

Matching Strike Dice Rolls to the Chinese Calculus

REPORT DOCUMENTATION PAGE			<i>Form Approved</i> OMB No. 0704-0188	
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1. REPORT DATE (DD-MM-YYYY) 14-05-2021		2. REPORT TYPE FINAL		3. DATES COVERED (From - To) N/A
4. TITLE AND SUBTITLE Matching Strike Dice Rolls to the Chinese Calculus			5a. CONTRACT NUMBER N/A	
			5b. GRANT NUMBER N/A	
			5c. PROGRAM ELEMENT NUMBER N/A	
6. AUTHOR(S) Maj James Arnold, USMC			5d. PROJECT NUMBER N/A	
			5e. TASK NUMBER N/A	
			5f. WORK UNIT NUMBER N/A	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Writing & Teaching Excellence Center Naval War College 686 Cushing Road Newport, RI 02841-1207			8. PERFORMING ORGANIZATION REPORT NUMBER N/A	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) N/A			10. SPONSOR/MONITOR'S ACRONYM(S) N/A	
			11. SPONSOR/MONITOR'S REPORT NUMBER(S) N/A	
12. DISTRIBUTION / AVAILABILITY STATEMENT Distribution Statement A: Approved for public release; Distribution is unlimited.				
13. SUPPLEMENTARY NOTES A paper submitted to the faculty of the NWC in partial satisfaction of the requirements of the curriculum. The contents of this paper reflect my own personal views and are not necessarily endorsed by the NWC or the Department of the Navy.				
14. ABSTRACT An understanding of the character of future high-end warfare, particularly between peer great powers, is essential to preparing future military leaders to think critically and avoid strategic surprise. The Halsey Alfa Advanced Research Program explores potential military decisions using a two-team (Red vs. Blue) wargame scenario representing high-end conflict between the People's Republic of China (PRC) and the United States (US). Halsey Alfa utilizes "Global Dice Rolls" (GDR) to distill complex geostrategic decision points to manageable statistical events within each trimester wargame. GDRs provide a strategic framework to bound the potential authorities for allowable (permissive, not directive) military action in a campaign. The Autumn 2020 Halsey Alfa wargame's GDR restraint on Red's employment of retaliatory strikes against Blue bases in the second island chain was fundamentally flawed, leading to skewed gameplay and lessons learned. The Departments of Defense and Navy will make substantive investments to evolve the Joint and Naval Forces toward deterring or winning a future conflict against the PRC. As such, a deep understanding of the true threat of strikes against our bases is critical to the force posture in the Western Pacific region and our operational design of force application in the event of conflict escalation between the two great powers: PRC and US.				
15. SUBJECT TERMS (Key words) Great power conflict, wargame, conflict escalation				
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT N/A	18. NUMBER OF PAGES
a. REPORT UNCLASSIFIED	b. ABSTRACT UNCLASSIFIED	c. THIS PAGE UNCLASSIFIED		
				19b. TELEPHONE NUMBER (include area code) 401-841-6499

Halsey Alfa Context

An understanding of the character of future high-end warfare, particularly between peer great powers, is essential to preparing future military leaders to think critically and avoid strategic surprise. The Halsey Alfa Advanced Research Program explores potential military decisions using a two-team (Red vs. Blue) wargame scenario representing high-end conflict between the People's Republic of China (PRC) and the United States (US). Halsey Alfa utilizes "Global Dice Rolls" (GDR) to distill complex geostrategic decision points to manageable statistical events within each trimester wargame. They provide a strategic framework to bound the potential authorities for allowable (permissive, not directive) military action in a campaign. Examples of GDRs may be as benign as approval for logistical deployments with host nation basing or support, to highly escalatory missile strikes against the opposing force. GDRs terminate at the highest end with nuclear attacks against the foe. The probabilities of the GDRs are recalibrated each game, based upon new research by students as well as relevant and emerging open source and classified information.

Due to the impact of COVID-19 during Autumn 2020, this paper – and all of Halsey Alfa Game 46 – relied entirely on open-source unclassified information. "Game 46" is referenced numerous times throughout this paper as shorthand for the Halsey Alfa game that occurred in the Autumn 2020 trimester. The author was a member of the Red (PRC) team and wrote this paper in response to a situation related to the PRC's use of long-range strikes against Blue (US) bases.

Introduction

The Game 46 GDR restraint on Red's¹ employment of retaliatory strikes against Blue bases in the second island chain was fundamentally flawed, leading to skewed gameplay and lessons learned. Red players contend that as part of the calculus for committing to a high-risk invasion of Taiwan, the Chinese Communist Party (CCP) leadership will have already authorized strikes by the People's Liberation Army (PLA) on critical US bases if certain conditions exist. The Departments of Defense and Navy will make substantive investments to evolve the Joint and Naval Forces toward deterring or winning a future conflict against the PRC. As such, a deep understanding of the true threat of strikes against our bases is critical to the force posture in the Western Pacific region and our operational design of force application in the event of conflict escalation between the two great powers: PRC and US. The following three research questions attempt to address the Game 46 GDR issue: 1. Does the literature support the logic for PRC strikes on US bases in the second island chain? 2. If the PRC would strike, under what conditions would the strike occur? 3. How can the GDRs be updated to replicate the strike calculus more accurately?

The paper begins with a brief discussion of the chain of events in Game 46 related to this GDR. Next, the paper examines the literature related to the doctrinal basis for China's authorization of such strikes. Then, the paper considers the factors of conflict escalation related to the strikes in the context of great power conflict. Finally, the paper proposes an updated GDR framework to more effectively account for PRC intentions.

¹ Note: This paper will use the country names (i.e. PRC, US, and Taiwan) when referring to general discussion of states' actions or intentions. The paper will use the team colors (Red for China, Blue for US, and Black for Taiwan, plus "CONTROL" for the referee team) to refer to specific actions within the wargame.

Game 46 Background

During the Game 46² invasion of Taiwan by the PRC, the US intervened militarily. The intervention included US “boots on the ground” (BOG) in Taiwan, as well as air and naval operations by the US against PRC forces in the western Pacific region to prevent Red’s successful seizure of Black. Blue opted to employ the stand-off cruise missiles Joint Air-to-Surface Standoff Missile – Extended Range (JASSM-ER) and Long-Range Anti-Ship Missile (LRASM) from its Guam based B-1 Lancer bombers. These Blue attacks caused Red the most concern because it directly threatened Red’s amphibious transports and port facilities supporting the PLA landing forces in Taiwan. Additionally, Red’s forces had little ability to defend against these munitions due to stand-off employment beyond the PRC defensive counter-air coverage. As a result, Red determined the situation warranted strikes to disable Anderson Airbase in Guam and multiple other installations in the second island chain.

The GDR mechanism in Halsey Alfa expresses through probabilities the uncertain outcomes of consequential geostrategic decision points. The current tables show the probabilities as a series of escalatory actions by Red and Blue. In the Game 46 GDR table, Red’s ability to strike targets outside Taiwan was given in collective chunks by country or major geographic grouping (e.g., Japan or the Marianas). When Red wanted to strike Guam during Move 4 (D+3), the highest GDR probability for strikes on the Marianas was 10%; the dice roll did not provide the improbable save for Red and did not authorize strikes on the Marianas. Red responded with a GDR override request for authorization of a proposed massive strike with over 150 ballistic and cruise missiles of multiple types on targets in the Marianas and other second island chain locations. CONTROL disapproved of the strikes due to insufficient evidence that

² Game 46 background is based upon numerous working documents and discussions across multiple game turns.

Red was on a losing trajectory and the proposed strike's disproportionate scale. During the next game move, additional stand-off strikes by Blue caused severe damage to the port facilities and transport ships resupplying and reinforcing PLA forces ashore in Taiwan. As a result, Red revised its GDR override request to more precisely articulate the rationale that the invasion would not succeed on the current trajectory and developed a strike plan narrowed in scope to only inhibit the use of Anderson Airbase by big-wing aircraft (i.e., bombers, tankers, airborne early warning, etc.). Following a full turn delay, the strike was approved, but only after additional strikes by B-1s launching from Guam.

The sequence of events from Game 46 laid out above generated discussion amongst Red and CONTROL regarding the validity of the Guam strike GDR and override mechanism. Red contends that the Game 46 GDRs did not correctly replicate the PRC's likely decision-making process, presumably due to invalid assumptions. The result is that the game may have produced less utility for senior leaders and planners by inaccurately constraining Red's actions in a way incongruent with anticipated PRC actions during a conflict.

The Case For Strikes

To test the validity of Red's claims in Game 46, this section of the paper will seek a deeper knowledge base into the decision calculus from which the PRC would authorize strikes against Blue targets. The two broad factors requiring validation are (1) the criticality of reunifying Taiwan in the minds of CCP and PLA leaders and (2) the PLA doctrine in the use of military force.

The Criticality of Taiwan Reunification

One flaw in the Game 46 GDR is that it does not accurately model the importance the CCP and PLA put on Taiwan reunification and the level of commitment to success following the

invasion decision. China's own stated national defense aims, among other things, include "oppose and contain 'Taiwan independence'; safeguard national sovereignty, unity, territorial integrity, and security."³ The National Defense Strategy explicitly refuses to renounce the use of force to achieve reunification and states that it will "take all necessary measures" to prevent "interference of external forces." The strategy continues by saying, "the PLA will resolutely defeat anyone attempting to separate Taiwan from China and [will] safeguard national unity at all costs."⁴ Other writing from the PLA's Academy of Military Science adds passion to the argument by stating:

"In the Chinese nation's continuously integrated history, it has deeply recognized that only with national unification can China enjoy peace, and national division will inevitably lead to violence and chaos. Without complete national unification, there will never fully be national rejuvenation... The Taiwan issue arose because of national weakness and instability but will surely end with national rejuvenation... There is only one future for Taiwan, which is to move towards unification with the motherland. It is better to lose thousands of troops than to lose an inch of soil. The Taiwan issue concerns China's core interests... Those who submit will prosper, while those who resist shall perish."⁵

Given the sources available in open-source research, it becomes evident from the writings of strategic level leadership and vested career professionals that unification of Taiwan with the PRC is one of the most vital core interests. While China has messaged that it views the matter as

³The State Council Information Office of the People's Republic of China, *China's National Defense in the New Era*, (Beijing, China: Foreign Languages Press Co. Ltd., 2019), pg.6-7.

⁴Ibid., pg. 7.

⁵Deng Bibo and Chen Yue, "Firmly Push Forward Complete National Unification," *National Defense*, 2019, 16-17, pg. 16-17.

an “internal” affair, it would seem that China expects “external forces” to become involved – an apparent reference to US military intervention.

PLA writing also establishes the importance of achieving a decisive victory in the face of US intervention and state that as a part of the “recovery of Taiwan, that China should threaten the US military’s strategic depth and ability to generate” combat power by striking key targets on “Guam, Hawaii, and even the West Coast.”⁶ Therefore, if the CCP commits to the invasion, it is committing to successful completion in accordance with PLA doctrine and is presumably willing to accept substantial human and material costs for all parties involved.

Chinese Doctrine

The next logical step is to decompose the doctrinal basis⁷ for how the PLA frames its response to US military intervention in Taiwan “reunification.” PLA doctrine provides the three interrelated doctrinal frameworks which provide insight to probable PLA actions in a conflict: Active Defense, Systems Destruction Warfare, and Target Centric Warfare. Finally, the doctrinal examination will consider the command and control relationship at play to authorize the desired strikes from Game 46.

Active Defense

The overarching military strategy of the PLA is that of “active defense,” which has evolved since its first inception under Mao Zedong. The convergence of strategic-level defense but operational and tactical-level offense serve as the strategy’s essence, including the idea of

⁶Sun Liang et al., "Analysis and Research Regarding the Future Expansion of China’s Operational Direction," *Ship Electronic Engineering*, 2020, 5-8, pg. 8.

⁷ This paper assumes audience knowledge of the kinetic strike systems within the joint fire strike complex, including the DF-26 intermediate range ballistic missile (IRBM), CJ-20 air launched cruise missile (ALCM), and YJ-18 land attack cruise missile (LACM). Rather than focusing on weapon platforms the paper focuses on the cognitive process of CCP and PLA decision-makers.

“we will not attack unless we are attacked, but we will surely counter-attack if attacked.”⁸ At its core, active defense seeks to annihilate the enemy once engaged through overwhelming counter-strikes against important enemy targets during the first opportunity to gain the initiative.⁹ In Game 46, therefore, Red should wait for Blue to commit the first hostile actions, then launch immediate counter-strikes against the source of Blue’s attacks.

Systems Destruction Warfare

The goal of continued PLA reforms is to achieve an integrated combat force capable of employment within system versus system operations, featuring information dominance, precision strikes, and joint operations.¹⁰ A derivative of the system versus system doctrine is “systems destruction warfare,” in which the intent is to paralyze the enemy’s operational system through kinetic and non-kinetic attacks to degrade or destroy key aspects, rendering it ineffective.¹¹ A firepower strike system is the active component of the Chinese “system of systems,” meant to wage kinetic combat in the physical sea, land, air, and space domains. The purpose is to achieve dominance within the domains and prevent the enemy’s use of them. In the systems destruction doctrine, the concept is to “strick[e] selectively but precisely and decisively against critical aspects of the enemy’s capabilities, in particular centers of gravity in enemy systems.”¹²

When formulating the attack on the enemy system, doctrine prioritizes four types of targets: first, degrade or disrupt information systems such as data links and networks; second, degrade or disrupt essential elements of the adversary’s operational system; third, degrade or disrupt the physical, operational architecture including transmissions systems, C2 nodes, and

⁸Central Military Commission, *China’s Military Strategy*, (Beijing: The State Council Information Office of the People’s Republic of China, 2015), pg. 7.

⁹The PLA Second Artillery, *The Science of Second Artillery Campaigns*, (Beijing: PLA Press, 2004), pg. 97.

¹⁰ Central Military Commission, *China’s Military Strategy*, pg. 8

¹¹Jeffrey Engstrom, *Systems Confrontation and System Destruction Warfare*, (Santa Monica, CA: RAND Corp, 2018), pg. 15-16.

¹²*Ibid.*, pg. 53.

firepower assets; fourth, disrupt the time sequencing and tempo of the operational system.¹³

Systems destruction seeks to strike the enemy system in its full operational and strategic depth to achieve domain superiority by destroying key targets.¹⁴

In the context of Game 46, again, the literature suggests Red should attempt to neutralize or destroy the B-1s with stand-off strike capability as the Blue's center of gravity. Without the ability to intercept the B-1s with tactical aviation, the best options are to destroy the bombers on the ground at Anderson Airbase in Guam. If the bombers are not destroyed outright, striking Anderson Airbase would force the B-1s to operate at far-flung bases to hamper their ability to generate repeated attacks.

Target Centric Warfare

Target Centric Warfare (TCW) is the concept of “attacking critical points in the enemy's operational system to achieve decisive effects with minimal collateral damage.” The goal of TCW is to use rapid, intense employment of precision strikes to attack enemy vulnerabilities in the enemy's system. As a part of TCW, the Chinese discuss the idea of “noncontact warfare,” wherein long-range precision strike forces concentrate sudden attacks on vital yet vulnerable targets in all depths. By blending activities at the strategic, campaign, and tactical levels, the enemy cannot recover because he has “no room or time to adjust or adapt.” The tempo of strikes is maintained to maximize pressure on the enemy.¹⁵ When selecting targets, priority should go to those who “have a great impact and high value for the campaign's progress. They should focus on striking key points, such as enemy firepower systems with large-scale casualty and

¹³Ibid., pg. 18.

¹⁴Ibid., pg. 111.

¹⁵Edmund J Burke et al., *People's Liberation Army Operational Concepts*, (Santa Monica, CA: RAND Corp, 2020), pg. 16.

destructive capability.”¹⁶ Within Game 46, the perfect embodiment of such a target set was Anderson Airbase as the base for the B-1 bombers launching the highly lethal stand-off cruise missile attacks, as well as numerous other tactical and support aircraft.

Command and Control (C2)

During any strategic campaign, the CCP’s Central Military Commission (CMC) retains overall leadership but appoints the theater command commander responsible for all military operations within the assigned operational area. The CMC exercises centralized command and unified leadership for strategic issue management for issues extending beyond the theater commander’s operational area.¹⁷ As strategic command authority, the CMC must recognize that success in the overall battlespace is only achieved by using superiority in one part of the battlespace to overcome weakness in another part of the battlespace.¹⁸ Before launching the campaign, the CMC’s planning and analysis would reveal critical vulnerabilities and consider possible offsetting actions. To successfully achieve an offset, the chain of command may seek to organize and sequence firepower to employ strike forces to maximum effect, implying a requirement to nimbly observe, recognize, and authorize strike opportunities to achieve campaign objectives in the shortest time possible.

The command authority’s analysis before the conflict would consider the requirements for winning the campaign and what conditions must control progress and the campaign’s outcome.¹⁹ Therefore, pre-conflict consideration of anticipated decision points enable timely decisions regarding the scale, timing, and coordination of strikes. The command system may employ firepower at the opportune moment to achieve decisive effects when the situation

¹⁶PLA Second Artillery, *The Science of Second Artillery Campaigns*, pg. 315-317.

¹⁷State Council Information Office, *China’s National Defense in the New Era*, pg. 16.

¹⁸PLA Second Artillery, *The Science of Second Artillery Campaigns*, pg. 62.

¹⁹*Ibid.*, pg. 71.

matches foreseen criteria. Once the campaign is in progress, the progression and rhythm become increasingly fast, requiring rapid decision-making and execution of critical commands to “seize the initiative”²⁰ based on battlefield conditions.²¹ The most critical factor driving the need for speedy strike commands is the need to “seize the initiative” from the enemy while avoiding debilitating losses from his attacks.

For the Game 46 takeaway, the CMC would have previously analyzed Blue’s and Red’s strengths, weaknesses and foreseen actions. Based upon this analysis, the CMC would stipulate the conditions within which it would authorize strikes against targets beyond the theater commander’s authority. Once the theater commander recognized these conditions, he would submit the justification of strikes for the CMC’s approval. The overarching guideline would be to ensure the operation remained on a trajectory toward successfully reunifying Taiwan.

Considerations for Conflict Escalation Control

The primary argument against striking Guam and other second island chain bases is that it will unleash an uncontrollable escalation ladder between Red and Blue. The current GDR table lends credence to this logic. The Red and Blue tables are essentially mirror images. Each next higher escalation by one team substantially increases the probability of approval for the other team’s next higher measure. There are two critical flaws to this construct. First, the US and PRC would be operating under different strategic and doctrinal frameworks and political considerations, and thus hold asymmetric risk calculations. Second, the assumption that each side would continue to escalate is not valid as each team/nation compares the prospect of further death and destruction to their perception of their values judgment on the importance of the

²⁰ Note: While the term “seize the initiative” may be considered an aphorism in some contexts, PLA writings repeatedly use this particular phrase verbatim; thus, it is appropriate to use it when attempting to accurately convey the intended viewpoint of the Chinese literature.

²¹ PLA Second Artillery, *The Science of Second Artillery Campaigns*, pg. 60, 66.

mission and likelihood of success in the current warfighting situation. Each side may potentially have the ability to impose a conventional yet asymmetric cost on the other side. Alternatively, each side may have the ability to impose symmetric costs on all sides by denying the use of particular domains (e.g., kinetic anti-satellite strikes may prohibit the use of certain orbits for all players).

To understand the context of a possible escalation, we must first establish the PLA conception of conflict. The table below describes how the PLA describes five stages of conflict in PLA doctrine:

Stages of Conflict ²²	Definition & Key Characteristics	Objective of Control
Crisis	-Manifestation of conflicts of interests -Constitutes a serious threat to national security and social stability -Crisis escalation is predictable, but timing is not	Prevent crisis from developing into a military conflict
Military Crisis	-Risky state which could escalate to armed conflict or war -Likely to change or damage the pre-existing military balance -May emerge if rivals' interests suddenly diverge or are suddenly threatened -Arises when resolution in other domains has failed	Control and guide the situation in a favorable direction
Armed Conflict	-Small-scale, low-intensity fighting between opposing armed forces -Does not constitute a state of war	Avoid expansion and escalation into war
Local War	-Use of armed forces in battle for limited political and/or economic objectives -Combat bounded within some geographic area	Seize the initiative to guide war to a victory; seize the initiative as quickly as possible when at a disadvantage; avoid escalation to total war
Total War	-Use of armed forces in large-scale battle to annihilate the adversary's fighting capacity to achieve grand political and/or economic objectives -Combat's boundaries and intensity is unbounded -Involves mass destruction and invasions of territory	Victory at all costs

Of note, the objective in each stage of conflict is not necessarily to deescalate to a less volatile situation; rather, it is to prevent escalation to a more intense form of conflict while also navigating toward a favorable situation.²³ Once a situation has transitioned from crisis or

²²Alison A. Kaufman and Daniel M. Hartnett, *Managing Conflict: Examining Recent PLA Writings on Escalation Control*, (Arlington, VA: CAN, 2016), pg. 21, 23, 41.

²³Ibid., pg. 22-23.

conflict to war, the objective of situation control is to seize the initiative and dominate the enemy, all while incurring the lowest cost and achieving a beneficial conclusion as quickly as possible.²⁴ The implication is that the PRC would employ precise, carefully calibrated, decisive action, which avoids unnecessary damage and keeps the conflict from escalating from local war to total war. As previously discussed, other PLA writings convey consensus that rapid, early, overwhelming firepower strikes to “seize the initiative” are essential to winning a war. There is some disagreement on whether the necessity of early action warrants pre-emptive strikes. Indeed, many documents adhere to the constraints of “active defense” wherein the PLA can absorb the first blow, then counter-strike. PLA doctrine does not appear to recognize that such efforts to seize the initiative through kinetic strikes would likely be construed as an escalation by the other side.²⁵ In particular, previous discussion of strikes “at all depths” clearly presents tactical and operational advantages to Red, but Blue would most certainly view strikes on “deep” targets as escalatory in nature.

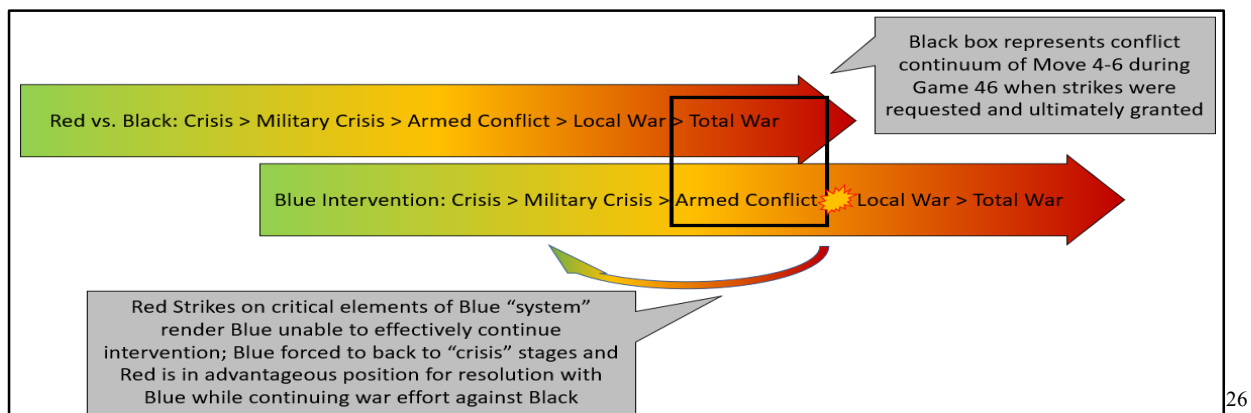
During a scenario similar to Game 46, a critical factor to account for in the escalation calculus is the two parallel conflict escalation timelines. In the Red vs. Black timeline, the conflict escalates rapidly to a total war effort, including massive firepower strikes and an invasion by overwhelming ground forces. The Blue Intervention timeline begins later, and at the point when Red vs. Black is at total war, Blue Intervention is still at the armed conflict stage approaching local war. Red’s aim in its total war against Black is to achieve a decisive victory, resulting in Taiwan’s physical and political unification within the PRC. However, Red’s aim related to Blue is to avoid escalation to a full-blown stage of war, which could endanger its campaign against Black, and could likely bring negative long-term political, economic, and

²⁴Ibid., pg. 42.

²⁵Ibid., pg. 82.

security ramifications. Thus, Red aims to calibrate its action against Blue to such a level that it neutralizes the Blue system’s ability to inhibit success against Black without escalating to war, and perhaps even off-ramping back to a state of crisis rather than conflict.

The figure below depicts Blue’s strikes (red bomb burst) and likely Red counter-strikes on the dual timeline. At this critical point, Red perceives a transition from armed conflict to local war. Such a shift would threaten the success of Red’s invasion of Black causing Red to launch a carefully calibrated firepower strike to neutralize the most critical threat from Blue. Red assumes this would serve as an offramp from war to a less intense crisis stage.



Considering Game 46’s chain of events with the aid of hindsight and additional research, CONTROL’s initial decision to disapprove the initial overwhelming strike against US bases in the second island chain was appropriate. The second approved request for more focused strikes seemed to balance not escalating while also achieving the degradation of Blue’s ability to launch strikes from Guam. The strikes did not result in entire paralysis of the Blue system. Perhaps sequencing the calibrated Guam strike with other limited strikes on Blue’s divert bases in other locations where Red had GDR approval (i.e., Australia) may have achieved system paralysis.

²⁶ Note: This figure was developed by the author to overlay the PLA conflict stages with Game 46 dual timelines and decision points related to conflict escalation and approval of strikes on Blue bases.

A Proposed Framework

From the previous two sections of the paper, we may deduce a few lessons regarding the criteria under which the PRC's strikes against Guam and other critical US bases would occur. Initially the PRC would likely forego the opportunity for a preemptive strike to maintain consistency in the narrative that Taiwan is an internal matter and that the US is an external interloper. Implicit in such a decision is acknowledgment that PLA forces must absorb initial attacks by the US. Therefore, the PRC would foresee the decision point for conducting counter-strikes on key US bases once the theater commander proposed and justified them. Though the strikes would require strategic leadership's consent, this would not be an existential crisis of conscience but rather more of a final validation of previously anticipated chain of events. The outcome of the decision would not be in question if properly justified in accordance with strategic guidance, but rather approval would be a matter of timing.

To bring forward these lessons into the GDRs, two areas of refinement are required. To begin specific refinements to the GDRs related to strikes on US bases, the country approvals require more specificity. In these cases, a country-wide blanket approval is fundamentally flawed because striking an outlying territory is not the same as attacking a major city on the mainland. As an obvious example in any Halsey Alfa scenario in the Western Pacific, all players likely consider strikes upon US bases on Okinawa in a very different calculus than strikes in metropolitan mainland Japan. Therefore, rather than blanket country approval, GDRs should be narrowed in scope to represent the restraint the Chinese would likely retain to prevent conflict escalation with multiple other nations. For example, "US or dual-use bases in Ryukyus" provide more rational and probable authorization than "strike bases throughout Japan."

Second, to replace the current GDR of a random dice roll per country, this paper proposes a new mechanism during future Halsey Alfa games. If Red requests a strike on a location not currently authorized, all of the following several conditions must be demonstrated in a written request from the “theater commander” – the Red team leader – to justify the strike request to the CMC for approval:

1. Red has reliable intelligence that the proposed target(s) directly generated or supported an attack on PRC forces, or irrefutable intelligence demonstrating that imminent offensive operations by US force will originate from the target base.
 - A counter-strike against the source of an attack is in accordance with “active defense.”
 - Pre-empting an imminent attack would need to be a rarity. However, there is sufficient discussion within both the systems destruction and target centric warfare literature to warrant an attack on a US base if Red anticipates grievous impact to offensive operations from the Blue attack (see item #2).
2. The attack noted in item #1 substantively negatively affected the reunification operation.
 - In accordance with the vitality of the Taiwan reunification operation, item #2 differentiates from the current GDR override of demonstrating to CONTROL that Red is on a “losing trajectory” because Red should not allow itself to get into that position given the self-professed importance of Taiwan reunification.
 - This item should include an explanation of how the reunification operation is affected. Critical items include:
 - Quantitatively evidenced reduction in throughput of reinforcements or resupply to the lodgment ashore on Taiwan;

- Attrition resulting in insufficient combat power ashore on Taiwan such that offensive operations are not possible and defensive positions are in danger;
 - Sustained and significant attrition to naval combatants or tactical aviation such that loss of control in the maritime and air domains is imminent.
3. Red's attack on the proposed target(s) will achieve paralysis in Blue's operational system and/or neutralize the specific Blue capability that carried out the attack in item #1. This requirement ensures the attack is in accordance with Systems Destruction and/or Target Centric Warfare doctrines.
 4. Red must provide a clear explanation of the attack's calibration to achieve item #3 without disproportionate destruction such that it would force Blue to escalate to a higher stage of the conflict spectrum.

Red must demonstrate all four factors to the satisfaction of CONTROL, who represents the CMC and retains the ability to make a subjective judgment as to the merits of Red's articulation of the case for the necessity to strike. Essentially, the current mechanism of a GDR override is pulled forward in the process to force Red to justify its escalatory action as simple due process.

Given that this is a wargame, the factor of chance must still be in play; however, the uncertainty should be related to the time to gain approval from the CMC, not random chance on the CMC's perception of priorities and doctrinal biases. To achieve this, on the first "game time" day from when Control receives the written request, the probability for approval would be 50%; on the following game-time day, the probability increases to 75%; and on the third day and beyond, the probability of approval increases to 90%. The exception is for "countries not listed," with probabilities of 33%, 50%, and 75% to account for factors unforeseen by CMC and PLA

planners. The GDR table would only show the highest probability, but underlying that value is a multi-value “if” statement in the spreadsheet, whose output is either a 1, 2 or 3 to represent the number of days delay Red would wait for strike approval from CMC.

	Blue	Blue	BOG	Blue Combat	BOG	Blue Strikes	
... then the actions listed below ...	Build-up	Build-up	Taiwan	Ops v Red Orig	Taiwan	Orig From	
... are authorized (<i>not</i> mandated):	Marianas	Country X	Liaison	From Country	Combat	Base in Country	
Use "extralegal basing"	Def 0.10 ---	0.33 ---	0.33 ---	0.50 ---	0.75 YES	0.75 YES	
Strike Bases in Country X ≠ Listed	Def 0.10 ---	0.25 ---	0.25 ---	0.33 ---	0.50 YES	0.75 YES	Day 0
Strike Bases in Ryukyus & Bonin Islands, Japan	0.05 ---	0.10 ---	0.25 ---	0.33 ---	0.33 YES	0.90 YES	0
Strike Bases in Northern Territory, Australia	0.05	0.10	0.10	0.33	0.33 YES	0.90 YES	0
Strike Bases in the Philippines	0.10	0.10	0.10	0.33	0.25 YES	0.90 YES	0
Strike Bases in the Marianas & FSM	0.10 ---	0.05 ---	0.10 ---	0.10 ---	0.10 NO	0.90 NO	0
Strike Blue Satellites	0.00 ---	0.00 ---	0.01 ---	0.01 ---	0.02 NO	0.02 NO	
Strike Blue M-L	0.00 ---	0.00 ---	0.00 ---	0.00 ---	0.00 NO	0.00 NO	
Nuclear demo	Def 0.00 ---	0.00 ---	0.00 ---	0.00 ---	0.00 NO	0.00 NO	
Nuclear strike @ sea	0.00 ---	0.00 ---	0.00 ---	0.00 ---	0.00 NO	0.00 NO	
Nuclear strike Blue M-L Mil	0.00 ---	0.00 ---	0.00 ---	0.00 ---	0.00 NO	0.00 NO	
Nuclear strike Blue M-L Civ	0.00 ---	0.00 ---	0.00 ---	0.00 ---	0.00 NO	0.00 NO	

Conclusion

This paper attempted to narrowly address the issue of refining the Halsey Alfa GDRs to more accurately reflect the PRC's real-world decision calculus for potentially escalatory strikes on US bases in the second island chain and elsewhere. There are multiple related topics not within the scope of this paper but which warrant additional research: What are the ramifications to the Blue GDR table if CONTROL substantially alters the Red GDR table? Is the loss of symmetry between the Red and Blue GDR tables appropriate given the different ethical and doctrinal constructs for PRC the US? In accordance with some of the TCW research, is a pre-emptive strike by Red on Blue a valid strategy, and if so, what are the escalation ramifications?

Through research into the importance of Taiwan reunification to the CCP and PLA, the doctrinal basis for applying firepower strikes during military operations, and considerations of conflict escalation, this paper has demonstrated that the PRC would conduct strikes on US bases in the second island chain. Furthermore, the decision would not be a matter of "if," but a matter of "when." Thus, the Halsey Alfa GDRs should be modified to better reflect the decision calculus for PLA theater and CMC strategic leaders to ensure the game-based research provides the most relevant lessons learned to operational commanders and planners.

Appendix I – Updated Strike Override Request Template

As a starting point for future CONTROL teams, this appendix offers an updated template for a Strike Override Request based upon the play of Game 46:

1. B-1 sorties from Anderson Airbase have conducted stand-off strikes against naval forces at sea and port facilities at New Taipei Port and Keelung. Blue is likely to continue the stand-off strikes, and Red cannot halt them based on the long-range of weapons release relative to Red's defensive counter-air capabilities. As such, the situation warrants a counter-strike against Anderson Airbase as the only method to neutralize the B-1 threat based there.
2. The attacks against New Taipei Port and Keelung ports blocked limited berths for the rapid offload of troops, equipment, and supplies critical to the reunification campaign. Due to limited throughput following Blue's strikes, Red's ground forces will have only 50% ammunition allocation, inhibiting self-defense against Blue/Black ground counter-attacks. Furthermore, to complete Taipei's seizure, Red requires an additional ten combined arms brigades due to the dense urban terrain and anticipated ferocity of Black defenses. Anticipated reduction in throughput at New Taipei Port and Keelung will continue to reduce throughput of reinforcements and resupply, delaying the clearance and seizure of Taipei.
3. Red proposes attacking Anderson Airbase with IRBM and LACM to destroy bombers and tankers on the ground and destroy critical infrastructure such as fuel depots and runways. As a result, the attack will neutralize Blue's center of gravity. To account for the possibility that Blue may have launched an attack as our missiles arrive, Red requests

simultaneous limited strikes on the runways at “big-wing” capable airbases at Guam International, Darwin International, and RAAF Tindal.

4. The proposed attack will not strike civilian terminals, hangars, or barracks for aircrew and maintainers at any of the bases. Additionally, each desired point of impact will be targeted with only one missile to avoid the appearance of wanton violence. Synchronized with the kinetic attack, the State Council Information Office will release a statement explaining the requirement to neutralize external interlopers’ ability to interfere with the internal security action within the PRC’s sovereign borders. The message will also clarify that the PRC desires only peace and tranquility within its boundaries and in the interactions with external states, but that it will not tolerate any attempt to prevent the unity and sovereignty of the Chinese nation. Finally, the message will offer the return to a status quo antebellum with any nation who became involved as “external forces.”