Introduction

The nature of both strategic and tactical nuclear weapons and their role as instruments of deterrence require that certain details be revealed to potential adversaries and others shrouded in the greatest degree of secrecy possible. Russian tactical nuclear weapons (TNW) policy is at the very extreme of the ambiguity part of the spectrum, which has put into question whether Russia has a TNW policy at all. Dmitry Adamsky asserts that “Russian NSNW [TNW] have no meaningfully defined mission and no deterrence framework. Contrary to expectations, nuclear reality in Russia is a constellation of contradictory trends and narratives unlinked by either unifying logic or official policy.”¹ He does acknowledge that “[i]f the Russian experience is analogous to the NATO one, then the incoherence is the manifestation of bureaucratic politics and of a learning exercise about the limits of nuclear weapons,”² but on the whole, his argument is theoretically unsatisfying. Adamsky convincingly shows that many competing – and, indeed, contradictory – perspectives on TNW do exist in the Russian debate, but apart from a nod at bureaucratic politics,³ he does not explain the causes of this “incoherence” in a theoretically rigorous manner.

¹ I would like to Stephen Peter Rosen, Rachel Esplin Odell, and Colin Brown for their helpful feedback on this paper.
³ Ibid., 124.
This paper aims to rectify that and explore how intra-governmental dynamics in Russia have led to the current state of the TNW debate. To do this, I identify the factors that have shaped TNW policy in other states and use the resulting framework to make inferences as to the contours of Russian policy.

Theoretical Framework

I postulate that the key independent variable for TNW policy – the two key aspects of which are the characteristics of the doctrine for deployment and employment of TNW, and the level of delegation of control – is the degree of the civilian leadership’s trust in the military as a reliable nuclear warfighting instrument. Civilians will trust in the military only if the military trusts itself; that is, if the military is not overly centralized and if it is comfortable with the delegation of autonomy. The independent variable – civilians’ trust in the military – is therefore operationalized as military superiors’ perception of the reliability of subordinates, which is reflected in the degree of centralization and level of autonomy the latter are accorded. I distinguish between high-trust regimes, where superiors trust subordinates, and low-trust regimes, where superiors are wary of entrusting subordinates with responsibility.

The level of trust does not translate into TNW doctrine and level of TNW control directly, but rather does so through intervening variables. In high-trust environments, the civilian leadership will let the military play the primary role in doctrine formulation and will entrust it with control of TNW, but the question of how exactly the military will formulate preferences is determined by organizational culture. As Austin Long argues, the influence of culture increases with the ambiguity of available information, and “peacetime information is probably the most ambiguous,
whereas major conflict is probably the least ambiguous source of information.”

First, there is a general lack of experience with nuclear weapons, as most of what we know derives from theory. Second, there is also much uncertainty about the status of TNW in particular, as the Russian case shows – whether they should be treated as means for regional or global deterrence, or as very powerful battlefield weapons that would be used for de-escalation. The high level of ambiguity should lead to organizational culture playing the primary role in the shaping of TNW doctrine. To identify individual armed services’ preferences, I rely on James Q. Wilson’s explanation of how organizational culture – “a persistent, patterned way of thinking about the central tasks of and human relationships within an organization” – operates:

First, tasks that are not part of the culture will not be attended to with the same energy and resources as are devoted to tasks that are part of it. Second, organizations in which two or more cultures struggle for supremacy will experience serious conflict as defenders of one seek to dominate representatives of the others. Third, organizations will resist taking on new tasks that seem incompatible with its dominant culture.

This yields the following hypothesis:

H1: In a high-trust environment, the civilian leadership will delegate control of TNW to the military and entrust it with doctrine development. Due to the ambiguity surrounding TNW, it will be organizational culture that will play the primary role in determining how individual services develop doctrine.

In a low-trust environment, on the other hand, the civilian leadership will actively exclude the military from the process of doctrine formulation and undertake it alone, with the question of

---

5 Adamsky, “Nuclear Incoherence,” 100-102.
Wilson also refers to “central tasks” as “critical” tasks and defines them as “those behaviors which, if successfully performed by key organizational members, would enable the organization to manage its critical environmental problem.” Ibid., 25.
8 Ibid., 101.
reliability playing an even more salient role. The intervening variable for doctrine formulation will be the civilian authorities’ perception of the difficulty of maintaining command and control (C^2) – the more difficult that is in a particular TNW deployment and employment configuration, the more effort they will invest into seeking an alternate configuration. The civilians will withhold TNW control from the military to the greatest extent possible.

H2: In a low-trust environment, the civilian leadership will withhold control of TNW from the military and take the task of doctrine development upon itself. TNW deployment and employment will be shaped primarily by the imperative of having as much direct control as possible; that is, by the perceived difficulty of maintaining command and control (C^2) in different TNW deployment and employment patterns.

Writing about nuclear posture, Vipin Narang also discusses these factors, but misidentifies the relationship between the variables. He too in effect distinguishes between low-trust and high-trust cases – “assertive” and “delegative arrangement[s],” respectively^9 – but erroneously reverses the direction of the causal arrow. In his view, less centralization and more autonomy for subordinates is a consequence of the civilian leadership trusting the military.\(^10\) This is putting the cart before the horse. Rather, as I argue, trust will depend on existing levels of centralization and autonomy.

The reason the causal arrow actually points the other way is that it is intra-military arrangements, and not civil-military patterns, that are truly resilient. Narang states that civil-military relations are not “epiphenomenal” to nuclear posture development because “even if civil-military structures initially form due to the balance of external/internal security threats, once they become institutionalized and ossify, they can produce an independent effect on a state’s

---


^10\ Ibid.
management of military and security affairs [emphasis in original].”\textsuperscript{11} However, as Peter D. Feaver notes, “civil-military relations is a game of strategic interaction” and is “iterative over time. As the external environment changes … the civilians must revisit the problematique and make changes …” Due to “bureaucratic inertia,” they might not, but nonetheless always can – “that they often choose not to simply underscores how they are sensitive to costs.”\textsuperscript{12} In light of this, the notion that civil-military arrangements can “ossify” and that civilians will accordingly keep trusting or distrusting the military simply because they have been doing so for a long time does not make much sense, especially since civilians do revisit the question and the costs Feaver mentions are so high in a nuclear context.

While civil-military relations therefore can and often do change, intra-military arrangements are generally very resilient, especially when it comes to attempts to change them from without. As Stephen Peter Rosen observes, “[m]ilitary bureaucracies … are especially resistant to change.”\textsuperscript{13} In other words, it is intra-military arrangements and not civil-military relations that become crystallized. This is not to say that intra-military arrangements cannot change; indeed, as Rosen observes in his study of military innovation, they can and indeed do, but the change comes from within.\textsuperscript{14} In the context of trust, levels of centralization and autonomy would change only if the military’s self-perception changed. Civilians, as my theory states, merely decide whether to trust in the existing military structures or not. They will keep trusting the military because the military trusts itself.

\textsuperscript{11} Ibid.
\textsuperscript{14} Ibid., 52.
I proceed by first testing the validity of the proposition that high levels of trust will lead to the military being accorded more control of TNW and higher levels of autonomy in doctrine formulation, and, conversely, that low levels of trust will lead to civilians severely circumscribing the military’s role. I do this by considering how well it explains either historical developments or current TNW policy in the American, British, French, Chinese, and Pakistani contexts. I then examine the levels of trust in Russia, and, using the tested theory, infer Russian preferences regarding control of and deployment and employment of TNW. To prove that the two hypotheses do not lead to convergent predictions, I also explore in detail the organizational culture of the services of the Russian Armed Forces. Finally, I compare the predictions of the two competing hypotheses against the available evidence and describe what current Russian TNW doctrine likely dictates.

Hypothesis Testing

United States

United States Army doctrine from the post-WWII era shows that the practice of trusting subordinates was an integral part of the organization’s mindset. The Department of the Army’s 1949 field manual on operations thus emphasizes the importance of “establish[ing] … a high standard of military conduct and performance of duty without destroying the initiative of the individual.”


In spite of the advances in technology, the worth of the individual man is still decisive. The open order of combat accentuates his importance. The dispersion of troops in battle caused by the influence of modern weapons makes control more difficult. *Every individual must*
be trained to exploit a situation with energy and boldness and must be imbued with the idea that success will depend upon his initiative and action [emphasis mine].

The United States is at the upper end of the high-trust part of the spectrum, as trust in subordinates was more than just desirable; it was, in fact, understood as necessary for the proper functioning of its military.

Evidence from the early Cold War shows that these high levels of trust resulted in, as my theory predicts, the military being entrusted with both control of TNW and doctrine development. By 1952, the US military had been granted partial control of nuclear weapons – only outside the United States – and by 1956, full control. Furthermore, once permissive action links (PALs) had been introduced, TNW were “widely dispersed to units in the field,” writes Eric Schlosser.

With regard to doctrine – and focusing on just one example – the Army developed TNW doctrine along lines that suited organizational interests. As John P. Rose observes, “in the literature there was no suggestion that atomic technology had brought about an end of land combat.” Indeed, as he further notes, “the Army’s first official doctrine on the tactical use of atomic weapons argued that while modification in organization, tactics, and techniques were necessary, the principles of war would not change.” The Army’s critical task, after all, has always been winning battles on the ground, and acknowledging that TNW in any way changed that type

---

20 Ibid., 85.
of war would be tantamount to calling upon Congress to relegate the Army to the status of an organization of secondary importance. This indicates that organizational culture in fact functions as the intervening variable in a high-trust case.

**Britain**

Contrary to conventional wisdom, the inflexibility ascribed to the British Army under the command of Field Marshal Bernard L. Montgomery did not continue into the post-war period. Montgomery, Simon J. Moody argues, “was quick to acknowledge the rapidly changing character of land warfare which was overshadowed above all by the emergence of nuclear weapons.”^{21} Most importantly, Montgomery believed that “a leader … must be trained to act independently and immediately within the framework of a general plan, rather than on precise and detailed orders or only after reference to a superior.”^{22} This indicates that the type of micromanagement exercised by Montgomery during the Second World War was more a product of his perception of the operational environment,^{23} not of a general distrust of subordinates. Put in context, this shift in thinking was quite a dramatic change, as the high levels of centralization in the British Army during the First World War stemmed in largest part from the “command structure” having been “based on obedience to superiors and suspicion of subordinates.”^{24} Therefore, Britain during the early Cold War is still a high-trust case, but due to its legacy of distrust of subordinates, less so than the United States during the same period.

---


^{23} Moody, “Was There a ‘Monty Method’ after the Second World War?”, 224.

The relatively high trust in the British military allowed for the delegation of control and physical integration of TNW, but only with some reluctance on the civilians’ part. The British started deploying the dual-capable NA39 carrier-based bomber together with TNW. The latter were disassembled while on board the aircraft carrier, but primarily to prevent accidents. As Stephen Twigge and Len Scott describe, this was met with concern, as “[f]or a growing number of strategists, the inherent difficulty of controlling tactical nuclear forces was a compelling argument against their deployment.” Although the British Army of the Rhine, the main grouping of British forces in Europe, would have control of US-supplied TNW in wartime, the “peacetime custodial arrangements,” Kristan Stoddart writes, “were extremely stringent with US armed forces guarding the nuclear warheads at all times.” The British Army would likely have preferred to deploy own TNW, but Blue Water, the project that would have endowed it with that capability, was cancelled in 1962. Twigge and Scott write that “why this warhead [RO 106, part of the Blue Water program] was developed is unclear,” but the most likely explanation is that this was a case of organizational interests run amok and consequently checked by the civilian authorities. The British case was therefore still on the high-trust part of the spectrum with regard to TNW control, but the wariness of giving subordinates too much autonomy shows itself in the civilians reining in organizational interests.

26 Ibid., 64.
27 Kristan Stoddart, Losing an Empire and Finding a Role: Britain, the USA, NATO and Nuclear Weapons, 1964-70 (New York: Palgrave Macmillan, 2012), 108.
28 Twigge and Scott, Planning Armageddon, 65.
French military doctrine lays out an important role for subordinates in the implementation of plans. As a French Army doctrine publication on general tactics notes:

… [S]ince planning results from imperfect and increasingly outdated situational awareness, it cannot produce a list of successive, deadline-based actions and ignores [sic] the uncertainty of the confrontation. … The elaborate plan must above all provide the subordinate unit with the conditions for initiative in the upcoming situations and not restrain the commander’s Freedom of Action which is the only effective weapon against unplanned developments. Since it provides a single view, Unity of Command is the essential quality to ensure a rapid execution in order to gain the advantage over the enemy. But, the command must also demonstrate coherence, simplicity and delegation of authority [emphases in original].

Instead of treating subordinates as a static means for the implementation of plans and attempting to envisage every possible scenario – obviously an impossible or even counterproductive task – the French Army recognizes that subordinates’ initiative is crucial for the translation of plans into action. The interservice doctrine manual similarly recognizes that “[t]he quest for freedom of action leads us to opt for an organization granting an appropriate degree of autonomy and subsidiarity, while safeguarding the coherence of the objectives and unity of command.”

In the simplest terms, France is a high-trust case.

The patterns of control delegation and deployment and employment procedures accord with the predictions of my model. As Vipin Narang describes, tactical nuclear forces “are not only physically integrated into the French armed forces, but authority for their release is also vested

---

with the military for theater use.”\textsuperscript{31} Organizational culture also plays an important role, as predicted by the theory – David S. Yost mentions that the development of the \textit{Hadés} SSM, while it was still in operation, allowed the French Army to take on the “rear area targeting” mission that had traditionally been reserved for the French Air Force.\textsuperscript{32} Although it is not known how the debate unfolded, this seems to be a classic example of one organization usurping the tasks of another.

\textit{China}

Judging by the overall levels of centralization and the autonomy accorded to subordinates, China is a low-trust case. This is by no means a novel phenomenon and appears to be rooted deep in the history of the Chinese People’s Liberation Army. A Defense Intelligence Agency publication from 1984 observes that “[o]ne of the major concerns of the Chinese military leadership today is how the present generation of junior leaders will perform in combat. … [T]he young CPLA officer[‘s] … grasp of tactics, technical proficiency, and ability to lead and inspire troops remain untested in modern warfare.”\textsuperscript{33} Although China has moved toward professionalizing its officer corps,\textsuperscript{34} most of the above concerns remain salient. As Roger Cliff writes, “[b]y all reports, the PLA was a highly centralized organization in 2000. According to one study, ‘the order to move any but the smallest military units for operational purposes must originate in the GSD at the direction of the CMC.’ Another indicated that in combat situations the PLA allows ‘minimal leeway for independent interpretation of orders.’”\textsuperscript{35} Time has not ameliorated this problem. By 2010, the Chinese military

\textsuperscript{31} Narang, \textit{Nuclear Strategy in the Modern Era}, 160.
had, if anything, become more centralized than it was in 2000.\textsuperscript{36} Cliff further observes that for decentralization to occur, there would have to be a “greater degree of trust in … junior officers.”\textsuperscript{37} Whatever the solution, if there indeed is one, this low level of trust has decisively shaped attitudes to delegation of control.

It appears that Chinese TNW are not integrated into any of the three traditional services, neither organizationally nor physically. Narang asserts that “[t]here is no evidence that the 100 or so lower yield nuclear weapons in China’s arsenal are deployed for tactical purposes, and the SRBMs in its inventory are all judged to be strictly for conventional roles.”\textsuperscript{38} Furthermore, as he also notes, China has a “highly assertive command structure which overwhelmingly privileges centralized control and tight procedural negative controls on the stewardship and release of nuclear weapons.”\textsuperscript{39} The low levels of trust in the military have thus resulted in the complete denial of control of TNW. Given these tendencies, it seems extremely unlikely that any TNW forces are even part of the organizational structure of the three traditional services; they are either part of the Second Artillery or under direct civilian control.

\textit{Pakistan}

Although Pakistan nominally became a multiparty democracy after the 2013 elections, its experiences with military intervention in politics and even military rule put into question the notion that the civilian government is capable or willing to meaningfully oppose the military. As Shaun Gregory writes, “short of an implausible ‘transformation … of both Pakistan’s strategic

\begin{itemize}
\item\textsuperscript{36} Ibid., 52-53.
\item\textsuperscript{37} Ibid., 55.
\item\textsuperscript{38} Narang, \textit{Nuclear Strategy in the Modern Era}, 135.
\item\textsuperscript{39} Ibid., 145.
\end{itemize}
circumstances and the ideas that the elite hold fundamentally’ … or the Pakistan Army’s own
decision to subordinate itself willingly to civilian control, there would seem to be no credible
means for civilian or other actors … to transform Pakistan and impose civilian control of the
army.”40 In terms of the high/low trust framework, Pakistan appears to be an easy test case, as the
civilian authorities have no means of wresting control of TNW from the military and effectively
cannot but trust in the military. However, parochialism plays less of a role, as the continued
functioning of the Pakistan Army is so closely linked with the survival of the state that this is one
of the rare cases where organizational interests are actually congruent with national interests.41 As
C. Christine Fair puts it: “Because the army requires the state to enable its own existence, it must
make appropriate adjustments along the way to ensure that its policies and preferences do not, in
fact, destroy the state.”42 Rather than giving the army free rein in the pursuit of its organizational
interests, this means that the highest military echelons – being aware that any inefficiency in
planning or procurement translates quite directly into an advantage for India – function, at least
for the purposes of my model, as the civilian leadership and pursue what is good for the state and
not solely for their service.

The Pakistani case is characterized by the ambivalence of the military leadership toward
subordinates. Sébastien Miraglia asserts that “troubled civil-military relations and Pakistan’s
doctrine of ‘asymmetric escalation’ lead to a nuclear command and control system that is assertive

40 Shaun Gregory, “Democratic Transition and Civil-Military Relations in Pakistan: The Limits of Theory,” in
Democratic Transition and Security in Pakistan, ed. Shaun Gregory (New York: Routledge, 2016), 64.
41 This is customarily not the case. As Morton H. Halperin et al. put it: “In one way or another, the pursuit of influence
itself is felt to be in the national interest. Not only is influence necessary to protect the organization’s other objectives,
but senior members of the organization are considered by junior members to be especially qualified to advise the
president on what the national interest is.” Morton H. Halperin, Priscilla Clapp, and Arnold Kanter, Bureaucratic
42 C. Christine Fair, Fighting to the End: The Pakistan Army’s Way of War (Oxford: Oxford University Press, 2014),
6.
only during peacetime,” and necessarily “more delegative … during nuclear alerts and operational deployments of nuclear weapons.”43 However, the Pakistani military leadership would likely not be willing to bear the risks associated with even short-term delegation if they did not have at least some trust in their subordinates. Admittedly, the Pakistani military does not have a tradition of delegating much planning authority. As Amer Ahsan Nawaz writes: “Brigadier Mazhar ul Haq … says … [that] ‘seniors do not want to take risk and therefore leave no chance of making mistakes by the juniors.’ This leads to directed functions, where nothing is left at the liberty of the juniors to decide.”44 The Pakistan military’s “regimentation system,” which, as Nawaz also writes, fosters “discipline, confidence, boldness, and motivation,”45 nonetheless appears to facilitate the trust requisite for delegation of TNW control, but only for short periods of time. Pakistan is a mixed case and offers the weakest evidence in support of my model, as trust appears to be an enabling condition rather than the independent variable.

Despite the somewhat mixed results in the Pakistani case, the overall results of hypothesis testing indicate that the theoretical framework is valid. In the following section, this framework is used to draw inferences about the Russian case, which are then measured against the existing evidence.

43 Sébastien Miraglia, “Deadly or Impotent? Nuclear Command and Control in Pakistan,” Journal of Strategic Studies 36, no. 6 (2013), 843, doi: 10.1080/01402390.2013.805126. Miraglia defines an “assertive” C2 system as “placed under tight and exclusive civilian control; they must respond to a highly centralised hierarchy; and nuclear weapons must include physical protection against unauthorised assembly or detonation.” Ibid., 842.
45 Ibid., 50.
Russian TNW Policy

Soviet/Russian military officers’ extreme distrust of subordinates show that Russia is a low-trust case. As Nathan Leites opens his work *Soviet Style in War*:

According to the Soviet High Command, the ideal Soviet commander … fears that his subordinates of all ranks may succumb to what he takes to be the natural bent toward inaction … . Moods, he is apt to believe, may deteriorate for flimsy or invisible reasons, and drag the level of activity down. *Human beings, the commander knows, are inclined to be indifferent toward tasks with which they are charged, and hence disposed to avoid them or to perform them only partially and badly.* There is only one effective safeguard against indifference: enthusiasm, prescribed and hard to foster. If one avoids indifference, one may still not arrive at adequate action but on the way to it succumb to *indecisiveness, a characteristic to which personnel are held to be especially prone when it is particularly damaging: in an unexpected and critical situation* [emphases mine].

However, concerns go beyond the possibility of a failure to carry out orders. Leites further describes that “[b]eyond action of low intensity there is inaction,”


describes that “[b]eyond action of low intensity there is inaction,”

and “[i]f, in the face of their commander’s dereliction, subordinates proceed on their own, they may merely replace damage from inaction with loss from faulty operation,”

which is particularly worrying in the context of nuclear command and control. “Besides inaction,” he continues, “there is misaction. Personnel, the High Command grants, often show a ‘lightminded attitude toward assignments’ which leads to ‘negligence … in performance.’”

In illustrating the possibility that “[i]n real or simulated combat, orders may be disregarded or not carried out to the letter,” Leites quotes the following passage: “The leader of the exercise expected precise … actions of the battalion. But his hope was not fulfilled. One of the companies went off the route of march. … Another one crossed minefields, not through passages, but at its whim.”

---

47 Ibid., 2.
48 Ibid., 5.
49 Ibid., 21.
50 Ibid., 22.
to other militaries – especially ones that predominantly rely on conscription – but as Leites describes it, it went well beyond a few instances of “inaction” and “misaction.” It would be more accurate to describe these problems as Soviet/Russian pathologies reinforced by the consequences of a tradition of a vicious cycle of centralization, where problems that in fact stemmed from a rigid non-delegatory structure were apparently perceived to be soluble only through further reinforcement of that same structure.

Therefore, in accordance with my theory, the Russian civilian leadership should not trust the military and thus withhold control of TNW and restrict doctrinal autonomy in accordance with the ease of maintaining $C^2$. If “inaction,” “indifference,” and “misaction” were all perceived as problematic even for troops stationed at their home bases, then forward deployment would have merely strengthened these negative effects, meaning that the civilians should have a strong preference for forces that can operate from home bases. Furthermore, Leites notes that “I believe that the Soviets are less divided than we about launching under attack—which might in part explain their more favorable attitude toward fixed land-based missiles [emphasis in original],”51 but the perceived need for greater control would also in large part account for this preference. This does not change the fact all three services possess dual-capable weapons platforms, but the civilian leadership should to the greatest extent possible avoid the forward deployment of these weapons.

The nature of submarine operations – namely, the need for stealth – makes $C^2$ of the sea-based leg of the nuclear triad much more difficult than $C^2$ of the air or land component. For example, as a 1962 Soviet Northern Fleet Headquarters report on Operation Anadyr, the Soviet deployment of men and materiel to Cuba, mentions: “Practically on every bandwidth, interference

51 Ibid., 365.
transmitters were turned on at the start of transmission of information from Moscow, which resulted in delays of reception of orders from the Headquarters of the Navy from several hours to a full day.” Of course, this was by no means a vulnerability unique to Soviet submarine forces, but the Soviet/Russian military pathologies discussed above exacerbate it rather dramatically.

Submarine operations required that a comparatively great degree of control be delegated to subordinates who were otherwise not taught how to operate on their own initiative, which in one instance very nearly led to disaster during Operation Anadyr. As the then-Senior Lieutenant Vadim Orlov recalls, the crew had to function under conditions of unbearable heat and heightened levels of stress:

It was unbearably stuffy … One the duty officers fainted and fell down [sic] … They were falling like dominoes … The Americans hit us with something stronger than the grenades [depth charges – comment in original]—apparently with a practical depth bomb. We thought—that’s it—the end. After this attack, the totally exhausted Savitsky [commander of the submarine], who in addition to everything was not able to establish connection with the General Staff, became furious. He summoned the officer who was assigned to the nuclear torpedo, and ordered him to assemble it to battle readiness. ‘Maybe the war has already started up there, while we are doing summersaults [sic] here—screamed emotional Valentin Grigorievich [Savitsky], trying to justify his order. ‘We’re going to blast them now! We will die, but we will sink them all—we will not disgrace our Navy!’ But we did not fire the nuclear torpedo—Savitsky was able to rein in his wrath [emphasis mine].

The vulnerability of submarine C² combined with Soviet/Russian military pathologies, especially officers not taught how to act in the absence of explicit orders, led to precarious situations such as

---


the one described by Orlov and would therefore prompt the Russian civilian leadership to avoid even deploying TNW-armed submarines, as they would have to delegate control to subordinates.

In summary, these low levels of trust should translate into preferences regarding control and doctrine in accordance with the perceived ease of maintaining $C^2$. That is, with civilian concerns being decisive, delegating control of TNW to Navy (VMF) forces should be avoided at all costs, and the decision about whether to trust the Ground Forces (SV) or Aerospace Forces (VKS) will depend on which can be used without being forward-deployed – the less delegation of control, the better. I follow this section by describing organizational cultures, using them to predict individual services’ preferences and show that the competing hypotheses do not produce converging predictions, and finally conclude by examining how well the predictions stand up to the record.

**Aerospace Forces (VKS)**

The Aerospace Forces (VKS) comprise the former Air Force (VVS) and the Aerospace Defense Forces (VKO), and the competing subcultures within the service appear to be evenly matched. Long mentions that “[c]ounter subcultures are unlikely to have a major effect on doctrine for the dominant culture, except at the margins, as they are simply too small and isolated,” but it is difficult to say which of the subcultures, that of the VVS or PVO-PRO (former VKO), would be the “counter” subculture. First, the PVO-PRO essentially has only one task – air defense – and should thus be characterized by a high degree of internal cohesion; in contrast, the VVS has two competing tasks: the protection of key civilian, military, and industrial locations – air defense – and air interdiction (AI)/close air support (CAS), meaning that the VVS forces inherited by the

---

VKS likely struggle with internal dissent.\textsuperscript{55} Judging solely by this criterion, the internal cohesion of the former VKO should help the air superiority/air defense subculture of the former VVS dominate the AI/CAS subculture, but the VKO was simply not large enough an organization for there to be such an effect.\textsuperscript{56} The air superiority/air defense adherents from the former VKO and VVS are part of the same general subculture, but will have difficulty achieving dominance over the AI/CAS subculture.

The number of different VKS assets similarly shows that neither the air superiority/air defense nor the AI/CAS task dominates the service’s culture. Out of the 1090 aircraft operated by the VKS, 320 are air superiority fighters, 195 are attack aircraft, 270 are attack helicopters, 357 are fighter/ground attack (FGA) aircraft, 139 are bombers, and the rest are various combat support aircraft. The equation, however, would be incomplete without air defense assets – the VKS operates 560 self-propelled air defense platforms.\textsuperscript{57} The VKS also has 68 ABM-3 \textit{Gazelle} nuclear-tipped anti-ballistic missiles (ABM).\textsuperscript{58} In total, therefore, the VKS operates 984 air superiority/air defense assets, 465 AI/CAS assets, with 357 FGA aircraft falling somewhere in between and the 139 bombers being part of neither category. In short, there are more air defense assets, but because FGA aircraft are neither fish nor fowl, it is possible that the FGA group would balance between

\textsuperscript{55} The tasks of the VVS, as defined by the Russian Ministry of Defense (MOD), are: “Repulsion of aggression in the aerial sphere and defense from airstrikes of upper-echelon government and military command centers, administrative-political centers, industrial-economic districts, crucial industrial facilities and infrastructure, and unit groupings; defeat of the adversary’s troops and military assets through the employment of both conventional and nuclear weapons; providing air support for combat operations conducted by other troop and Armed Forces branches.” Ministerstvo oborony Rossiyskoy Federatsii, “Voenno-vozdushnye sily,” trans. by author, accessed December 6, 2016, http://structure.mil.ru/structure/forces/air.htm.

\textsuperscript{56} In 2015, the VVS consisted of 148,000 personnel, but after the merger with the VKO, the size of the VKS ended up at 145,000 personnel. International Institute for Strategic Studies, “Russia and Eurasia,” in \textit{The Military Balance} 115, no. 1 (2015): 190, doi: 10.1080/04597222.2015.996357; International Institute for Strategic Studies, “Russia and Eurasia,” in \textit{The Military Balance} 116, no. 1 (2016): 194, doi: 10.1080/04597222.2016.1127566. Of course, the decrease in size is a consequence of the general military reorganization in Russia, but also shows that the VKO itself was very small and did not add substantially to the VVS numbers.

\textsuperscript{57} IISS, “Russia and Eurasia, 2016” 195.

\textsuperscript{58} Ibid., 190.
air superiority/air defense and the AI/CAS subcultures and might in fact wish to prevent one from dominating the other and thus preserve this high degree of maneuver space.

Furthermore, even with regard to the distribution of TNW, the air superiority/air defense and the AI/CAS groups are fairly equal. According to Hans M. Kristensen and Robert S. Norris, Russia has approximately 400 low yield nuclear-tipped ABM for the self-propelled SA-10 Grumble and SA-20 Gargoyle, and 68 ABM-3 Gazelle. On the other side, there are approximately 570 TNW deliverable by medium- and intermediate-range assets,\(^\text{59}\) that is, by the 63 intermediate-range Tu-22M3/MR Backfire C, and the 140 Su-24M/M2 Fencer and 57 Su-34 Fullback medium-range FGA aircraft.\(^\text{60}\) Neither the air superiority/air defense nor the AI/CAS group has enough of a numerical advantage to be able to take the reins.

The tasks of the AI/CAS subculture of the VKS are most compatible with the conception of TNW as a counterweight to conventional weapons. As George E. Hudson writes, “[p]erceived weakness in the conventional military balance in Europe conditions Russian thinking about NSNWs [TNW] in part.”\(^\text{61}\) TNW, as means for addressing the Western superiority in advanced conventional weapons, closely fit the AI/CAS task, especially if viewed as the equivalent of precision-guided munitions, which are also deliverable primarily by aircraft. Emphasizing TNW deliverable by medium- and intermediate-range air assets would allow the AI/CAS group to “bootstrap” by demonstrating that the pursuit of national interests necessitates a greater number of such assets, subsequently expanding theatres of operations, and then again demanding that asset

---

60 IISS, “Russia and Eurasia, 2016” 195.
acquisition expand (which would allow for even greater power projection, and so forth). The AI/CAS group, in other words, likely prefers forward deployment of TNW and dual-capable weapons platforms, especially as a means of “dominat[ing] representatives of the [other culture].”

Although neither the concept of air defense nor of air superiority would by itself be at odds with forward-deployment, it must be remembered that, per Russian military doctrine, the emphasis appears to be not on the defense of troop concentrations but on the protection of domestic infrastructure – as defined by the MOD, the VVS air superiority/air defense task is the “[r]epulsion of aggression in the aerial sphere and defense from airstrikes of upper-echelon government and military command centers, administrative-political centers, industrial-economic districts, crucial industrial facilities and infrastructure,” with “unit groupings” mentioned only last. The only basic difference in how the corresponding PVO-PRO task is defined is that the newly created arm is also responsible for intercepting enemy ballistic missiles. Air superiority/air defense adherents in the VKS therefore understand the protection of forward deployed troops and assets as taking resources away from the critical task of protecting domestic infrastructure. Given how evenly

---

62 This would be somewhat similar to but less direct than the USAF line of argument described by David Alan Rosenberg: “The growth of the nuclear stockpile was linked to escalating target estimates, just as expansion of SAC was linked to the stockpile. In January 1952, President Truman approved a third increase in fissionable material production, amounting to a 50 percent increase in plutonium production and 150 percent in uranium 235. General Vandenberg, who had originated the request within the JCS, justified it in terms of prospective Soviet targets. Even allowing for incomplete intelligence, he told the President, there appeared to be ‘perhaps five or six thousand Soviet targets which would have to be destroyed in the event of war.’ This would require a major expansion in weapons production. Critics in the other services labeled this line of argument ‘bootstrapping.’ Air Force-generated target lists were used to justify weapons production, which in turn justified increased appropriations to provide matching delivery capability [italics mine].” David Alan Rosenberg, “The Origins of Overkill: Nuclear Weapons and American Strategy, 1945-1960,” International Security 7, no. 4 (Spring 1983): 22-23.

63 Supra note 8.

64 Supra note 55.

matched the air defense/air superiority and AI/CAS groups within the VKS appear to be, neither perspective should be able to dominate.

_Navy (VMF)_

The VMF is dominated by the submarine arm. “As Soviet naval officers realized,” Christopher C. Lovett notes, “only naval aviation and submarines had played a distinguished role in the war,” and after extensive back-and-forth between naval aviation and submarines for most of the Cold War, “[b]y the mid-1980s the Soviet Union had the largest submarine force the world had seen since the Second World War.” Particularly telling is also the fact that the VMF currently operates as many as 63 submarines but only 35 “principal surface combatants,” the latter category encompassing aircraft carriers, cruisers, destroyers, and frigates. This makes the dominant role of the Submarine Forces obvious.

The VMF has at its disposal a mixture of approximately 760 nuclear sea-launched cruise missiles, anti-submarine weapons, surface-to-air missiles, depth bombs, and torpedoes. Unfortunately, the distribution of said 760 TNW is not known, making it impossible to estimate on this basis how well Naval Aviation can compete with the Submarine Forces for influence. However, given the above-discussed dominance of the Submarine Forces, their subculture is in effect the overall service culture, and whereas Naval Aviation has only 41 dual-capable aircraft – its complement of Su-24M _Fencers_ – the Submarine Forces have a complement of 49 tactical submarines, each of which can carry many more weapons than a _Fencer_. The majority of the

---

67 Ibid., 252.
69 Kristensen and Norris, “Russian Nuclear Forces,” 126.
70 IISS, “Russia and Eurasia, 2016” 193.
71 Ibid., 191.
760-odd TNW, in other words, is likely intended for use by submarines, but this is not as crucial as otherwise because the VMF in general, not just the Submarine Forces, likely prefer forward deployment.

The VMF has a tradition of power projection, which should lead to it being strongly in favor of forward deployment of dual-capable assets. As Harriet Fast Scott and William F. Scott write: “In spreading its influence throughout the world through its projection of military power and presence, the Soviet Navy of the 1980s is one of the most powerful instruments of the Kremlin. Under the umbrella afforded by strategic nuclear forces, Soviet Naval forces have little opposition in providing support to Soviet-inspired wars of national liberation.”72 Additionally, in light of the Submarine Forces’ operational needs – they have to be deployed to conduct operations – the VMF should prefer forward deployment of TNW and dual-capable assets.

*Ground Forces (SV)*

The SV have a TNW capability, but it is the smallest of all the three services. At the time of writing, the SV has 72 SS-26 *Stone* and 48 SS-21B *Scarab* nuclear-capable missile systems,73 with around 140 TNW for those forces.74 The SV also control an unknown number of ground-launched cruise missiles.75 The *Stone* and *Scarab* brigades appear to be part of a SV joint artillery and rocket forces command, as all other such weapons,76 and are thus likely treated more as conventional artillery despite their being dual-capable. However, that does not mean that TNW and dual-capable

---

73 IISS, “Russia and Eurasia, 2016” 191.
74 Kristensen and Norris, “Russian Nuclear Forces,” 126.
75 Ibid.
platforms would be forward deployed; more important is the fact that the SV have never seen power projection as part of their critical task.

Indeed, the critical task of the SV and its predecessors has traditionally been conducting land warfare on the Eurasian landmass. As the MOD description of tasks notes, the SV are “intended for the repulsion of adversary aggression in continental theatres of operation, and for the protection of the territorial integrity of the Russian Federation and the national interests of the Russian Federation.” The SV therefore likely opposes the forward-deployment of dual-capable weapons systems, and since it has the smallest TNW capability of all the three services, it likely fears that the VMF and VKS could both bootstrap more effectively, as they would already have a head start in TNW capability, and as the importance of TNW would increase, the traditional SV missions would become less relevant and the organization would lose influence.

In summary, the VMF likely favors forward deployment, the SV likely opposes it, and the VKS is split between its competing subcultures. The predictions of the hypotheses therefore do not converge, with the exception with the VKS case, where neither hypothesis provides a very clear prediction.

Conclusion

Although the record provided by TNW employment during military exercises is far from complete, the general patterns confirm the predictions of the low-trust hypothesis and further validate my theory. As Adamsky himself observes,

During the exercises simulating conventional wars, the nuclear threshold was crossed at the final phase of the exercise when conventional attacks of the qualitatively or quantitatively superior enemy produced daunting situations. At that stage, not a general

purpose, but the Long Range Aviation platforms attacked targets in the theater of operations, in proximity and in remote naval and ground theaters. In other exercises, surface-to-surface missile units of the General Purpose Forces took similar ‘nuclear responsibilities.’ Although the Navy assigned itself theater nuclear responsibilities, and has a significant NSNW arsenal, the combined arms exercises have demonstrated that, as a rule, the Long Range Aviation equalized naval inferiority and conducted de-escalation and deterring strikes at sea.\(^78\)

In light of this finding, it is safe to conclude that the Russian civilian leadership indeed does not trust the military and consequently both avoids delegation to the greatest degree possible and envisions the use of TNW in accordance with the principle of using the forces where \(C^2\) is the least vulnerable, apparently going so far as to even avoid using VVS elements that otherwise do not have a nuclear role and relying only on preexisting, tested control mechanisms. Admittedly, these exercises are not the perfect proxy for forward deployment and level of control, but it is indicative that the predicted preferences of the services do not seem to matter; the predicted preferences of the VMF are even actively opposed. The fact that the VMF appears to be excluded from TNW operations on a regular basis proves that it is seen as the greatest liability among the three services and that the most pressing civilian concern is the fear of what an unreliable military would do.

This is further reinforced by the historical record. Besides not trusting their own military, the Soviets also did not trust other Warsaw Pact forces. As Matthias Uhl remarks: “[T]he nuclear weapons of the Warsaw Pact armies would remain under Soviet control at all times, right up to the moment of launch.”\(^79\) This indicates that the imperative of having forces capable of fighting a theater nuclear war at a moment’s notice was trumped by the fear of incompetence or catastrophic independent action on the part of subordinates. It is perhaps precisely because Warsaw Pact armies

\(^{78}\) Adamsky, “Nuclear Incoherence,” 104-105.

were modeled after the Soviet military that such a high degree of control was perceived to be necessary – what the Soviets had exported to allies in Eastern Europe was not only equipment and the organizational structure of the military but the accompanying mindsets as well, meaning that distrust of subordinates must have featured prominently in all Warsaw Pact militaries.

In terms of current Russian TNW doctrine, it would appear to be closest to what Adamsky terms “RND by NSNW from strategic platforms.”\textsuperscript{80} In terms of deterrence being credible, this doctrine is somewhat unconvincing, as there is a wide variety of other platforms that could also be used in the same role, but are not because the civilian leadership views them and the forces operating them as unreliable and untrustworthy. Adamsky’s dismissal of the notion that the Russian leadership is being deliberately ambiguous thus does not seem to be justified,\textsuperscript{81} as it would be sensible for them to try and conceal the practice of not using a large portion of their dual-capable forces in a nuclear role. Although one would require knowledge of the internal workings of the Russian government, not to mention classified documents and debates, to confirm this, it is not at all impossible that Russia is very much like China with regard to its TNW arsenal – it simply might not be deployed at all because of a lack of trust in the military. However, having dual-capable weapons platforms is useful, as forward-deploying them only with conventional munitions has more or less the same effect that forward-deploying them together with TNW would have, only without the risks; after all, it is incredibly difficult if not impossible to establish whether the munitions that have been deployed with are TNW or merely conventional munitions. If the platforms are indeed being deployed only with conventional munitions, then there is a very good

\textsuperscript{80} Adamsky, “Nuclear Incoherence,” 101.
\textsuperscript{81} Ibid., 93.
reason for Russia to conceal doctrine and TNW practices, for it would otherwise undermine its capacity for RND.

Albeit this paper shows that the theoretical framework of high/low trust is valid, it does not establish beyond a doubt that it is the causal relationships it builds on that are determinative. To show that the independent variable should in fact be operationalized as intra-military arrangements, a more systematic look at periods of change and varying trust within the military, preferably during the nuclear age, would be necessary. With relatively minor adjustments, it would also be possible to use the theory developed here to analyze changes in conventional military doctrine and thus draw broader links between civilian trust in the military as a reliable instrument, organizational culture and doctrine development. Finally, while organizational culture dynamics provide a good robust framework for inferring services’ preferences and likely courses of action, the VKS case in particular shows that there are limits to the approach, especially if competing subcultures with similar levels of influence are present. Therefore, future research should aim to identify supplementary intervening variables that can be used when the organizational culture framework does not yield clear predictions.