

**Using Red Teaming Tools for Model Development:
A Six Step Process to Develop a Better International Decision Model**

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ABSTRACT

Red teaming enables self-awareness, reflection, cultural empathy, applied critical thinking, and creative thinking. In the complexity of the international security environment, or the operational environment as it is known in military circles, these skills are particularly useful. In the summer of 2021, a game that foreshadowed the war in Ukraine, NATO's role, and the possibility of nuclear weapons use was developed thanks in part to the use of red teaming tools.

In previous papers and conference presentations the outcomes of the two-level, three-player game and its significance were described. The game predicted the invasion of a non-NATO country, NATO not directly engaging in combat operations, the Russian people initially supporting the invasion, and the eventual threat of nuclear weapons use. Basic principles such as Maslow's hierarchy of needs combined with the different starting situation of each actor. Also, the pathways to progressively higher needs fulfillment were interpreted inside the value system of each actor. In other words, it discovered that Vladimir Putin was not acting irrationally, but rather rationally acted in a very different value system.

In media, politics, and even military analysis we often confuse rationality with values. Red teaming has long sought to help overcome the obstacles of mirroring and other cognitive biases and traps, usually through rich cultural understanding and logical approaches of analysis and synthesis. In this paper, the combination of certain red teaming, international studies, and game theory approaches into a rational and somewhat predictive game of international conflict is described. This is contrasted with a game that represents the dominant narratives leading up to and into the war. The overall explanation and comparison highlights the usefulness of incorporating red teaming methods in model design for the support of war games, simulations, and decision support tools.

ABOUT THE AUTHOR

Nathan Colvin holds a Graduate Certificate in Modeling and Simulations from Old Dominion University, where he is also completing his last semester of coursework toward a Ph.D. in International Studies as an I/ITSEC Leonard P. Gollobin Scholar. Additionally, he studies at Russian language and culture at the undergraduate level at The Ohio State University. He earned master's degrees in Aeronautics and Space Studies (Embry-Riddle University), Administration (Central Michigan University), and Military Theater Operations (School of Advanced Military Studies). He earned a Bachelor of Science degree in Geography: Environmental Science, with a minor in Computer Science Engineering. He has deployed to Iraq, Afghanistan, Pakistan, and Latvia as an aviator, operational planner, and strategist. He is currently participating in the HillVets LEAD program.

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INTRODUCTION

Red teaming attempts to prevent failures in thinking. Humans rely on assumptions, bias, stereotypes, generalities, heuristics, and a bevy of other mental shortcuts to deal with the complexity of daily experience. Many of these rules of thumb are accurate and useful. At other times, they are deeply flawed, strengthen institutional discrimination, or increase the likelihood of a catastrophic accident. The United State Army Training and Doctrine Command's G-2 discusses red teaming in these terms:

Red Teaming is a flexible cognitive approach to thinking and planning that is specifically tailored to each organization and each situation. It is conducted by skilled practitioners normally working under charter from organizational leadership. It uses structured tools and techniques to help us ask better questions, challenge explicit and implicit assumptions, expose information we might otherwise have missed, and develop alternatives we might not have realized exist. It cultivates mental agility to allow Red Teamers to rapidly shift between multiple perspectives to develop a fuller appreciation of complex situations and environments. This leads to improved understanding, more options generated by everyone (regardless of rank or position), better decisions, and a level of protection from the unseen biases and tendencies inherent in all of us. (2018, pp. 3–4)

Red teaming enables self-awareness, reflection, cultural empathy, applied critical thinking, and creative thinking. In the complexity of the international security environment, or the operational environment as it is known in military circles, these skills are particularly useful. In the summer of 2021, while enrolled in a Game Theory course at Old Dominion, I built a game that foreshadowed the war in Ukraine, NATO's role, and the possibility of nuclear weapons use. The rationale used in this game was only possible through the use of red teaming tools.

In previous papers and conference presentations the outcomes of the two-level, three-player game and its significance were described (Colvin, 2022, 2023). In this paper, I describe how I combined certain red teaming, international studies, and game theory approaches into a rational and somewhat predictive game of international conflict. Development of this combined approach proceeded iteratively and sometimes messily. However, after the initial fog of creation lifted, there were some simple steps that I now offer for future designs. These steps include:

1. Put the people (actors) first in the social system – identify key actors and scale (individual or groups).
2. Put the people (actors) in relation to each other. What are prevalent institutions and systems of action?
3. Figure out what people (actors) want. What are their values and goals?
4. Layout the interactions of the people's (actors) pursuits. Develop the system of systems.
5. Determine the central person (actor) of study and how they will act in the context of the other actors.
6. Backwards check your future. Does the outcome of the future align with the evidence available today?

In the following pages, I will highlight the tools that align with this process. Further, I also demonstrate my game's difference with a game built on common ethnocentric assumptions. In doing so, I hope to illustrate the usefulness of red teaming methods in model design for the support of war games, simulations, and decision support tools. My goal is to provide steps for decision analysts which are sensitive to the diversity in the international system.

BACKGROUND

On Strategy, International, and Game Theory

While the process described in this is suitable for solving a wide array of problems, this particular approach is tailored to decisions in the international security space. Its body of knowledge is drawn from strategy, security studies, international relations, and international studies. As Baylis and Wirtz (2013, p. 5) describe, “strategy deals with the difficult problems of national policy, the areas where political, economic, psychological, and military factors overlap”. This definition highlights the holistic concerns of security studies across elements of national power (diplomatic, economic, military, information), but also across the scale of human endeavor from the individual, group, and group interaction perspectives.

The field of international studies is concerned with the interactions of cultural, social, political, and economic issues amongst different national, state, or interstate groups. Cultural studies, security studies, international development, foreign policy, and international relations can all play a role in international studies. This brings a lot of tools to the table, of which, many seem incompatible. For example, one ongoing debate is whether the international system works on the basis of realism, or whether liberal ideas are feasible. This pits the classic ideas of power and interest against ideas of values and freedom. However, instead of pitting these ideas against each other, it is possible to make them compatible. For example, if these perspectives are treated as levels of development instead of natural systems, they can be evaluated as conditions of the interstate system. In other words, some states act as realists while others act as liberals. This becomes fundamental in developing the game.

Especially inside the relatively young field of international relations, some theorists are treated as fundamental, if not dogmatically. From historical perspectives of Herodotus, Thucydides (1973), and Machiavelli (1513) the seeds of power are modern realism are detected. Philosophers like Locke set the foundations for liberalism to become a foundation of modern domestic governance, diffusing power from the divine sovereign to the will of the people. These ideas spread to values-based international relations theory as well. Ideas ties to individual rights, domestic governance, and international interaction were increasingly colliding with each other over time.

Kenneth Waltz is most recognized for his work *Man, the State, and War* which identified three levels of analysis (images) in international relations (2001, p. 12). Speaking specifically on conflict, Waltz stated, “Where are the major causes of war to be found? The answers are bewildering in their variety and in their contradictory qualities. To make this variety manageable, the answers can be ordered in the following three headings: within man, within the structure of the separate states, within the state system”. He went on to identify that “the views comprised by any one image may in some sense be as contradictory as are the different images *inter se*” (2001, 12). The approach Waltz took in this description conveyed the complexity and propensity for bias in our studies.

Ironically, much of the future work of Waltz, and the international relations community at large, focused on the complications of the interstate image. Case in point, Waltz penned *Theory of International Politics* (1979) which fostered the neorealism school of interstate behavior. However, there were acknowledgements of domestic and personality factors in specific areas of study, if not grand international theory. Cultural anthropologists Clifford Geertz (1973) and Geert Hofstede (2005) provided important understandings of how culture and nationality intersected between these images. Like Geertz and Geert, the political scientist Robert Putnam also traveled research territory from the individual to interstate levels.

Most recently, Putnam penned *Bowling Alone* (2020), exploring how technology and individualism were eroding the traditional social ties of American identity. Earlier, Putnam also described the idea of two-level game theory to describe the situation of international negotiations. When Putnam took part in the G7 summits from 1976-1979 he noticed significant shifts in the aims and choices of actors. He noticed that the individual negotiator (first image) needed to consider the goals of domestic actors (first and second image) while pursuing an agreement with the international party or parties (third image). In this case, the limited agenda of the negotiation allowed for a re-scoping of the international (third image) problem to include the otherwise complexifying characteristics of the first and second images. His two-level game theory supplied a framework for studies between dissimilar images.

With Putnam’s description of a two-level game, we return full circle to the idea of strategy (Putnam, 1988). Whether coordinated or competitive, actors are interdependent in the international systems. Joel Watson (2013, p. 1) points

out that “situations of interdependence are called strategic settings because in order for a person to decide how best to behave, he must consider how others around him choose their actions.” The work of John von Neumann, Oskar Morgenstern, John Nash, and many others were to bring mathematical analysis to human behavior and choice through theory of games. By understanding the actors, their preferences, and the options available to them, they could arrive at solutions concepts that help analysis understand the strategic (or operational) environment.

According to Watson (2013, 7), a game theory model consists of some formal elements such as a list of players, description of player choices, description of what players know, how actions lead to outcomes, and a specification of player preferences for the outcomes. The quantitative nature of game theory does not divorce it from qualitative understanding. In many decision-making games, players have some sort of underlying logic, even if individual preference might be different. However, in international relations, the complexities of first and second order differences undermine this universal logic. What players choose, know, and prefer are unique to their particular local context, making social and strategic culture a main concern.

As a Cornell University Networks Course blog points out, Stanley Kubrick’s *Dr. Strangelove* highlights what happens when a system is developed around an overly rigid interpretation of shared rationality (Cornell University, 2015). Religion, ideology, false narratives, or even the satirical fear of “impurify[ing] all of our precious bodily fluids” may lead actors to shift their goals, preferences, and choices – invalidating the calculated solution set. Underlying beliefs bend understanding of otherwise benign facts, into what may be malign outcomes. Red teaming the components of a model helps to find the cultural and other specific components of other decision makers.

On Red Teaming Tools

The United States Army Training and Doctrine Command’s University of Foreign Military and Cultural Studies developed the Red Teamers Course and *The Red Team Handbook*. Unlike a Red Cell, that plays the role of the adversary, the Red Teamer looks to educate the “friendly” or “blue” team’s thinking. This involves improving self-awareness and reflection (SAR), Groupthink Mitigation (GTM) and Decision Support, Fostering Cultural Empathy (FCE), and developing Applied Critical Thinking (ACT). The Red Team Handbook delivers no less than fifty separate techniques to use SAR, GTM, FCE, and ACT. While many of these techniques are meant to maximize contributions of analysis teams, they can also be adapted for the researcher who is reviewing literature. The first contribution of red teaming is that it aids the author in incorporating many, sometime contradictory sources. At each step of the model design process, the improved game used certain techniques to craft context informed options, which are highlighted in the following sections.

BASE CASE

To appreciate the value of red teaming techniques, it is important to review the prevailing thoughts on the situation, as a point of comparison. In the media, academia, and elsewhere there was continuous confusion on why Russia seemed to act against its own international interests. Explanations were often reductive to the point of being unhelpful. Russians were revanchist or imperialists. Vladimir Putin was labeled a bad strategist or a madman. Each of the cases attempted to explain a break from rational logic.

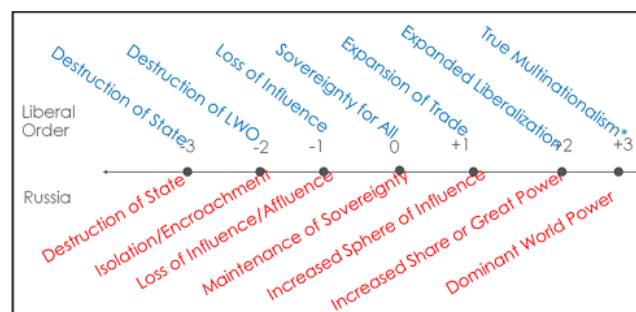


Figure 1 - Scored goals of the liberal western order and Russia in comparison, in a state-on-state game

The prevailing narratives relied on a traditional state-on-state approach (Waltz Third Image) to understand the situation. When those goals were played out in a matrix game using *Rational Choice Theory*, the Nash equilibrium showed that Russia and the West should peacefully compete in the existing world order, because that is where each nation had the best outcomes. In other words, a choice outside of this would be “irrational”.

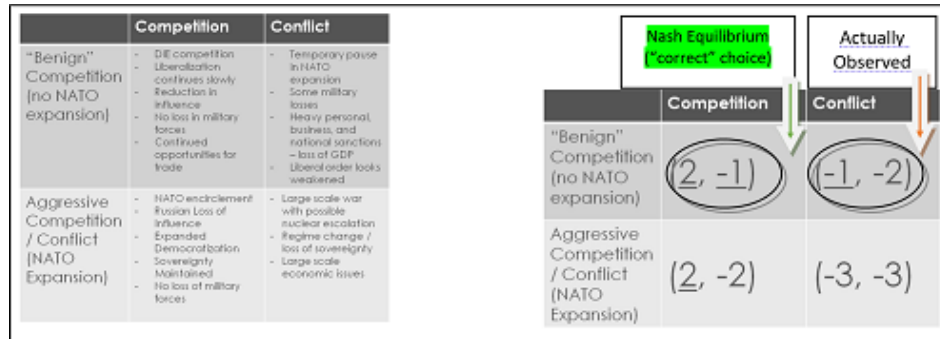


Figure 2 - The Base Case Game that indicates irrationality on the point of Russia

Based on education and personal studies, it was unlikely that an irrational state actor was to blame. Instead, the base case model oversimplified the situation - biased towards a western conception of international decision making. In other words, context, culture, and cult of personality were missing, leading to mirroring. This type of bias assumes our adversary will respond in the same way we would in their position. To overcome these factors, the improved game leveraged multidisciplinary literature review and red teaming techniques.

METHOD FOR IMPROVEMENT

Game theory and Rational Choice Theory were still the underlying method of analysis in the new treatment. However, given the significance of autocratic, illiberal leadership in Russian history, this factor needed to be accounted for. Actors would act rationally, but the values and goals need not be universal. Further, it was unlikely that any actor would continue playing a game where their best choice was a losing one, as in the base case. Instead, they would choose to change the game to suit their desires. Geographic, geopolitical, historical, military, biographical, and popular culture references were used to expand understanding. Then, Watson’s game model design process was fitted to the specific problem. The following paragraphs outline those steps.

Step 1: Determine Actors

Determining the actors (gathering the list of players) is the foundation of the game. Taken from Morgan Jones’ *The Thinkers Toolkit*, Problem Reframing helps to establish the bounds of the issue at hand. During this stage, the problem is paraphrased and restated several times with different language to expose new components of the problem. Next, the problem is restated in an “opposite” manner. The viewpoint is expanded to include more factors, but is also narrowed and redirected to look at the problem from all directions. After the problem is restated, a technique known as *The Five Whys* can help get to the root of the problem. By identifying the first order result, one asks why this is the case, then that case is questions repeatedly. This process should be iterated at least five times, but can continue as long as there is more to explore. Using these red teaming techniques identified that Vladimir Putin as an essential actor, alongside the Russian domestic population and a multilateral “western liberal order”. With greater understanding of the problem’s features, the researcher can also assign who is concerned with each aspect of the problem. The various actors can be tracked through the process of *Stakeholder Mapping*, which actually reveals much about the players’ relationships.

Step 2: Players in Relation

Stakeholder Mapping is more than listing the various actors, as it is particularly good at finding actors that might not otherwise be overlooked. For example, in international relations games, it is often the two states decision making that is tested against each other. However, by considering otherwise marginalized actors, the improved game identified that the Russian domestic audience played an outsized role in the goals of Russia’s autocratic leader, Vladimir Putin. This matched with observed actions where Putin would act against the state’s international interests,

but in ways that reduced domestic freedoms, centralized power, and reinforced his cult of personality. Additionally, during *stakeholder mapping*, the relationship between Article 5 and Russian invasion became clear. The probability of conventional defeat or nuclear escalation meant that Putin needed to avoid a direct confrontation with the west. This put the possibility of invading a non-NATO country on the table as a key way to consolidate domestic power, which by most measures, he has done. In general, finding the connections between actors is what stakeholder mapping is holding is about. The stakeholder mapping process continues to bleed over to understanding the values and goals of actors.

Step 3: Values and Goals

In stakeholder mapping, cultural analysis, analysis of interests, power and influence analysis all help make connections between actors and set the stage for the next step. Positional power, personal power, and political power should all be taken into account. A stakeholder silhouette can help plot an abstract relationship between influence and support for a particular approach. One caution that the manual gives is that stakeholders can change over time, which is particularly important to an iterative game. This step is most critical in defeating mirroring.

Stakeholder mapping can also leverage the *Onion Model*, borrowed from Geert Hofstede. The onion represents the layers of values, wrapped in symbols, heroes, and rituals. Oftentimes, it is the artifacts of culture that are most easily seen and are therefore expected to be critical to particular cultures. Here a multidisciplinary approach is useful. History, law, institutions, religion, gender, ethnic practices, holidays and many other factors combine to reveal what is important to an actor. At the individual level Maslow and Machiavelli are more instructive for the autocrat than most international relations theory. For the Russian people, culture and history add to these sources. For example, the Russian Orthodox Church rituals are an important practice in modern Russia. However, beyond a purely religious context, the church reinforces the idea of orthodoxy in all senses, conservative values, and a slant towards authoritarianism. Likewise, although Russia is a multiethnic country, many of its narratives are wrapped around a “Slavic” identity. Whether in serfdom, communism, or cult of personality the dominant values of Russia over time seem to remain orthodoxy, autocracy, and nationality.

Step 4: Actor Interactions

While stakeholder mapping helps plot the relationships between actors, this step is more about understanding what actors know, and what they will do with that knowledge. In other words, this step leads from intent to a range of outcomes. A tool that can be useful to search the landscape of possible outcomes is the *Swartz method* of *alternative futures*. In a traditional Swartz model, the researcher would determine two key factors, which are plotted on the x and y axis, with relative intensity of outcome – such as high or low.

A two-level game theory appeared to be an appropriate starting point. This required the analysis of three different actors – the western liberal order as the external audience, the Russian people as the domestic audience, and Vladimir Putin as the “negotiator” between these two audiences.

Table 1 – Scoring the goals of each player in the improved game; compare to Figure 1 for Base Case

	Liberal Order	Russian People	Putin
3	True Multilateralism	High Affluence/Actualization	Full Control, Max Affluence & Influence
2	Expanded Liberalization	Long Term QoL Gains	Expanded Long Term Influence/Affluence
1	Acceptable Competitors	Short Term QoL Gains	Expanded Short Term Influence/Affluence
0	Status Quo	Status Quo	Status Quo / Uncertainty
-1	Loss of Influence	Higher Needs Struggle	Loss of Influence
-2	War	Basic Needs Struggle	Regime Change
-3	Liberal Order Destroyed	Death	Death

A modified *Swartz* analysis was developed, which included three-actor dimensions instead of the normal two-issue dimensions. Each actor’s choices, whether the actor was an individual or group, were aligned by thinking of Maslow’s hierarchy of needs – the failure to meet the lowest needs were scored the lowest, while the highest needs such as esteem and actualization were scored the highest. The result was eight discrete “worlds” that describes the span of possibilities in the game. These worlds included:

1. **“Globalization Glasnost”** – President Putin chooses relatively benign competition, the Russian people support him, and the liberal order also chooses a form of benign competition.
2. **“Internal Entropy”** – In this scenario, President Putin chooses relatively benign competition, the Russian people do not support him, but the liberal order does not take active involvement.
3. **“Rapid Expansion”** – In this configuration, President Putin chooses regional conflict, the Russian people support this decision, and the liberal order does nothing significant to halt this activity.
4. **“Regional Chaos”** – This case sees President Putin choosing conflict, while the Russian people do not support this activity, but the liberal order does not intercede in either the external or internal conflict.
5. **“Cold Shoulder”** – Here, President Putin chooses benign competition instead of armed conflict in an attempt to repair relations, the Russian people support this move of reconciliation, but the liberal order’s reaction is lukewarm at best.
6. **“Everyone is Against Me”** – When President Putin chooses benign competition, the Russian people cannot understand the sudden reversal and do not support it.
7. **“Underdog Victory”** – In this scenario, President Putin is bolstered by the success of incremental increases in regional conflicts and the Russian people support him, but the liberal order pushes back.
8. **“Doomsday”** – In this final scenario, President Putin chooses conflict and this leads to escalation to large-scale conflict with the liberal order.

Table 2 - Aligning each of the eight worlds to the game in the strategic form

		1. Putin			
		Competition		Conflict	
		2. Russian People			
		Supports Putin	Not Support	Supports Putin	Not Support
3. Liberal Order	Supports / Neutral	1	2	3	4
	Does Not Support	5	6	7	8

However, understanding what is possible is different from what is likely. For that, it was necessary to understand which of the three actors was most important and how they would act.

Step 5: Central Actor and their Actions

Stakeholder mapping and Swartz analysis helped develop a context informed game. Putnam’s two-level game put this individual negotiator at the center of the model. In this case Vladimir Putin acted as the “negotiator” in the decision of whether to compete benignly in the international order or to commit to violent conflict. Through a multidisciplinary literature review, historical, biographical, and psychological factors were combined to understand how Putin would act. From Machiavelli to Maslow, it was clear he would act to secure his own power in the domestic realm, not because of a grand strategic international plan, because the Russian people were the largest threat to his previous and future gains.

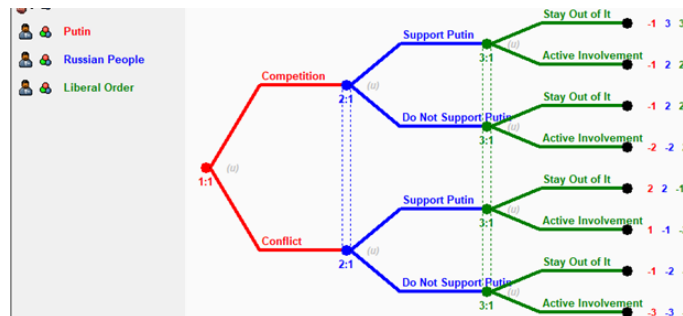


Figure 3 - The Improved Game in Extensive Form

If Putin chooses benign competition, his power base slowly erodes as globalization creates greater liberalization in Russia, eventually requiring leaving the seat of power. If this event occurs, there is no guarantee of his personal safety or reputation remaining intact. Likely, his years of political engineering requires an all or nothing approach to power. Therefore, despite conflict having negative impacts to the Russian state, Putin sees clear advantages to remaining in power where he can continue to survive, and even shape a continuing historical legacy for himself. By

examining his choice between competition and conflict separately, two Nash Equilibriums highlight his payoffs. **Evaluating his options, he sees that competition/cooperation with the West lead to negative (-1) personal outcomes, while conflict leads to positive (+2) personal benefits.**

Based on the estimated goals (Table 1), the Russian people are better off supporting Putin. This might seem counter-intuitive since war could have serious economic and physical consequences for the population. However, the likely consequences of war are unevenly distributed – not everyone will be drafted into wartime duty. On the other hand, resisting the regime is nearly guaranteed to result in negative consequences such as jail, involuntary service, or other negative impacts. The range of outcomes for supporting Putin is +3 to -2, while non-supporting ranges from +2 to -3. **Therefore, the option for the Russian population to resist is nearly immediately eliminated.**

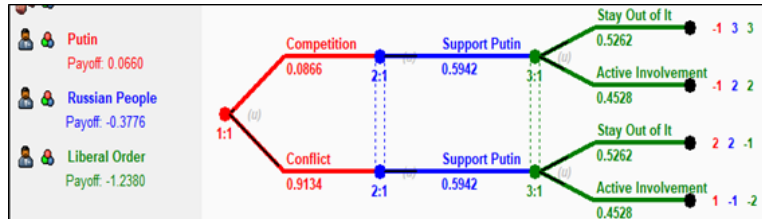


Figure 4 - Iterative dominance eliminates domestic resistance

Similarly, the West reduces its risk (using the goals defined above) by not directly participating in combat operations. Instead it seeks various ways to compete indirectly, such as security assistance, sanctions, and other deterrent actions. **The outcomes for the West to stay out of conflict range from +3 to -1, while directly engaging in conflict with Russia range from +2 to -3.**

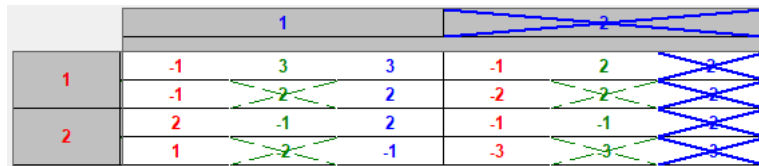


Figure 5 - Iterative dominance eliminates western combat involvement (NATO Combat)

As the Russian people and the West remove the choices most dangerous to them, they also remove some of the highest risks to Putin as well. **While many might advocate for the toughest possible response, realistically, global thermonuclear war will benefit no one.** However, when these higher consequences are taken off the table, Putin is emboldened by the lack of either foreign or domestic resistance. **There is no longer any counterweight to some of his most aggressive choices, as seen below.**

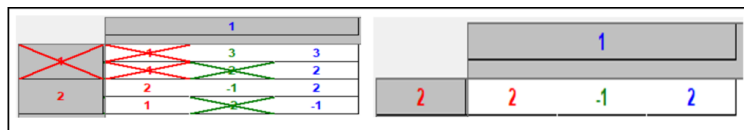


Figure 6 - Iterative dominance eliminates nuclear weapon use if NATO is not involved in combat

Through the continued application of iterated dominance, there is really only one rational choice - Putin chooses conflict, the Russian people support him (at least passively), and the western liberal order does not go to war.

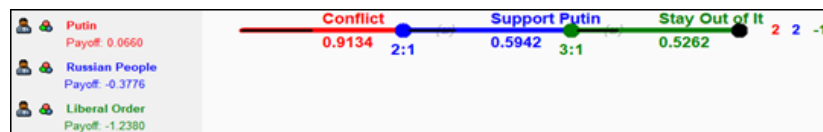


Figure 7 - Iterative dominance presents the inevitability of invasion

Step 6: Backwards Check

The first check on the game is whether the game can create a narrative that is feasible and believable. While there might be surprises, there should not be logical fallacies. In addition to the explanatory narrative above, there were additional logical findings. The primary finding is that Putin chooses conflict, the Russian people support him, and the western liberal order does not engage in combat. This description could be applied to Chechnya, Georgia, Crimea, and now the entire country of Ukraine. The second finding is that Article 5 of the Atlantic Treaty is a useful deterrent to Russian invasion of NATO territory, which makes sense from the perspective that it could lead to heavy casualties that might actually remove Putin from power. Staying in the seat of power becomes a survival strategy, not just a vanity project. Third, maintaining domestic support is one of the largest components to high payoffs for Putin. This idea circles back to the writing of Robert Putnam who demonstrated that in two-level games, any negotiation with external parties must have at least tacit agreement of the internal audience. The final lesson is that by controlling most levers for the use of force, autocrats are capable of actively reshaping the game. By repression of the media, assembly, and other forms of domestic resistance, authoritarian regimes (including autocrats) remove domestic audience choice from the playing table. Once a domestic audience is basically compliant, the autocrat's decisions are the people's decisions. This speeds decision making for the regime; however the system's resiliency is then tied to the benevolence of the autocrat. Unfortunately, in both history and psychology, the more means at the disposal of an actor, the more likely they will use that power for their own purposes.

Hindsight is *twenty-twenty* is as true of imaginary futures as it is of the present, so foresight should at least replicate a plausible scenario when reviewed. The decision game above provides the analytical guardrails that develop a feasible scenario. Even though this explanation is compelling, the red teaming technique of storytelling can be used to revisit and provide context to each of the world's developed with the Swartz method.

1. "Globalization Glasnost": *President Putin* chooses relatively benign *competition*, the *Russian people* support him, and the *liberal order* also chooses a form of *benign competition*. In this configuration, Russia plays by the rules of the liberal order, participating in free trade, and allowing for a basically free exchange of ideas and culture. This removes many of the barriers presented by sanctions, allowing the growth of the Russian economy. This enlightened approach improves the state of the Russian people and its international trading partners. Moreover, with the lack of conflict, neither side bears the loss of military personnel or equipment. By all accounts, this is an ideal situation, except of course for an autocrat. In the short term, President Putin receives high praise, but eventually the influence of soft power, rising expectations, "golden handcuffs," and relative power of competitors reduce his term in power. In this case the liberal order and Russian people prosper, but President Putin loses influence.
2. "Internal Entropy": In this scenario, *President Putin* chooses relatively benign *competition*, the *Russian people* do not support him, but the *liberal order* does not take active involvement. In this case, President Putin's reversal of behavior and reproachment with the west is seen as a sign of weakness and a sign to opposition that it is "now or never" to create political change. Although President Putin may see advantages in international engagement, his resolve to stay in power is as strong as ever. Russia's international engagement earns the President a wide berth in sovereign issues from the international community, and the lack of external conflict allows him to focus the full force of his security apparatus to squashing domestic resistance. While it is clear that Russia does not adopt full human rights for its citizens, the liberal order retains or expands liberalization throughout the world, because Russia is not interfering. Internally the Russian people suffer the consequences of political repression and internal violence. Putin manages to retain power, but at the cost of true domestic support.
3. "Rapid Expansion": In this configuration, *President Putin* chooses regional *conflict*, the *people* support this decision, and the *liberal order* does nothing significant to halt this activity. President Putin reads the liberal order's red line as including only those states that are secure inside of NATO's Article 5 protection. President Putin directs several "gray zone" activities as preamble to conventional military occupation. Belarus is absorbed into a new "Greater Russian Federation," triggering a wave of attempted secessions across non-NATO Russian enclaves. The liberal order proves either unable to mount a unitary response or judges a strong response to be contradictory to its best interests. While the liberal order avoids international conflict, its credibility and influence suffer. While the Russian people bear some short-term costs to these conflicts, the activity is mostly limited and outweighed by a newfound greater-Russo identity and larger trade area, which improves their quality of life. This translates to stronger support and greater influence for President Putin, further expanding his long-term influence and control.

4. “Regional Chaos”: *President Putin choosing conflict*, but the *Russian people do not support* this activity, but the *liberal order does not intercede* in either the external or internal conflict. By remaining out of the conflict, the liberal order loses some face as the keeper of international peace and order but retains their blood and treasure. A strong anti-Putin movement sees the population lose freedoms and possibly their lives, either as part of a government crackdown, or on the frontlines of the external conflict. The turmoil of a near revolution combined with the requirements of large-scale regional conflict takes a large toll on the population’s economic welfare. President Putin takes the blame with the population and his attempts at quelling his detractors fuels the resistance, to a bloody end.

5. “Cold Shoulder”: Here, *President Putin* chooses benign *competition* instead of armed conflict in an attempt to repair relations, the *Russian people support* this move of reconciliation, but the *liberal order’s reaction is lukewarm* at best. After years of distrust, the liberal order sees the Russian move as a sign of some sort of internal weakness and attempts to setup a conditional reconciliation. While some sanctions are lifted, boosting the economy, the carrot is paired with a stick of NATO expansion. The Russian people seem content with their newfound relative prosperity, but President Putin suffers from a lack of regional influence, and the new vectors of soft power into the country likely spell the end for a lifetime of rule. The liberal order benefits from the expansion of trade and security, without the loss of military power that conflict would bring.

6. “Everyone is Against Me”: When *President Putin* chooses benign *competition*, the *Russian people* cannot understand the sudden reversal and *do not support* it. Meanwhile, the *liberal order* chooses active regional involvement, expanding NATO and attempt to help internal dissent with targeted sanctions against President Putin’s monetary interests and supporters. Putin cracks down on dissent, causing economic and human rights issues against the Russian people. In response Putin is deposed. While the liberal order expands and creates a more stable Europe, Russia suffers long term as different interests vie for power in the vacuum left by Putin’s departure.

7. “Underdog Victory”: In this scenario, *President Putin* is bolstered by the success of incremental increases in regional *conflicts* and the *Russian people support* him, but the *liberal order pushes back*. With staunch support of the Russian people and ethnic Russians abroad, Putin is emboldened to make large territorial grabs. The liberal order is caught flat-footed by the suddenness of these moves and mounts an unsuccessful military response. Unwillingly to escalate to nuclear warfare, the liberal order is bloodied, in recession, and with losses of what they thought were future members of their ideological club. While the Russian people take pride in the victory, they are forced to accept a lower standard of living for an extended period to pay for the large-scale operations. Putin, however, receives direct credit for the move and secures more regional and domestic influence and control.

8. “Doomsday”: In this final scenario, *President Putin chooses conflict*, and this leads to escalation to *large-scale conflict with the liberal order*. Meanwhile, the *Russian population* sees this move as an unforgivable betrayal of their former compliance and *resists the President*. Faced with external and internal dissent, President Putin faces reduced areas of control. With the prospects of literally nothing to lose, he lashes out in a desperate attempt at gaining a foothold through the use of tactical nuclear weapons, meant to be a regional trip line to stop advancing NATO forces. Instead, it leads to a nuclear exchange between Russia and NATO. This is the worst case.

By telling stories for each world, analysts can provide a qualitative comparison to get a “gut” check on the game itself. While intuition is not entirely scientific, it is a key factor in gaining attention and credibility for a model. The red teaming technique known as the Delphi method tries to formalize what is called a *BOGSAT* in the military – *A bunch of guys sitting around talking*. The Delphi method combines expert input with group judgment, but attempts to minimize groupthink, by having a facilitator define the key items of analysis, then asking expert opinion. The expert opinion is then passed to other experts for their feedback and probability of likelihood, repeated until an acceptable consensus is reached. Storytelling can help feed the Delphi process, but also the important role of strategic messaging. After all, the best model in the world is no good, if it does not get to the right decision maker.

CONCLUSION

Red teaming techniques are tools that can provide cultural and other rich context, if tied to good multidisciplinary sources that are appropriate for the topic. Experts are extremely helpful to provide input, but are often the ones most likely to be caught in their own bias and norms of their field of study. Red teaming can integrate expert sources of different perspectives, which helps mitigate bias. Aligning relevant sources, red team techniques, and game theory combined to create a model more explanatory than popular opinion, even amongst experts. By determining actors,

putting actors in relation, determining values and goals, determining interacting relationships, focusing on the central actor, then backwards checking the results allows for the alignment of these three pillars in a logical manner. Simulations, war games, and other formalized decision making can benefit from aligning these methods.

Limiting rationality not to the ideal end state, but rather to the process of achieving goals, there is hope that rationality can explain and provide some limited predictive power. Rationality is about ratios, the measure of what the utility of a given choice are. By treating the “ends” as a desired state of being and the “ways” as a process of becoming, games such as these can help us methodically gain better understanding. While we may wish for universal values, most evidence supports that when power is concentrated, it is used for personal gain. While morally depressing, understanding the differences in goals allows for better analysis. This drives home the point that cultural education and red teaming skills are as, if not more important in large scale combat operations as they were during the Global War on Terror.

Apply red teaming to game theory, we see that Putin has a dramatically different worldview than the West. From that world view, however, his actions are completely rational. The autocrat’s own survival is the primary concern of international activity. This is why Russia often pursues aims that are not fully aligned with international goals of sovereignty preservation, multilateralism, and protection of borders from actual threats. For the autocrat, all politics is local, even in international politics. International activities are a means to distract from domestic issues, create external straw man threats, quell dissention, and reinforce personal power. For years Putin played a strategic game to keep himself enriched and empowered. Whether facing his own mortality, a lack of information, believing his own hype, or a host of other reasons, Putin may have bitten off more than he can chew in Ukraine. However, the fact that he acted with violence against a non-NATO country was not only rational for him, it was predicted.

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