner inconsistent with the purpose of the United Nations.⁴⁷

While the territorial integrity of Ukraine was guaranteed by these two documents, there was another even more specific promise that Ukraine relied on. This was in the Budapest Memorandum, a territorial implied guarantee signed by the United States, the United Kingdom, and Russia in 1994. In section 2 of the memorandum, the language reads:

The Russian Federation, United Kingdom of Great Britain and Northern Ireland, and the United States of America reaffirm their obligation to refrain from the threat or use of force against the territorial integrity or political independence of Ukraine, and that none of their weapons will ever be used against Ukraine except in self-defense or otherwise in accordance with the Charter of the United Nations.⁴⁸

In section 5, the promises become even more specific:

The Russian Federation, The United Kingdom of Great Britain and Northern Ireland, and the United States of America reaffirm, in the case of Ukraine, their commitment not to use nuclear weapons against any non-nuclear weapon state party to the Treaty on the Non-Proliferation of Nuclear Weapons, except in the case of an attack on themselves, their territories, or dependent territories, their armed forces, or their allies, by such a state in association or alliance with a nuclear state.⁴⁹

These treaties and the context of Caplow's rules offer a look into the view held by Ukraine that these guarantees would be sufficient to exchange their nuclear weapons for paper promises.⁵⁰ Ukraine during this period would not be the only small state to abandon its pursuit of nuclear and chemical weapons in exchange for guarantees to its territorial integrity. Caplow's conclusion of the irrelevance of international war was widely held up to 2018, when *Foreign Affairs* magazine published a special issue titled "Do Nuclear Weapons Matter?" This line of thinking reflects the attitude of the U.S. security elite, even now.⁵¹

Twenty years after Ukraine gave up its nuclear weapons, it ironically found itself threatened by Russia, which was armed possibly with the very weapons so surrendered. The first unrecognized anomaly or failure suffered by Ukraine was the Russian annexation of Crimea in 2014.⁵² Ultimately, it did not matter if Ukraine had the UN Charter, the Treaty on the Non-Proliferation of Nuclear Weapons, and the Budapest Memorandum guaranteeing its territorial integrity. From 2014 to the present day, the strategic, policymaking, and academic communities refuse to recognize the failure of the deterrence paradigm.

During this period, Lawrence Freedman argued that the failure of deterrence would be obvious, and since it was not obvious it must not be a failure:

Because all interests are not of equal worth, it is unwise to make them all subjects of deterrence. At the high end of major war the workings of deterrence are easy to grasp. The prospect of major war, with all the chaos, death, and destruction that would entail is deterrent itself. This is why NATO still has an important function as its Article 5 provision commits each member state to consider an armed attack against one member state, in Europe or North America, to be an armed attack against them all. This creates a risk that what might otherwise have been a localized incident can be turned into a general war. It is notable that Russia was prepared to invade Ukraine and Georgia, which are not part of NATO, rather than Estonia and Latvia, which are.⁵³

This demonstrates how Freedman's analysis of the events of 2014 is similar to the subjects of Bruener and Postman's psychology experiments who failed to see a black ace of hearts.

One cannot promise to act and then discard that promise because the commitment is deemed too costly. That Russia violated the UN Charter by invading and annexing Ukrainian territory, and that there was no collective military action made to reestablish Ukraine's violated border, as was the case with South Korea in 1950–53 and Kuwait in 1990–91, put all the promises that make up the deterrence paradigm into question—including NATO. One cannot argue that the guarantees of NATO are more valuable or important than the guarantees of the UN Charter. The moving of the line of deterrence in essence has proven that deterrence has failed, though this is not obvious to the members of the deterrence paradigm.

This failure is not obvious because the members of the defense paradigm do not want to make it obvious. The actions taken by Russia against Ukraine in 2014—first the occupation and annexation of Crimea and then the war in Donbas—were never identified as an invasion. Instead, the conflict was first called a civil war with heavy foreign intervention and later identified as a proxy war. Who is to say that if the same actions were taken against Estonia or Latvia today, the members of NATO would not classify them in the same way as the members of the UN who guaranteed Ukraine's territory did in 2014? This is why the failure in Ukraine also creates a potential failure in Estonia or Latvia: the states offering the guarantees may not honor them. It is not unlike a person who steals; to be a thief is not dependent on the value or importance of the things one steals, but that one is engaging in the act of stealing. The deterrent paradigm failed everywhere when it failed in Georgia and Ukraine. The failure was not obvious because the strategic elite refused to perceive the failure and still does today. Just because the line of deterrence has moved does not mean that the paradigm has not failed and remains intact. The paradigm has indeed failed, and as a result, a new theory, paradigm, and grammar need to be developed to meet the coming challenges of revisionist states.

In 2022, as Russia launched its invasion of Ukraine, the West clung to the hope of avoiding a wider war by moving the line of deterrence from the UN Charter to NATO. Russia continues to calculate that the cost of war is not too great. Iran may have come to the same conclusion, as in 2023 its proxy Hamas crossed an international line of demarcation and created another aggressive war in the Middle East. The rational actor criterion for decision making is creating anomalies for those who use it, and people around the world are suffering today because the thought of pursuing an aggressive war was believed to be irrational. As analysis into the changing perspective of China and Russia to the irrationality of aggressive war comes from the outside in, a statement by the Chinese minister of foreign affairs, Wang Yi, in March 2024 seems to confirm that both nations, as well as other revisionist states, have proclaimed their separation from the rationality of deterrence:

As key major countries of the world and permanent members of the U.N. Security Council, China and Russia have forged a new paradigm of major-country relations that differs entirely from the obsolete Cold War approach.⁵⁴

This new paradigm confirms this article's argument of the failure of deterrence. There now exists a formal declaration of this failure by the very states that the United States and its allies are supposed to be deterring. De facto failures of deterrence happened on 27 February 2014, again on 24 February 2022, and again on 7 October 2023. The argument that the paradigm has failed will not be recognized by the strategic community because of the problem of identifying and recognizing paradigmatic failure. The political ramifications of dismantling and reestablishing a new strategic theory, paradigm, and grammar are too great unless faced with a calamity. Having said this, it is possible to establish a new strategic theory, paradigm. The strategic theory of John R. Boyd and a paradigm developed from his dialectic called "strategic morality" could prevent the West from inadvertently stumbling into World War III.

Facing a New Challenge: Boyd's Strategic Theory and Strategic Morality

The Individual, Institutions, and the State

Unlike Clausewitz's rationality, Boyd's theory is founded on a criterion based on individual perception rather than institutional decision making. Boyd's framework begins with the perception of the individual of their reality and how they pursue their objectives through behavioral choices. The decisionmaking criterion is based on one's perception of their independence of action on their own terms.⁵⁵ It is not materially determinant as is the cost-benefit analysis of realism. Instead, when an obstacle exists to one's increasing their independence of action on their own terms, people will enlist the help of others. In other words, they will cooperate.

When cooperation becomes routine, or when the obstacle to one's independence of action is perceived as permanent, an institution is formed. Institutions gain legitimacy when they are generally accepted to enhance the individual's and indirectly the community's independence of action.⁵⁶ To the contrary, when an institution is perceived as no longer enhancing one's independence of action of one's own terms but is seen as impairing one's independence of action, individuals defect from the institution. If a critical mass of individuals defect, institutions are faced with a dilemma of either reforming or dying. Therefore, the decision model of Boyd's strategic theory is based on the freedom of individuals to perceive and act inside their perception of reality. Instead of costs and benefits, the choice is between cooperation and defection.

For example, this article has reported that China and its allies have now confirmed that they are defecting from the deterrence paradigm. The decision-making model used here is based on the perception of one's

situation, and the decision to cooperate or defect can include material and nonmaterial variables. Therefore, one can either accept the Chinese statement at face value and recognize it as a defection or explain it away inside the deterrence paradigm as an anomaly and continue to act inside the established strategic paradigm. The problem is that the established strategic paradigm cannot model nonmaterial variables very well. Boyd contends on a systemic level that individuals find themselves in a competitive environment and are required to make decisions based on their perception of reality as often as one blinks, with the objective of increasing their control of limited resources. A limited resource in the context of this article is sovereignty and territorial integrity of a state. This is why some states choose to defect and resist an aggressor, such as Ukraine today; and other states, even those with more material resources than their adversary, defect from their institutions and cooperate and/or surrender, such as France in 1940.⁵⁷ Therefore, in Boyd's theory the strategic objective is to have one's enemy defect from their institutions, which put them at war.⁵⁸ The ability to have one's adversary defect from their institution to one's institution is the strategic objective.

Boyd explains this further in his definition of war. He defines *war* as having three planes: physical, mental, and moral. The physical plane pertains to the five senses. The mental plane relates to the realm of ideas. The moral plane involves the interplay of idealized criteria and the ability to achieve the criteria through the perception of oneself and the acceptance of others. The moral plane entails the cultural codes of conduct or standards of behavior that constrain, sustain, and focus one's emotional and intellectual responses. Conflict arises when either the individual, institution, or nation-state is perceived as having violated this self-professed code of conduct or standard of behavior. Boyd defines this violation of the self-professed code as *corruption*.⁵⁹

Boyd saw the inability to live up to one's self-professed standard of behavior as a corrosive agent in strategy. Corruption can explain the failure of the United States in Vietnam (1965–75), Iraq (2003–11), and Afghanistan (2001–21). Boyd personally observed this lack of awareness in the gap between talk and action during the Vietnam War. H. R. McMaster also chronicled the lack of support for the constitutional processes during this period in his book Dereliction of Duty: Johnson, McNamara, the Joint Chiefs of *Staff, and the Lies that Led to Vietnam*. While this behavior has contributed to the ultimate failure of U.S. military power on numerous occasions, the ignoring of the moral plane in war still has not been remedied. This discounting of the moral plane creates a gap in credibility between the individual and their leaders, which contributes directly to the morale and attitude of the individuals involved in the conflict. This can be seen today in the difference in morale between the Ukrainian and Russian people: the Ukrainian knows why they are fighting, while the average Russian is not sure.⁶⁰

This section introduced the individual and their perception of morality, which is defined as the self-professed standard of behavior. With this serving as context, the following section will present the formal dialectic that Boyd developed for his decision-making modeling and the scientific conditions that premise his explanation of the strategic environment.

Boyd's Strategic Dialectic and Scientific Conditions

A dialectic forms patterns that enhance one's understanding of observed reality that is interpreted by one's enhanced mental concepts. These patterns that Boyd wrote about in his 1976 paper "Destruction and Creation" are the result of "a changing and expanding universe of mental concepts matched to a changing and expanding universe of observed reality."⁶¹ Boyd's dialectic allows readers to explore why leaders, institutions, and nation-states pursue decisions that seem irrational to their adversaries. Additionally, the dialectic facilitates the design of decision-making models that reintroduce the perception of the individual into the strategic policy process. The ability to use the criterion of one's ability to increase their independence of action on one's own terms allows for an assessment of strategic policy on the moral plane of war. This is more powerful in determining whether a community surrenders or resists than the tools provided by the deterrence paradigm. The dialectic described here represents a continuous process that Boyd calls "destructive/deduction" and "creative/induction." To specifically explain the process, this article will borrow directly from the Boyd's briefing "The Strategic Game of ? and ?"⁶²

Illustration

- Imagine that you are on a ski slope with other skiers—retain this image.
- Imagine that you are in Florida riding in an outboard motorboat maybe even towing water skiers—retain this image.
- Imagine that you are riding a bicycle on a nice spring day—retain this image.

 Imagine that you are a parent taking your son to a department store and that you notice he is fascinated by the tractors and tanks with rubber caterpillar treads—retain this image.

Now Imagine that You

- Pull skis off ski slope; discard and forget rest of the image.
- Pull outboard motor out of motorboat; discard and forget rest of the image.
- Pull handlebars off bicycle; discard and forget rest of the image.
- Pull rubber treads off toy tractors or tanks; discard and forget rest of image.

This Leaves Us with

Skis, outboard motor, handlebars, rubber treads.

Pulling All This Together

What do we have? Snowmobile⁶³

The process of perceptually creating a snowmobile exemplifies how innovation and creativity are formed by individuals. These scenes, unrelated at first, create a sense of unease among audiences and represent an unfamiliar stimulus to one's process of established perception, similar to the scientists facing a paradigmatic revolution or a fighter pilot losing a dogfight.⁶⁴ The failure or destruction of the established pattern encourages the individual, institution, or nation-state to form new connections. These new

connections relieve the feeling or disorientation, and a new equilibrium is established. The dialectic of destructive/deduction and creative/induction can be used in forming a strategic paradigm.

This article has presented the criterion for decision making, independence of action on one's own terms. It has also defined *strategic morality* as the self-professed code of conduct or standard of behavior that is accepted and perceived by the individual and community, as well as Boyd's dialectic of destructive/deduction and creative/induction.

The final part of presenting Boyd's strategic theory is to identify the three scientific conditions that one must have in a theory and paradigm in order to have a scientific valid explanation of war. The three scientific conditions are Kurt Gödel's ontological proof, Werner Heisenberg's indeterminacy or uncertainty principle, and the second law of thermodynamics. Boyd argued the importance and relevance of Gödel's proof when he wrote that it "indirectly shows that to ascertain the consistency of any new system, we must devise or reveal another system beyond it."⁶⁵ Gödel's proof suggests that one's decision making is intrinsically flawed due to the subjective nature of one's perception of reality and the resulting behavior. In the context of paradigmatic failure, Gödel's proof reinforces Kuhn's conclusion that one's proximity to a theory can blind one to the anomalies it creates and its ultimate failure.

Boyd incorporates Heisenberg's indeterminacy or uncertainty principle as well. The equation for the principle is VQ> = h/m, in which V is the velocity of uncertainty, Q is the position of uncertainty, and h/m represents Max Planck's constant divided by mass. This can be understood as follows: as mass decreases, the uncertainty in measuring the position of the observation

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drastically increases, masking the true behavior of the phenomenon. When an observer's intrusion is high, the phenomenon's behavior appears to be erratic, whereas low intrusion results in less obscured behavior. Therefore, for the purposes of this article, the more one refines an explanation within a paradigm, the more distorted one's perspective becomes due to the increased influence of one's intrusion.

Boyd goes on to explain how this intrusion effects the testing process. Because the product of velocity and position uncertainties are equal to or larger than a small number (Planck's constant) divided by the investigated particle or the body's mass, the implication for research is that the hidden behavior hinders the expectation of reality's description with the actual reality perceived by the paradigmatic community. Consequently, an observer's psychological perception influences their ability to cooperate or defect from the investigated results of the behavior of the phenomenon. In other words, one's psychological predisposition impacts how one interprets results of observations when determining the potential for change in the environment. In this case, this means the failure of deterrence and the return of aggressive war in the strategic environment.

Boyd's third scientific principle is the second law of thermodynamics, specifically the concept of entropy. *Entropy* is an idea representing the potential work, action, capacity, or degree of confusion and disorder associated with any physical act or informational activity. The second law of thermodynamics states that all observed natural processes increase in decay in any closed system. Entropy, uncertainty, and the growing inability to test the phenomenon of a closed system explains why theories and their paradigms fail.⁶⁶

These scientific conditions provide insight into why members of the deterrence paradigm perceive the present conflicts in Ukraine and Israel/Gaza as opportunities to deter escalation by providing weapons and, if need be, fighting a limited war. Collectively, these three scientific conditions form the basis of Boyd's strategic theory, which uses cooperation and defection and the introduction of the moral plane to explain the phenomenon of war.

Conclusion

Where does the paradigmatic failure of deterrence and Boyd's strategic leave readers? Although Boyd's strategic theory was never published as an academic text, there are excellent transcriptions available. These texts offer an outstanding foundation to establish a new paradigm in the United States. This becomes possible if one agrees that the self-professed standard of behavior or code of conduct is articulated in the U.S. Constitution and that an understanding of the strategic procedures encased therein will enhance the chance for victory, not inhibit it. One must also agree to build a paradigm that includes the legislative branch as well as the executive branch, no matter who controls them politically, and make the debates and decision-making processes transparent to the average individual. Finally, a new theory and paradigm will only work if the individual who ultimately decides whether to resist or surrender is brought back into the strategic grammar. Implementing these preliminary steps will be a great challenge, but if it proves successful, they will enhance U.S. strategic policy and enable Americans to meet "our 1937 moment."

³ Sun Tzu, *The Art of War*, trans. Lionel Giles (New York: Barnes and Noble Classics, 2003), xxii. ⁴ For examples of the UN Security Council enforcing international borders, see "United Nations Security Council Concerning the North Korean Invasion of South Korea: UN Council Resolution of June 27, 1950," in Allen Guttmann, ed., *Korea and the Theory of Limited War* (Boston, MA: D. C. Heath and Company, 1967), 2–3; and "U.N. Security Council Resolution 678 (Iraq and Kuwait)," in John Norton Moor, Guy B. Roberts, and Robert F. Turner, eds., *National Security Law Documents* (Durham, NC: Carolina Academic Press, 2006), 171–72.

⁵ For more on realists and their formation of the deterrence paradigm, see Bernard Brodie and Fawn M. Brodie, *From Crossbow to H-Bomb: The Evolution of the Weapons and Tactics of Warfare* (Bloomington: Indiana University Press, 1973); Edward Hallett Carr, *The Twenty Years' Crisis, 1919–1939: An Introduction to the Study of International Relations* (New York: St. Martin's Press, 1939); and Colin S. Gray, *Modern Strategy* (Oxford, UK: Oxford University Press, 1999).

⁶ Euan Ward and Stephen Castle, " 'This Is Our 1937 Moment,' the U.K.'s New Army Chief Says of the War," *New York Times*, 28 June 2022.

⁷ Jonathan Beale, "Britain Must Train Citizen Army, Military Chief Warns," BBC News, 24 January 2024.

⁸ *The North Atlantic Treaty* (Washington, DC: North Atlantic Treaty Organization, 1949).

⁹ Jeff Mason and Steve Holland, "Russia Received Hundreds of Iranian Drones to Attack Ukraine, U.S. Says," Reuters, 9 June 2023.

¹⁰ "Who Are the Houthis and Why Are They Attacking Red Sea Ships?," BBC News, 15 March 2024.

¹¹ Christopher Sabatini, "Maduro Hopes to Mobilize Venezuelans around an Old Grievance in Guyana. He Seems to Have Failed," Chatham House, 7 December 2023; Hyonhee Shin and Josh Smith, "In Threatening Shift, North Korea Moves to Redefine Relations with South," Reuters, 4 January 2024; and Christopher Bodeen, "China Reaffirms Its Military Threats against Taiwan Weeks before the Island's Presidential Election," AP News, 28 December 2023. ¹² Grant T. Hammond, *The Mind of War: John Boyd and American Security* (Washington DC: Smithsonian Books, 1992), 161.

¹³ Thomas S. Kuhn, *The Structure of Scientific Revolutions* (Chicago: University of Chicago Press, 2008); and Edward Slingerland, *What Science Offers the Humanities: Integrating Body and Culture* (New York: Cambridge University Press, 2008), 65, https://doi.org/10.1017/CBO9780511841163.

¹⁴ Quoted in Slingerland, *What Science Offers the Humanities*, 65–66.

¹⁵ Carl von Clausewitz, *On War*, in Mortimer Adler and Robert M. Hutchins, eds., *Gateway to the Great Books*, vol. 7 (Chicago: Encyclopedia of Britannica, 1963), 479.

¹⁶ See Brodie and Brodie, *From Crossbow to H-Bomb*; Carr, *The Twenty Years' Crisis*; and Gray, *Modern Strategy*.

¹⁷ Carr, *The Twenty Years' Crisis*, 1.

¹⁸ Carr, *The Twenty Years' Crisis*, 10.

¹⁹ Stephen McGlinchey, ed., *International Relations* (Bristol, UK: E-International Relations Publishing, 2017), 8.

¹ Lawrence Freedman, *Ukraine and the Art of Strategy* (New York: Oxford University Press, 2019), 20.

² Charter of the United Nations and Statue of the International Court of Justice (San Francisco, CA: United Nations Conference on International Organization, 1945), hereafter United Nations Charter.

²³ United Nations Charter.

²⁴ "Telegram, John J. Muccio to George Marshall, November 19, 1948" (Official File, Korean War and Its Origins Collection, Harry S. Truman Library and Museum, Independence, MO); and "Memo, Dean Acheson to Harry S. Truman with Attachment, September 14, 1945" (Official File, Korean War and Its Origins Collection, Harry S. Truman Library and Museum, Independence, MO).

²⁵ This was not the only factor in Kim's calculus, as he had already decided to cross the 38th parallel no matter what conditions were like in South Korea.

²⁶ Kathryn Weathersby, "The Soviet Role in the Early Phase of the Korean War: New Documentary Evidence," *Journal of American-East Asian Relations* 2, no. 4 (Winter 1993): 433, https://doi.org/10.1163/187656193X00149.

²⁷ Weathersby, "The Soviet Role in the Early Phase of the Korean War."

²⁸ Dean Acheson, *Present at the Creation: My Years in the State Department* (New York: W. W. Norton, 1969), 405.

²⁹ Acheson, *Present at the Creation*, 413.

³⁰ Acheson, *Present at the Creation*, 405.

³¹ Acheson, *Present at the Creation*, 405.

³² It is worth noting that the Soviets/Russians would not miss another meeting from that time to the present.

³³ Max Hastings, *The Korean War* (New York: Simon and Schuster Paperbacks, 1987), 55.

³⁴ Sergei N. Goncharov, John W. Lewis, and Xue Litai, *Uncertain Partners: Stalin, Mao, and the Korean War* (Stanford, CA: Stanford University Press, 1993), 161.

³⁵ Goncharov, Lewis, and Xue, *Uncertain Partners*, 161.

³⁶ Guttmann, *Korea and the Theory of Limited War*, 2–3.

³⁷ Mark Perry, *The Most Dangerous Man in America: The Making of Douglas MacArthur* (New York: Basic Books, 2014).

³⁸ Korean War Armistice Agreement, 27 July 1953, Treaties and Other International Agreements Series #2782, General Records of the United States Government, Record Group 11, National Archives.

³⁹ Guttman, *Korea and the Theory of Limited War*, 20.

⁴⁰ Guttman, *Korea and the Theory of Limited War*, 25.

⁴¹ Theodore Caplow, *Forbidden Wars: The Unwritten Rules that Keep Us Safe* (New York: University Press of America, 2007), 98.

⁴² Caplow, *Forbidden Wars*, 1.

⁴³ John J. Mearsheimer, "The Case for a Ukrainian Nuclear Deterrence," *Foreign Affairs* 72, no.
3 (Summer 1993): 51.

⁴⁴ *Memorandum on Security Assurances in Connection with Ukraine's Accession to the Treaty on the Non-Proliferation of Nuclear Weapons* (Budapest, 5 December 1994), hereafter Budapest Memorandum.

²⁰ Robert Jackson, *Sovereignty* (Cambridge, UK: Polity Press, 2007), 149.

²¹ Sun Tzu, *The Art of War*, xxii.

²² "Draft Proposal Submitted by Australia, Canada, Italy, Japan, the United Kingdom of Great Britain and Northern Ireland, and the United States of America (United Nations document A/Ac. 134/L.17 and Add. 1 and 2)," in *Report of the Special Committee on the Question of Defining Aggression, 1 February–5 March 1971* (New York: United Nations, 1971).

⁴⁵ See United Nations Charter; "Treaty on the Non-Proliferation of Nuclear Weapons," in Moore, Roberts, and Turner, *National Security Law Documents*, 411–12; and Budapest Memorandum.

⁴⁶ United Nations Charter.

⁴⁷ "Treaty on the Non-Proliferation of Nuclear Weapons."

⁴⁸ Budapest Memorandum.

⁴⁹ Budapest Memorandum.

⁵⁰ Caplow, *Forbidden Wars*, 1.

⁵¹ Two articles in this special issue include John Mueller, "Nuclear Weapons Don't Matter, but Nuclear Hysteria Does," *Foreign Affairs* 97, no. 6 (November/December 2018): 10–16; and Nina Tannenwald, "The Vanishing Nuclear Taboo?: How Disarmament Fell Apart," *Foreign Affairs* 97, no. 6 (November/December 2018): 16–24.

⁵² Vladimir Rauta and Andrew Mumford, "Proxy Wars and the Contemporary Security Environment," in *The Palgrave Handbook of Security, Risk, and Intelligence*, ed. Robert Dover, Huw Dylan, and Michael S. Goodman (London: Palgrave Macmillan, 2017), 103; and Freedman, *Ukraine and the Art of Strategy*, 20.

⁵³ Freedman, Ukraine and the Art of Strategy, 21.

⁵⁴ "Wang Yi: China and Russia Have Forged a New Paradigm of Major-Country Relations that Differs Entirely from the Obsolete Cold War Approach," Embassy of the People's Republic of China in the United States of America, 7 March 2024.

⁵⁵ John R. Boyd, "Destruction and Creation," in Robert Coram, *Boyd: The Fighter Pilot Who Changed the Art of War* (Boston, MA: Little, Brown, 2002) 451–60.

⁵⁶ Boyd, "Destruction and Creation."

⁵⁷ B. H. Liddell-Hart, *History of the Second World War* (Old Saybrook, CT: Konecky and Konecky, 1970), 696.

⁵⁸ Hammond, *The Mind of War*, 161.

⁵⁹ Col John R. Boyd, USAF (Ret), *A Discourse on Winning and Losing*, ed. Grant T. Hammond (Maxwell AFB, AL: Air University Press, 2018), 344.

⁶⁰ H. R. McMaster, *Dereliction of Duty: Johnson, McNamara, the Joint Chiefs of Staff, and the Lies that Led to Vietnam* (New York: Harper Perennial, 1998).

⁶¹ Boyd, "Destruction and Creation."

⁶² Boyd, *A Discourse on Winning and Losing*; and Hammond, *The Mind of War*, 161.

⁶³ John R. Boyd, "The Strategic Game of ? and ?," ed. Chet Richards and Chuck Spinney, *Defense and the National Interest*, June 2006.

⁶⁴ Boyd, "The Strategic Game of ? and ?."

⁶⁵ Boyd, "Destruction and Creation."

⁶⁶ Boyd, "Destruction and Creation."