Securing Eastern Ukraine - Fighting Russia's "Hybrid" Warfare

US Military Power

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Introduction

The Russian annexation of Crimea and its semi-covert involvement in the civil war in eastern Ukraine evince a new Russian willingness to to intervene militarily in its European neighbors and raise important questions about how the United States and its potential victims could defend themselves against what some see as a new form of Russian warfare.[1] This analysis offers answers two two questions, one specific and one more general. Specifically, it takes as a scenario a hypothetical US decision, taken immediately after the Russian annexation of Crimea, to deploy forces to Ukraine and considers whether it would be possible for these forces to secure the Donbass region against rebel violence and Russian incursions. More generally, it answers what a hypothetical defense of eastern Ukraine reveals about what some have called Russia's new mode of "hybrid warfare". I argue that despite what some commentators claim (e.g., Saunders 2016; Davis 2015) hybrid warfare is not a radically new form of warfare, and thus military responses to it will not differ from the traditional conventional or unconventional warfare and American forces are well equipped to fight. However, as a novel combination of existing forces and techniques, hybrid war demands a specialized combination of responses. After proposing an understanding of hybrid war and how to counter hybrid war, I examine my scenario and find that a US force would have been able to intervene in March 2014 to defeat the hybrid threat. This intervention would rely on a risky political gamble, however, that Russian political leaders, faced with the failure of hybrid techniques, would not decide to escalate their involvement into a conventional invasion of eastern Ukraine, overwhelming US forces and likely triggering a great power war.

[1]This paper benefited enormously from the advice and assistance of Lt. Col. Joel Schmidt, USMC, and Maj. Tim Wright, US Army. Rachel Tecott provided extensive comments on an earlier draft.

Rather being than a completely new form of warfare, hybrid warfare is largely a combination of conventional war, unconventional/insurgency operations, and information operations (Puyvelde 2015,Kofman and Rojansky (2015)). Given this understanding, what are the force levels required to defend against "hybrid war"? Several campaign analyses have studied counterinsurgency campaigns (Greenhill 2001; Anderson 2014; Seibert 2007), and defensive missions against conventional Russian forces are the original topic of analysts conducting open source net assessment (Mearsheimer 1982; Posen 2013, among others). Studies highlighting the difficulty of defending the Baltic states against conventional Russian attack examine the limits of rapid and large-scale conventional US force projection in Europe and the limits to the force underlying NATO commitments (Shlapak and Johnson 2016). What is less studied, however, is campaigns consisting of dual conventional defense and unconventional counterinsurgency components. How do the force requirements differ for these missions? What are the size, composition, and objectives of American forces that would have been needed to secure and stabilize the Donbass region of Ukraine in March 2014 as instability in the region first began. Paralleling current planning for future counter-hybrid threat operations, what would the US military have needed to do to prevent the loss of Eastern Ukraine as soon as Crimea was annexed and separatist agitation in Donbass began? These concerns and findings travel well beyond Eastern Ukraine and could highlight force requirements for a number of conceivable US or NATO missions in the Baltics, Poland, Romania, Finland, or Georgia.

My approach proceeds as follows. I first propose an understanding of hybrid war, emphasizing its continuity with other well-understood forms of warfare, and then drawing attention to what makes it unique. I also discuss the purpose of hybrid warfare and several erroneous treatments of it. I then lay out the hypothetical scenario in more detail. The scenario begins on 17 March 2014, the day that Crimea declared independence from Ukraine and was annexed by Russia. Around the same time, agitation began in the Donbass region of Ukraine for independence, which eventually led to covert Russian support for the rebels and eventual direct involvement. For the sake of learning about future scenarios, I attribute a great degree of perspicacity to the Ukrainian and US governments and assume that the Ukrainian government immediately asked for and received assistance from the US to secure and defend eastern Ukraine against future Russian intervention and ongoing rebel activity.

We can use the benefit of hindsight (a la *Duffer's Drift*) to re-run history with the knowledge we gained

from seeing it once before to infer more about Russian objectives and commitments (Swinton 1916). While a counterfactual match-up between actual Russian forces and the US forces I choose to send is not a completely fair fight, given our knowledge of Russia's moves, the ability to see how the scenario played out under one version of history is helpful in eliminating many of the forking paths in a wholly imagined scenario. Knowing what Russian actions were in the absence of counterfactual US involvement hopefully gives us a better sense of what they would do in a situation in which US forces did intervene. Knowing the Russian timeline of intervention is especially useful for evaluating a potential US response given the claims I make about he importance of speed in counter-hybrid operations.

Hybrid War: An Understanding

Hybrid war has received a great deal of attention in the past several years. NATO, seeing a potentially new form of threat on its borders (and a new *raison d'etre*?) has expressed concern about the alliance's ability to respond to hybrid war (Calha 2015; France-Presse 2015; Barnes 2016). Inside the US military, Lt. Gen. McMaster is leading a new "Russia New Generation Warfare Study" to examine how American forces would need to be redesigned and deployed to counter an eastern Ukrainian style hybrid war. Moreover, the Pentagon seems to be beginning to reorient some of its forces toward defeating Russian hybrid threats in eastern Europe, including pre-positioning armor and heavy equipment in eastern NATO countries (Reuters 2015). The ambiguous nature of hybrid conflict itself and the combination of different forms of warfare that go into it complicate efforts to develop good counter-hybrid war doctrine. This debate thus far has led to several misunderstandings of the nature of hybrid war.

What Hybrid War Is Not

Before coming to an understanding of what hybrid war is, we should discount several less useful definitions of the concept. Mis-defining hybrid war is not only bad intellectually, it can also led to flawed recommendations for countering it. The first usage that does not provide useful analytical leverage is one stating that hybrid war is simply "political war". Max Boot argues that the United States has lost the ability to conduct "political warfare," which he defines primarily in terms of organizing overt and covert propaganda and intellectual efforts against ideological foes, the same way US opponents are able to (2013). Boot approvingly cites

an early Kennan memo (269 Policy Planning Staff Memorandum, May 4, 1948), arguing for an increased ability to conduct "political warfare". Kofman (2016) criticizes the use of the term "political warfare" in general as essentially redundant, but also argues that focusing
on propaganda and activities "short of war" misapprehends hybrid war, when the nature of hybrid war also includes conventional fighting and terrorism.

The second problematic usage of "hybrid war" is one that labels all Russian activity as hybrid war: "if you torture hybrid warfare long enough it will tell you anything, and torture it we have. The term now covers every type of discernible Russian activity", as (Kofman 2016) points out. Several types of operations should be kept analytically distinct from hybrid war: Russian military activities in Syria, dangerous flybys of Russian planes near US naval vessels, Russian government assassinations of journalists inside Russia, and online trolling to harass opponents and spread disinformation (Chen 2015), for instance. None of these meet the criteria I lay out above are conceptually distinct from hybrid war.

Finally, some observes have uncritically lumped Russian denial of service attacks on foreign web sites into a amalgamation of cyber war and hybrid war. "Putin is Waging a Relentless Cyberwar Against Ukraine," announced an article appearing in Newsweek and Council on Foreign Relations (Limnéll 2016). These cyber operations consist of propaganda efforts, denial of service attacks on websites, disrupting some networks, and defacement of websites. Janis Karklins, director of NATO's Strategic Communications Centre of Excellence, perhaps goes too far when he decries "the weaponization of social media" (qtd. in France-Presse 2015). In fairness, some Russian cyber attacks have military utility, including the use of internet data to location Ukrainian military units and could be used to disable military communications (Limnéll 2016), but cyber vandalism should be considered an enabling operation as part of hybrid war, not a radically new threat that upends traditional military balance of power.

All three definitions overemphasize the importance of psychological and cyber operations. Hybrid war undoubtedly includes these things, but miltiaries that see information operations as the core of hybrid war will underestimate the importance of armed components of hybrid war and will not be successful defenders.

What Hybrid War Is

I propose an understanding of hybrid war that has four components: the "sponsor" of hybrid war (1) uses deniable forces, in (2) combination of conventional and irregular/unconventional forces, with (3) a component of information operations, for the objective of (4) creating instability. The core technique is to delay the opponent's ability to understand and muster a response to the attack until the aggressor's objectives become *fait accompli*.

Component 1: Hybrid war includes the use of deniable forces, even when the deniability is flimsy. The effect of deniability is several fold. First, by deploying units without insignia, even when they are equipped with vehicles or weapons that clearly come from the sponsoring state, the state behind hybrid warfare can delay the response by the attacked state. Deniable forces also slow a potential response by allies, who may not be sure whether violence is coming from internal instability, requiring a domestic police response, or from an outside state, triggering treaty obligations. Finally, deniable forces strengthen the legitimacy of rebel forces by providing military victories that can be credited to rebels. Altman calls the use of deniable forces "Green Men" tactics, and points out that their use in territorial seizures is not new or unique to Russia (Altman 2016a). By achieving its objectives in a "fait accompli", the aggressor reduces the need for conventional military strength and reduces the chances of great power war (Altman 2016b).

Component 2: Hybrid war, in my understanding, employs both conventional and unconventional military power, both directly in the form of deniable sponsor forces, as well as local rebel groups. In both Crimea and Eastern Ukraine, Russian conventional forces were deployed (albeit without identifying insignia) and Russian artillery has supported rebel operations. Russian unconventional units have also been involved in proving arms and operational planning to rebel groups in eastern Ukraine. An integral component of hybrid war is the role of local rebel forces, who can operate both to further the military objectives of the operation (see point 4), but also as a force that legitimates the sponsor's interest in the conflict while at the same time obscuring its role. In the case of eastern Ukraine, Russia can point to rebel groups as evidence of a genuine, organic movement among Russian-speaking Ukrainians defending themselves from the Ukrainian state. The requirement for local forces implies that hybrid war will not find fertile group in places without coethnics or the potential for creating rebel groups.

Component 3: Information operations, especially network and psychological operations, are universally

included by analysts in their definitions of hybrid war, as they should. *Joint Publication 3-13: Information Operations* defines information operations by stating that "the Secretary of Defense now characterizes IO as the integrated employment, during military operations, of IRCs [information-related capabilities] in concert with other lines of operation to influence, disrupt, corrupt, or usurp the decision making of adversaries and potential adversaries while protecting our own." (US Joint Chiefs of Staff 2014, ix). Information operations are an integral *component* of hybrid war, which is not the same as seeing information operations as the totality of hybrid war. Information operations on their own will not achieve the objectives of hybrid war; armed force is needed as well.

Information operations are particularly important in legitimating the struggle of local proxy forces against the defending state. The plight of co-ethnics across the border gives Russia a public reason for interest in the conflict, although it has not exploited this component of the conflict as much as it could. Slobodan Milošević, during the wars attending Yugoslavia's breakup, consistently appealed to the suffering of Serbs outside of Serbia as a justification for "protective" Serbian intervention. That Putin has not used this rhetoric, despite its good fit with the rest of his project, is puzzling and may change.

Component 4: The aim of hybrid war always includes creating confusion and destabilizing an area. In the case of eastern Ukraine, this objective seems to be the primary one. By making eastern Ukraine ungovernable, Russia makes Ukraine an unappealing addition to NATO or the European Union, puts pressure on the Ukrainian government to accept Russian demands, and sends a warning message to other potentially recalcitrant states on its borders, specifically the Baltics, that the Russian government and military has the ability to intervene at will: "if in Crimea the aim was to create a new order, in the Donbass it was as much as anything else to create chaos, even if a controlled, weaponised chaos" (Galeotti 2016, 285). Some scholars, writing on emerging Russian military doctrine, see hybrid war of the type practiced in Eastern Ukraine in 2014 as a model for how the early stages of a future "New Generation" war could unfold (Chekinov and Bogdanov 2013; Bērzinš 2014). As a battlefield preparation device, hybrid war's objectives would still be to create instability and confusion, but it would then be followed up with a conventional attack.

Countering Hybrid War

The understanding of hybrid war that I propose above reveals several important strategies of a counter-hybrid fight. Because hybrid war is simply a novel combination of existing capabilities and strategies, the United States already has the forces to counter it. I discuss how these forces should be used in general terms before going into more specifics in my discussion of the eastern Ukraine campaign scenario. Effective counter-hybrid war consists of three components:

- Acting despite ambiguity to create failure early for opposition; hybrid war relies on sequential success (Bērziņš 2014)
- Counter-messaging
- Defeating deniable forces, but in such a way that the sponsoring country will not intervene directly.

I go through each of these in turn.

Counter-Hybrid War Component One: The first and most important requirement of an effective counter-hybrid war is to act decisively despite ambiguity about the identity and objectives of the opponent. The "endgame" of hybrid war is to make instability, loss of government control, or de facto annexation a *fait accompli* that would require a concerted and escalatory response on the part of the government to undo. When the hybrid aggressor is much more powerful than the victim, thawing or escalating the conflict carries large risks. And because the attack is often deniable or cloaked in a language of self-determination, the victimized country may not be able to summon the support of allies to provide assistance or international legitimacy for its effort to re-assert control over its territory. The best response to a hybrid threat is to prevent the attacker from reaching its objectives in the first place. Resistance needs to begin as soon as possible to force the aggressor to choose between giving up and escalating to a conventional fight.

Russian and Estonian military theorists argue that hybrid war is a cumulative set of increasingly kinetic and overt steps that cannot proceed unless successful in earlier stages (Chekinov and Bogdanov 2013; Bērziņš 2014). This logic was developed in reference to hybrid war as a preparation of the battlefield for a full-fledged "New Generation" war, but holds here and helps to explain the theory of victory behind early response. Deniable conventional intervention will not occur until the initial information operation preparation has occurred and propaganda and potentially cyber operations have laid the groundwork for a slowed

or confused response from the victim. If limiting the involvement of enemy conventional forces is the top priority (which it is here), then defeating local rebel forces is the most important requirement. If local rebel forces do not exist, then the veneer of plausibility over covert interventions by the sponsor's forces would disappear altogether.

The defending state needs to mobilize a military response as soon as possible to a hybrid threat to have the best chance of defeating it. One intriguing proposal for speeding this response is decentralize the authority to use force to local commanders or individuals, getting around some of the difficulties of communication and the delays that "next generation warfare" is meant to create (Bērziņš 2014, 11). Lavrov (not that Lavrov) (2014) argues that Russian forces were initially stretched very thin in Crimea and remained vulnerable to a counterattack for several weeks after the inital uprising. The success of the operation rested on Ukraine's unwillingness to attack in the face of ambiguity about who the soldiers were. Here, the defending country would again gamble that the aggressor would not be willing to escalate to conventional fighting in the initial phase and would withdraw if it came to that choice.

Counter-Hybrid War Component Two: Countermessaging/Information Operations. Almost all commentators on hybrid war agree that Russian propagandists are skilled—the main point of contention in discussions of Russian information operations is how important they are to hybrid war. Complementing Russian skill in propaganda and information operations is that hybrid war's goals, especially the creation of instability and situational ambiguity, are served by general discord and distrust. The targets of Russian information operations do not necessarily need to come to believe in the Russian point of view for hybrid war to be successful, they merely need to disbelieve their domestic authorities. An example of this approach outside a hybrid war scenario, is the online "troll farms" backed by the Russian state that post anti-West messages into online discussions to disrupt debate (Chen 2015).

Russia has the advantage in information operations and propaganda, but a counter-hybrid war operation cannot succeed if it cedes the entire propaganda war to Russian forces. Military psychological operations units need to exercise caution in what they emphasize. Counterintuitively, they should not document and expose direct Russian involvement in the conflict, as this has the potential to risk Russian escalation if it sees reputational costs to leaving. Instead, PSYOPs should emphasize the "outsiders" involved in the fight, some of whom may be "deniable" Russian forces but many of whom may legitimately be volunteer thugs

that are formally independent of the Russian state. Creating a cleavage between local forces and outside forces could make them less effective on the battlefield and loosen ties between local rebels and Russian forces. Psychological operations units should also prevent a potential Russian message from taking hold, that US troops are imperialist occupiers, etc. These information operations will probably not be completely successful against Russian IO, but any defense against hybrid war that cedes command of the "information space" to Russian forces is likely to fail.

Counter-Hybrid War Component Three: The third component of a counter hybrid war is for the defending country to call the sponsor's bluff and defeat the hybrid forces as though they were indeed internal rebel forces. Altman, in a study of 105 land grabs, finds that "deniable" forces have been used before, but rarely successfully (Altman 2016b). The key technique for defeating deniable threats is to buy the fiction that the forces are indigenous rebel forces and defeat them conventionally:

> In each instance, the defender countered hybrid tactics in the same way. They accepted the fictitious terms of the conflict and mobilized enough strength to defeat the deniable forces on the battlefield. They sought to engage the deniable forces without also attacking any uniformed forces of the aggressor or striking targets in the aggressor's territory, keeping the fighting contained. (Altman 2016a)

This approach is successful because it turns the nature of deniable forces back on themselves. If a sponsoring country does not acknowledge that armed actors are affiliated with it, then the defending country can legitimately keep killing thugs in its own territory until the sponsor admits that they are their dead thugs, at which point the benefits of deniability are lost and the credibility of the sponsoring country, if it exists, is damaged.

If militaries fighting hybrid threats employ these three techniques for countering hybrid war, they are more likely to end the conflict or force it into being conventional. Czech Army Gen. Petr Pavel, the current head of NATO's military committee, states, "The primary purpose [of hybrid war] is to create an influence that is strong enough, but below the threshold of Article 5, so they achieve the goals without provoking the enemy or opponent to initiate a defense response" (qtd. in Barnes 2016). As long as the meta-goal of ensuring the sponsoring state does not escalate, then they will be able to defeat the unconventional forces on their territory and end they hybrid threat.

In the next section, I examine how these techniques would look when employed by the United States in a hypothetical intervention against the most recent example of hybrid war, the conflict in the eastern Donbass region of Ukraine.

Scenario: Defending Eastern Ukraine in March 2014

The premise of this scenario is that in the immediate aftermath of the Russian annexation of Crimea and the first seizures of government buildings in eastern Ukraine by rebels, the United States agreed to help the Ukrainian government reestablish control of eastern Ukraine and prevent Russian involvement. At this point in the conflict in eastern Ukraine, Russian forces were not directly involved in the fighting in eastern Ukraine. Within two months of the first building seizure, Russian equipment and special forces were present in eastern Ukraine, coordinating attacks against Ukrainian military forces and supplying heavy weaponry, including the Buk missile that downed Malaysian Air Flight MH-17 on July 17, 2014. This scenario posits a counterfactual world in which US forces intervened to help Ukrainian forces stabilize eastern Ukraine immediately after the annexation of Crimea and the first rebel building seizures in the eastern city of Donetsk and its surrounding towns on March 18, 2014.

Russian Objectives

Formulating a US response to the scenario requires understanding Russian objectives in eastern Ukraine and whether they are important enough to justify a full Russian invasion of Ukraine. In contrast to its objectives in Crimea, where were very clearly to gain formal and de facto control of a strategically and historically important region, Russian aims in eastern Ukraine are cloudier. I see four strategic objectives of the Russian government for its presence in eastern Ukraine: to keep Ukraine pliable, to keep NATO and the EU away from Ukraine, for domestic political consumption, and as a warning for other countries in the region. These interests are great enough to keep Russia involved in the civil war in eastern Ukraine, but are not large enough to push Russia into a full-scale invasion of eastern Ukraine.

Russia's first strategic objective is to to keep Ukraine more pliable than it was immediately after the Euro-maidan protests and the victory of pro-Western political leaders. Battlefield success by separatists have led Ukraine to make deals, including the Minsk Protocol (Minsk I), which gave major concessions to

the Luhansk and Donetsk People's Republics, including devolution of power to the Donetsk and Luhansk Oblasts and amnesty for separatists. Although the ceasefire component of the protocol was violated almost immediately, the concessions by Ukrainian negotiators demonstrate the leverage that Russian and separatist forces have when they are winning on the battlefield. The support for proxy groups in eastern Ukraine makes it clear to Ukrainian politicians that closer Ukrainian ties with Western Europe is a red line for Russia. Even if the leadership of Ukraine is hostile to Russia, it should be made very cautious about leaving the Russian sphere of influence.

The Russian government has also succeeded in creating distance between Ukraine and its potential NATO membership, revealing a second strategic objective:

> As long as Russian proxy states exist within the internationally recognized borders of Ukraine, NATO is unlikely accept Ukraine as a member. Given the obligation of treaty signatories to defend one another, Ukrainian membership would bring NATO into direct confrontation with Russia as long as the proxy states continued to exist. The creation of defensible proxy states, or a single united state, thus serves Russia's grand strategic objective of creating a security buffer between its own borders and NATO. (Spaulding 2015)

A third set of objections for Putin is domestic considerations. A semi-acknowledged operation in Ukraine shows that Russia is a real international actor and that it can exert real power in its "near abroad". In doing this, he could potentially distract from domestic problems in Russia, including high inflation and negative economic growth (Bērzinš 2014). Indeed, the intervention seems to have been successful in this regard. A Pew survey a year after the annexation of Crimea and semi-overt Russian support for rebels in eastern Ukraine found that 83% of Russians approved of Putin's policy toward Ukraine, 82% approved of his handling of the European Union, and even 70% approved of his approach toward the economy (Simmons, Stokes, and Poushter 2014). It is unclear how the Russian public would respond to a costlier full-scale invasion of Ukraine with its inevitable higher Russian casualties. This, and the economic costs of wider involvement, discourage Putin from invading.

Finally, a Russian objective in destabilizing eastern Ukraine is to send a warning to other countries in what it sees as its sphere of influence: in case they did not learn from the 2008 invasion of Georgia, they should now know that the Russian government is willing to use force to prevent its neighbors from drawing closer to Western Europe, NATO, and the EU. Ukraine's loss of national sovereignty over an important part of its territory should give pause to other countries considering a move away from Russia's orbit. At the same

time, the hybrid approach achieves this will relatively low Russian military expenditures, making it a more credible threat in the future than invasion.

Russian forces

Any operational planning process needs to account for the enemy forces arrayed against it. The Russian military certainly has dominance over the Ukrainian military, even when the Ukrainian military is reinforced by US troops. By the beginning of April 2014, the Russian military had 40,000 troops on Ukrainian border (Voice of America 2014), including armored units. The central gambit of the operation makes these forces less important than they would be a in conventional deterrence mission. Russian conventional forces could take eastern Ukraine, but the gamble in this scenario is that they will not. The more relevant forces in this scenario are Russian Spetznas special forces, which crossed the border and embedded in Ukrainian rebel units. Unfortunately, information on their size, disposition, and presence on the Russian-Ukrainian border is difficult to find.

US/Ukrainian objectives

In intervening, the United States has one meta-goal, or "gambit", in Altman's (2016a) words: to make hybrid war approach ineffective and gamble that conventional escalation is too costly for Russian government. The guiding principle and assumption behind the US operation is that US intervention will make hybrid war infeasible for Russian forces, but that Russian objectives are not important enough and US forces not threatening enough to prompt conventional Russian escalation. The specific objectives and force requirements must be tailored to balance the need for success against the hybrid threat with the need to avoid prompting Russian escalation.

Objective One: No Shooting (Uniformed) Russians: With that meta-objective in mind, the first objective of the US force is to avoid any shooting between it and uniformed Russian forces. Direct conflict would be the most likely way that a direct Russian/US war could emerge from this conflict and should be avoided if at all possible. US conventional personnel should not operate near the Ukraine/Russia border, where accidental shooting could happen. These areas should be patrolled by Ukrainian forces, potentially in conjunction with US special forces. Any acknowledged Russian forces in Ukraine should be fought by Ukrainian forces,

if at all. "Deniable" Russian forces, on the other hand, can safely be engaged, calling the hybrid war bluff until Russia acknowledges that their dead thugs are indeed their dead thugs.

Objective Two: Interdiction: The second objective of the US force is to interdict any arms and Russian unconventional forces crossing the border to support rebel operations. In later phases of the conflict as it actually unfolded, this aid, both material and organizational, was crucial in maintaining the rebels' ability to defeat Ukrainian military forces. The hypothetical intervention discussed here would have occurred early enough to have prevented this influx.

By late summer, Russian forces were inside Ukraine, training and equipping Ukrainian rebels, conducting reconnaissance, and providing "backbone" for the rebels [Gordon and Kramernov (2014); reuters2014russian]. If indeed outside support to the rebels was as important as it seems, rebels devoid of their supplies would not be able to resist regular Ukrainian military forces. By using their advantage in mobility and training, US forces can cut this supply off, leaving the regular Ukrainian military to defeat rebel forces. Pursuant to the first objective, no uniformed Russians should be fired upon.

Objective Three: Secure Major Cities

The main combat power of the force will be based in Donetsk, the most important center of rebel activity in the Donbass region. On April 6-7, 2014, 20 days after the annexation of Crimea, armed pro-Russian rebels seized the government regional center, Interior Ministry, and security service building in Donetsk (Kyiv Post 2014), declaring the formation of the "Donetsk People's Republic". A month later, on May 11, leaders in Donetsk and Luhansk, the second major city involved in the uprising, held referenda that they claim supported independence. Depending on how quickly US forces could deploy (the subject of a later section), they would probably arrive before the seizure of buildings in Donetsk. Local police have been notoriously inconsistent in defending Ukrainian government buildings. Basing US forces in Donetsk to defend key Russian buildings would be an easy mandate for American forces and have the potential to remove support for rebels by denying them the legitimacy that success and capture of government buildings gives them (see Landau-Wells 2008 for a discussion of the "locational dimension" of sovereignty in civil wars).

Forces should also deploy to two other cities in the Donbass region: Luhansk and Debal'tseve. The importance of Luhansk is as another hub of the rebellion. Debal'tseve is a critical transportation hub in Donbass. It sits on the main road and rail line between Luhansk and Donetsk, as well as the major road and rail line

from Russia into central Donbass.

> Ukraine's control of Debaltseve has represented a major hurdle for the creation of a united "Novorossiya" territory from the Donetsk and Luhansk People's Republics (DNR and LNR). […] the capture of Debaltseve will open up a direct rail and highway connection between Russia and the front line around Donetsk, allowing Russia to launch future offensive phases more quickly. (Spaulding 2015)

Ukrainian forces expended a huge effort later in the war to holding it. Holding these three cities would prevent a coherent breakaway republic from forming and would isolate potential rebels in rural areas. Thee rebels could fight a rural insurgency, but this would be difficult without Russian support. It would also be much less threatening to the sovereignty of Ukraine than the existence of two functioning and territorially consolidated breakaway republics would be.

Objective Four: Degrade Rebel Forces:

Direct fighting between US forces and rebel forces is actually the least important objective of the mission. Early intervention should prevent these groups from building a large amount of combat power. Except for rebel forces in the urban areas where US forces will be based, rebels should be fought by Ukrainian military units. However, if US forces have excess combat power and rebels are operating nearby or in cities, they could engage in a "since you're down here, it would be really great if you could just sort of take care of the [rebel] problem we've been having in here" mission.

Objective Five: Train and Advise Ukrainian Forces:

The intervention has as its most immediate goal stopping Russian escalation in eastern Ukraine. The mere presence of US forces and some degree of operations against rebels will go a long way in providing this. The longer term success of the mission, however, relies on building Ukrainian forces' ability to secure the eastern part of the country. US involvement will give these forces breathing room to rebuild after several years of drastic downsizing (Institute for International Security Studies 2014, 194), but US involvement should also actively work to improve the skills of the Ukrainian military, especially in fighting unconventional warfare. The ability of the Ukrainian military to resist a determined Russian invasion will remain minimal in the near future, but its ability to track and disrupt rebel activity in eastern Ukraine could be much better. The best foreseeable exit scenario is that immediate Russian activity is halted, the Ukrainian military has the strength

to defeat the cut-off rebels in the east, and US forces can withdraw or remain in an actual non-combat role to deter a conventional Russian invasion.

Although the United States has had very poor success in training militaries in Iraq and Afghanistan, the situation in Ukraine is considerably different and more hopeful. First, Ukraine is a much better functioning state than Iraq and vastly better than Afghanistan. The country is not affected by massive internal fighting (especially in the spring/summer of 2014), and faces a partially external threat, rather than a wholly domestic insurgency. The Ukrainian military also has a history of functioning as a relatively effective and professional military. All of these make a military training mission more hopeful than in other places the US military has attempted it and make this exit strategy not completely implausible.

Troop-To-Task Analysis

I generate a force estimate needed for this operation by comparing available US forces to the list of objectives I present above. The task to force mapping is summarized in Table 1. I will describe where and how quickly they will be deployed in the section following this one.

1st Brigade, 82nd Airborne Division

The main combat power and deterrent presence will come from the first brigade of the 82nd Airborne Division, based at Fort Bragg, North Carolina. I provide justifications for using an infantry unit, of this size, from this higher formation. I conclude the section by detailing which Ukrainian forces are available to deploy alongside US forces.

Why infantry and not armor or mechanized infantry?

The first benefit of infantry in this scenario is the speed with which they can be deployed, giving them the ability to break the earliest chain in the progression of a hybrid conflict. This speed comes specifically from their ability to be deployed by air. Although transport ships could land at Odessa, I assume that the Black Sea is impassable to US transport ships and thus that all forces will need to be air deployable or come over land from Western Europe. The Black Sea has always been a threatening place for US ships to operate, but with the annexation of Crimea and its Black Sea fleet base, the Black Sea is even more hazardous for US ships

to operate in and removes the previous best port for disembarkation in Ukraine. The Russian Black Sea fleet includes five Kilo-class submarines, two guided missile cruisers, a destroyer, and two frigates (Institute for International Security Studies 2016, 198), making a transit too hazardous unless accompanied by a large US warship escort and the tremendous escalatory risk that presents. Without sea access, armored units would have a much more difficult time deploying to Ukraine. Speed is a critical requirement of this operation, and deploying an armored even from a prepositioned base in Europe would be very slow and logistically complicated.

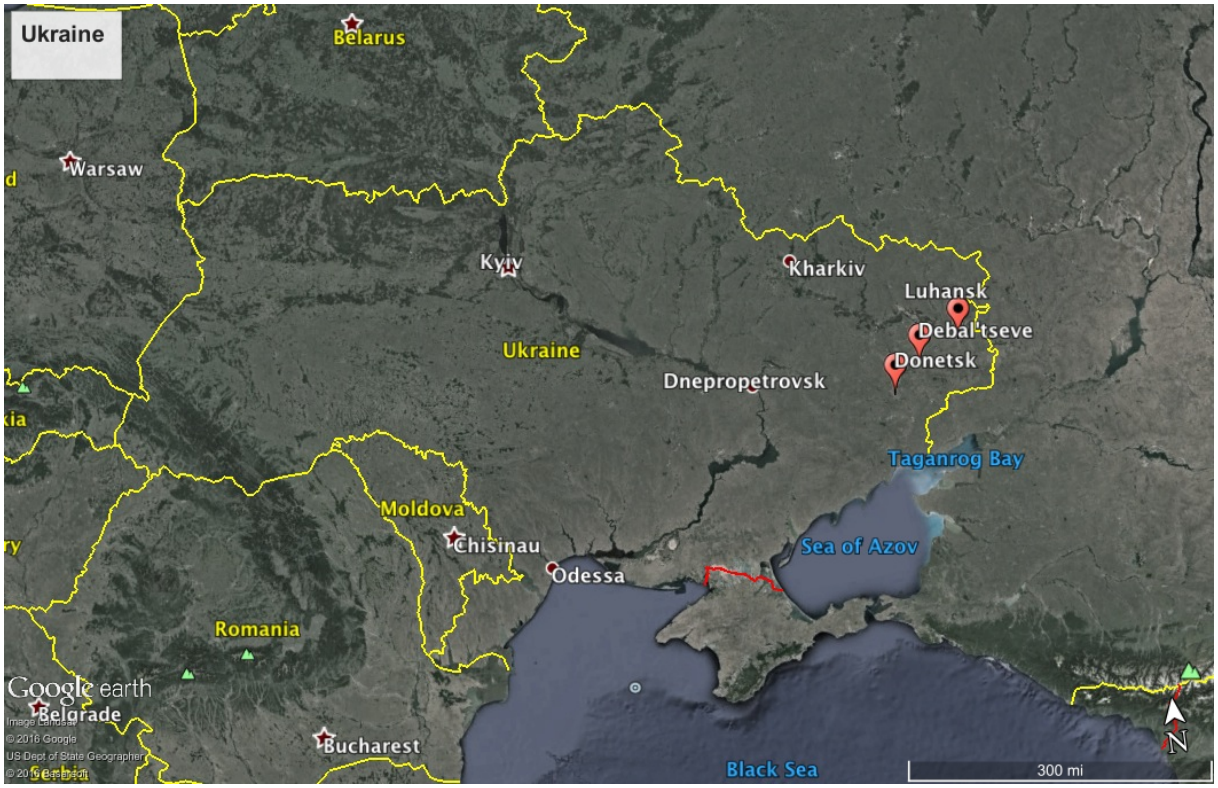

Figure 1: Map of Ukraine Showing Three Critical Cities in Eastern Ukraine

Another benefit of deploying infantry rather than armor is that it maintains the careful calibration of force needed in this operation, providing enough combat power to occupy key cities and disrupt rebel activity, without massing enough combat power that Russia feels threatened enough to escalate. Because infantry units lack good organic mobility and are not suited to fighting armored units, they present much less of an offensive threat to Russia than an armored unit would be. The US commitment to stay inside Ukraine and conduct defensive or counter-rebel operations is much more credible when the force conducting the

operation cannot threaten Russian units on the other side of the border.

Why a brigade?

The smallest self-contained deployable conventional ground unit in the US Army is the brigade combat team, making a brigade the minimum sized main force we could consider bringing. The reasons for using the smallest sized unit are three-fold: the BCT can be deployed faster than any other unit, with the lowest risk of Russian escalation, while still achieving US objectives.

Although the conflict in eastern Ukraine later escalated to involve several thousand combatants on each side, in the initial phases, it was not clear that this would happen. The seizures of government buildings were undertaken with only a small number of volunteers who were acting contrary to predominant sentiment:

> [S]everal surveys, including a poll released Wednesday, have found that residents of the key eastern city of Donetsk overwhelmingly oppose any move to join Russia. That survey, conducted March 26-29 in conjunction with Donetsk National University, showed less than 27 percent of city residents supporting the building seizures, and only 4 percent wanting to separate from Ukraine.
>
> A poll conducted by the Gallup organization in conjunction with the International Republican Institute found just 4 percent of respondents favoring secession. That survey was released April 5. (Voice of America 2014)

The brigade would be likely to fight small groups of rebels, but would not be doing so in a political environment that was completely supportive of rebel actions. In the absence of an overwhelming hostile population, a larger force would not be needed to impose order, and could potentially backfire, if a heavy American troop presence gave credence to a propaganda claim that US forces were imperialists coming to oppress Russian speaking Ukrainians etc. At the same time, a brigade, with its three maneuver battalions, would have enough combat power to defeat lightly armed groups of rebels in Donetsk and to hold at least one other key city, either Luhansk or Debal'tseve. The BCT deploys with a battalion from the 319th Field Artillery Regiment, equipped with 105mm towed howitzers. The M119 howitzer has a range of 7-8 miles, meaning that the Brigade Combat Team could also defend the area of operations around its main base against more serious attacks. The BCT could also deploy with M777 155mm towed howitzers, with a range of 15 miles (25 miles with GPS guided munitions), giving them much greater combat power against rebels equipped with heavy weapons or armored vehicles. The M777 is much lighter than previous 155mm towed howitzers, making it much easier to deploy by air (two can be carried in a C-130).

Why the 82nd and not the 173rd Airborne and 2nd Cavalry Regiment?

An alternative unit to use here in place of the 82nd Airborne would be the 173rd Airborne Infantry Brigade Combat Team based in Vicenza, Italy. The primary reason to not take the 173rd is that components of the BCT were instead deployed to Poland and Estonia, Latvia, and Lithuania in April 2014. Moreover, the ability to have additional combat power in Europe to defend other NATO countries or to rapidly reinforce the 82nd in Poland if needed is very important. Tying the 173rd down in Ukraine would greatly limit the ability of the US to respond to other crises in Europe, weakening the ability of the United States to respond to Russian activities elsewhere and obviating the larger strategic justifications behind a US involvement in eastern Ukraine.

Potential reinforcement: If rebel forces are more difficult to defeat or US forces need to operate quickly over a larger area of eastern Ukraine, the 1-82nd BCT could be reinforced by a Stryker Brigade Combat Team from the 2nd Cavalry Regiment (2CR) based in Vilsek, Germany. Stryker units are optimized for high mobility infantry operations, which would be a good fit for this operation. On the other hand, as units with slightly more offensive power than an infantry BCT (albeit limited power against armored units), the 2CR would present a potentially greater threat to Russia than dismounted units. Second, similarly to the reason for not using the 173rd, the 2CR should be maintained for a more serious contingency than the operation of choice being discussed here.

Table 1: US Troop-to-task summary

Task	Forces
[Meta-goal: prevent Russian escalation]	[the reason for not bringing more forces or armor]
Prevent Russian/US direct fire	1-10 Special Forces Group (Airborne)
Interdict arms and forces	1st Battalion, 82nd Combat Aviation Brigade
Secure major cities	1st Infantry BCT, 82nd Airborne Division
Degrade rebel forces	Infantry BCT; 1-82nd CAB
Train and advise Ukrainian forces	1-10 Special Forces Group (Airborne)
Psychological operations	6th Military Information Support Battalion, 4th MISG(A)
Transportation and support	18th CSSB and 39th Transportation Battalion, 16th Sustainment BDE

Task	Forces
Potential reinforcement	2nd Cavalry Regiment; 173rd Airborne Division

1st Battalion, 10th Special Forces Group (Airborne)

In addition to the main infantry BCT, the deployment should also include a battalion from the 10th Special Forces Group, which is based in Stuttgart. The purpose of this unit in this mission would be to arrive before the main force and liase with the Ukrainian army. As a special forces unit that specializes in unconventional warfare and countering unconventional warfare, the 10th SGF(A) is an ideal unit to begin advising and training Ukrainian forces in fighting the rebels on Donbass. Army Special Operations Command is developing new doctrine for a "counter-unconventional warfare (CUW)" fight (United States Army Special Operations Command 2014), a mission that reflects their role here.

A second part of the mission envisioned for special operations forces and special forces is to conduct "remote area operations"—joint operations with host nation military in contested or insurgent-dominated areas to interdict supplies and destroy bases (United States Army Special Operations Command 2014, 19). By operating away from the main US force and in conjunction with Ukrainian units, they will be able to gather more intelligence on movements of rebel units and material support for those units coming from Russia. Air interdiction relies on good targeting intelligence, which the 1-10 SFG(A) will be able to provide.

Finally, an important role for a special forces unit in this deployment is to act as a buffer between regular US forces and the Russian border. The worst potential outcome of the deployment would be an exchange of fire between US and Russian troops across the Ukraine/Russia border. By keeping conventional US forces several kilometers away from the border and only operating with special forces attached to Ukrainian forces along the border, the chance of a shootout between US and Russian forces is minimized.

1st Battalion, 82nd Combat Aviation Brigade

The interdiction mission will be supported primarily by the 1st Attack Reconnaissance Battalion, 82nd Combat Aviation Brigade, which flies AH-64D Apaches. The 1-82 ARB is deployed with 24 Apaches, crews, and a

forward support unit. An attack reconnaissance unit is ideally suited to an air interdiction effort. Although joint doctrine now longer recognizes battlefield air interdiction (BAI) as a mission, the role of the battalion from the 82nd CAB is to conduct BAI against an unconventional enemy. Cutting supplies off from the Donbass rebels and destroying the heavy equipment they might already have is an important part of weakening them to the point that Ukrainian forces could destroy them. Because infantry units have very poor mobility, aviation assets would be needed to destroy deniable convoys. The greatest threat to aviation is being shot down by Russians, either intentionally or unintentionally. The areas where they will be operating are within the slant range of Russian-based surface-to-air missiles, but flying low and relying on Russian reticence to shoot down American aircraft may protect the helicopters. This mission is the one that presents the greatest risk of escalation, meaning that the commander will need to exercise caution when making decisions about which convoys to interdict.

6th Military Information Support Battalion, 4th Military Information Support Group (Airborne)

The units in the US Army responsible for information operations are Military Information Support Groups, of which we are specifically interested in units specializing in psychological operations. The 4th Military Information Support Group (Airborne) (formerly 4th Psychological Operations Group (Airborne)) is a group based at Fort Bragg, NC, and is the only active duty military information support operations (MISO) group. This operation requires tactical PSYOP company from the 6th Military Information Support Battalion, 4th Military Information Support Group (Airborne). A tactical PSYOP company can develop, produce, and distribute propaganda to support a commander (US Department of the Army 2005). By deploying with the force, the tactical PSYOP company will be able to target its messaging more effectively to Ukrainian civilians. As discussed above, the US force will not be able to "defeat" the Russians in PSYOPs, but not countering their PSYOPs or information operations would concede defeat in this important enabling mission.

18th Combat Support Sustainment Battalion and 39th Transportation Battalion (16th Sustainment Brigade, 21st Theater Sustainment Command)

Brigade Combat Teams cannot sustain themselves indefinitely using only their organic support and supplies. To function over time, they need a combat support and sustainment unit. The best unit to use for this

purpose is the 18th Combat Support Sustainment Battalion, which is part of the 16th Sustainment Brigade, 21st Theater Sustainment Command. The sustainment brigade provides logistics, ordnance, maintenance, and fuel to combat units. In addition to requiring a support and sustainment unit, infantry BCTs also require additional transportation assets if they want to conduct non-dismounted operations. Infantry BCTs have only enough organic vehicles to move a quarter of the brigade at once. In this mission, where units are highly dispersed and may need to respond rapidly to violence in remote parts of their areas of responsibility, having the ability to relocate rapidly is critical. This transportation ability will be provided by the 39th Transportation Battalion, also from the 16th Sustainment Brigade, 21st Theater Sustainment Command. Both units are based in Kaiserslautern, Germany. I assume that both units have a contingency plan for deploying to eastern Ukraine and either organic transportation assets or arrange their own travel to Kiev and then on to Donetsk after the 1st Brigade, 82nd Division establishes a base in Donetsk.

Airpower

This operation does not envision a large degree of air power beyond the Army aviation battalion that will be deployed with the force. However, if air support is needed, especially against armored vehicles or areas defended by MANPADs, missions could be run from Incirlik Air Base in Turkey or Aviano Air Base in Italy, though neither air base is within range of eastern Ukraine without mid-air refueling. Reapers flying from Incirlik could provide air support in eastern Ukraine, but at the very edge of their combat radius. Maintaining close air support ground attack aircraft over eastern Ukraine risks provoking Russian forces and presents the danger of an accidental or deliberate destruction of a US aircraft by surface-to-air missiles, creating the risk of a wider escalation.

Ukrainian Forces

In addition to the US forces involved in the operation, the Ukrainian military will also deploy three mechanized infantry brigades to secure smaller towns and the countryside and to act as a buffer between US and Russian forces on the border. Because of Ukraine's Warsaw Pact legacy, most of its units are based in the western part of the country, where they serve almost no purpose. Redeploying them to the east will create much more combat power and the presence of US special forces should greatly improve their combat

effectiveness. The units to redeploy are the 24th, 30th, and 51st mechanized infantry brigades. All of them were based in western Ukraine in 2014, meaning that their redeployment comes at no security risk to other parts of the country. One brigade will be deployed in Luhansk, which does not have a US battalion due to its proximity to the border, one will secure the main road between Debal'tseve and the Russian border, and one will maintain control of the southern part of the border near Mariupol. All three brigades will have a US Special Forces Company attached.

Deployment of Forces/Operational Plan

In this section I describe where US forces will be deployed and in what time frame.

The bulk of US forces will deployed in Donetsk, where the center of rebel activity is. As soon as possible after the order to go is given, the 1st Battalion, 10th Special Forces Group and the transportation and combat support units will leave from Germany to Kiev. The special forces units can begin operation with the Ukrainian military units in the region as soon as possible, and the transportation and sustainment units can deploy the rest of the way to Donetsk as soon as the 82nd is on its way. See Figure 2 for the positions of US forces in Donbass.

A safe and conventional deployment for the 82nd could be to fly to Kiev airport or Dnepropetrovsk airport, which are 700 and 260 km from Donetsk respectively, where they could join with the transportation battalion for overland transportation to Donetsk. To avoid having to drive to far and to eke more political benefit out of the operation, lead units from the 82nd will instead jump onto the Donetsk air field and secure it, allowing the rest of the 1st Brigade, 82nd Airborne and 1st Battalion, 82nd Aviation Brigade to land. For maximum effect, the MISO unit could arrive ahead of time in order to film the airborne insertion for propaganda purposes. Although an airborne insertion is beyond what is needed for this operation, it usefully furthers some of the objectives of the mission by demonstrating to Russia that the United States has a capability to "seize" an airfield on Russia's border and that rebels in Donbass will be seriously outclassed by US forces.

The Donetsk airport has a 10,000 foot runway, which is much longer than the minimum length required by C-17 and can comfortably accommodate C-5s as well (United States Air Force 2011, 10). The airport was not seized by rebels (some of whom had Russian passports until May 26 (Roth and Tavernise 2014),

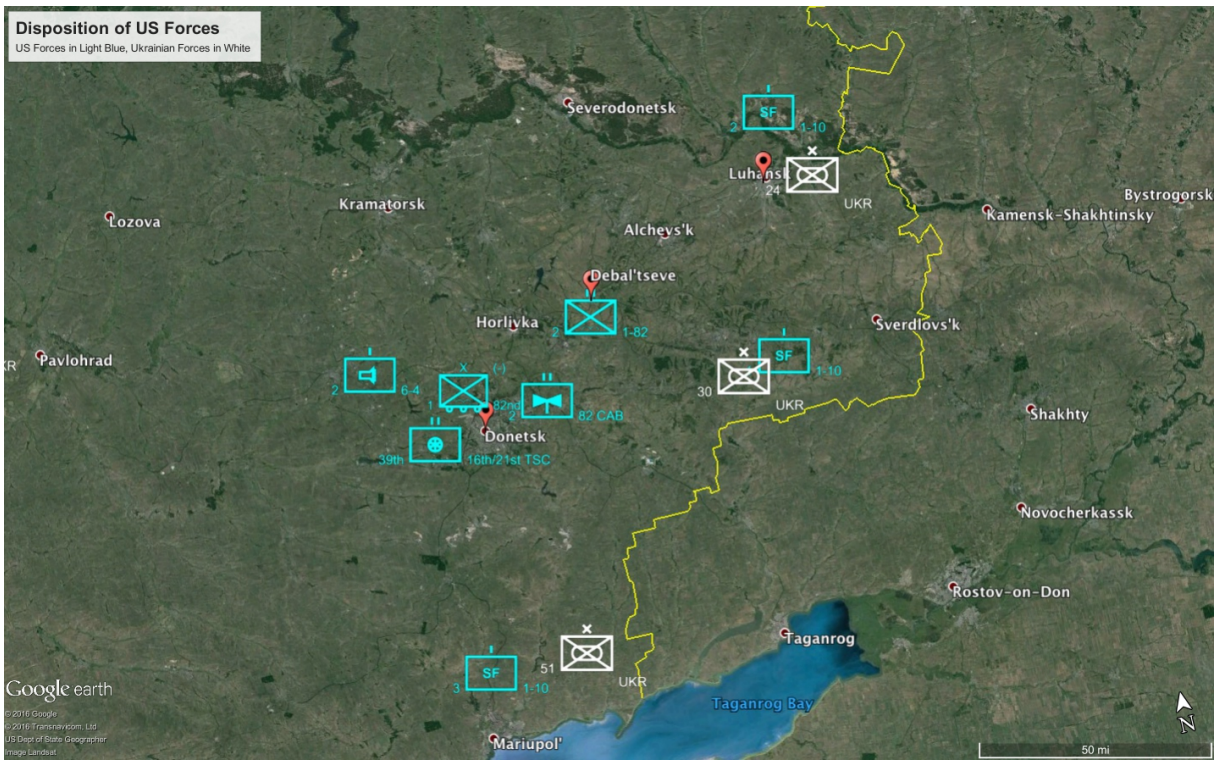

Figure 2: Deployment in eastern Ukraine. Most US forces are concentrated in Donetsk. Note the use of Special Forces to maintain distance between conventional US forces and the Russian border.

well after the proposed deployment time (see below). The airport building was destroyed and the air strip heavily shelled (see Figure 3), though this occurred in September 2014, 6 months after this scenario.

Figure 3: Donetsk Airport Showing Heavy Building Damage, Runway Cratering, and a Destroyed Plane

Timing

Fighting throughout eastern Ukraine intensified throughout May, as did the degree of Russian support and involvement. As with any counter-hybrid war, intervention at the earliest stages is the best way to counter the hybrid campaign. The imperative for speed was one of the main reasons for using an airborne infantry force, rather than a heavier Stryker or armored force. Given that the operation uses the fastest deployable unit,

Figure 4: Disposition of Ukrainian Forces, March 2014. Note the concentration of Ukrainian forces in the West, a legacy of the Cold War.

could it be reasonably expected to arrive and begin operations before the situation became much worse?

Several time factors play a role in determining the time between the beginning of the annexation of Crimea and the arrival of US forces in Donetsk. Based on what seem like reasonable default values and a range of uncertainty around those values, an expected deployment time of 15 days (plus or minus 3) is reasonable (see Figure 5. These time factors are the delay between the annexation of Crimea (our $t = 0$ time) and order for the 82nd to deploy, the time needed between the order to go and first plane to leave, the number of sorties needed to deploy the force, how many flights can be generated per hour, and any additional "friction".

Figure 5 shows a screenshot of an interactive calculator, available at http://ahalterman.shinyapps.io/DeploymentTimer/, showing the assumptions going into the predicted 15 day deployment time. Any of these parameters can be varied to change the estimated time. Some sliders allow a range of values to better quantify the inherent uncertainty in many of these estimates. In these cases, the calculator treats all values contained within the sliders as equally likely and simulates many possible outcomes, resulting in a distribution rather than single estimate in the right side graph. The calculator also returns the C-17

equivalents needed at peak load and compares that number to the total size of the C-17 fleet. Excessive values for this number should cause analysts to re-assess the parameters on the left.

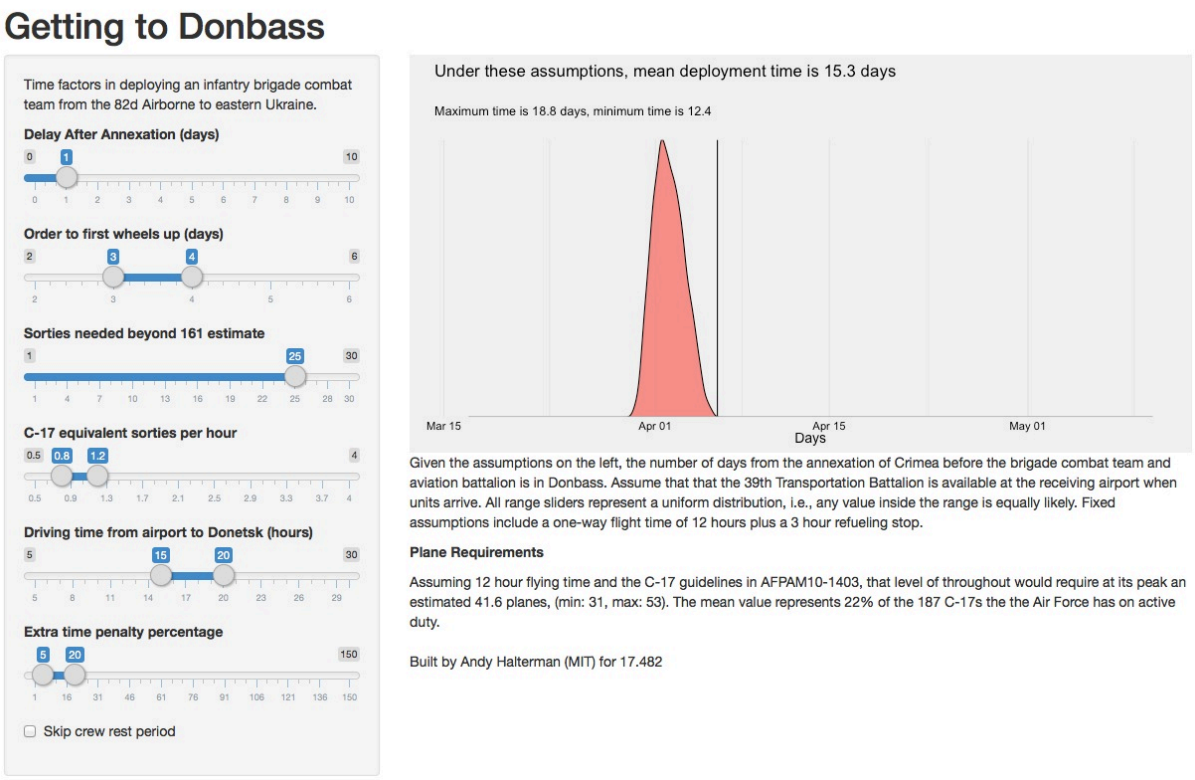

Figure 5: Estimated Deployment Times For 1st Brigade, 82nd Airborne. Vertical line is the date rebels seized buildings in Donetsk. Interactive version is available at http://ahalterman.shinyapps.io/DeploymentTimer/

Delay after annexation: My scenario assumes an unlikely degree of forward thinking and decisive action (foolhardiness?) from political leaders in making the decision to deploy forces to Ukraine. This parameter can be changed, but as the crucial assumption underpinning the campaign analysis, remains the most assumption-ridden and fiated.

Order to wheels up: The 82nd Airborne Division maintains a "Global Ready Response" capability with the ability to deploy worldwide within 18 hours. The forces needed in Ukraine are larger than those available through the Global Response Force battalion. And although speed is important for counter-hybrid operations, it is not as urgent as the tasks the GRF is designed to address. The time from order to when the first plane departs includes the time to mobilize or recall troops, to conduct mission planning and rehearsal (if rehearsal is needed), to prepare equipment, and to load the first plane. I assume that this is possible within

three to four days. The 25th Infantry Division has the ability to deploy a light or Stryker brigade combat team within 7 days (US Army 25th Infantry Division 2014, 4), but is on less of a rapid deployment schedule than the 82nd, as brigades in the 82nd train for rapid response in support for the GRF.

Number of additional sorties: A great advantage of infantry brigade combat teams is that they are much easier to move by air than any other type of brigade. The GAO estimates 141 sorties needed for an infantry BCT deployment, roughly half of what would be needed to move a Stryker brigade by air (2003). Specifically, "Deploying an Army light infantry brigade would require airlifting about 7,300 tons of materiel and about 3,800 personnel, requiring about 141 C-17 airlift sorties" (United States General Accounting Office 2003, 6–7). On top of that number are the flight to transport the aviation assets. Each air attack platoon with AH-64s comprises 4 aircraft, 27 personnel, and 4 Tricon containers/8 pallets (US Army 25th Infantry Division 2014). This load can fit on 2.5 C-17 equivalents. Moving a battalion of 24 aircraft should require an additional 15 sorties, resulting in an absolute minimum of 156 sorties. On top of this minimum, more flights may be needed because of less than optimal packing, the need to bring civil affairs troops, additional supplies, technicians, or other support staff. I assume that water and fuel for the force will be provided by the Ukrainian military. The initial several flights will be under-loaded, as outfitting a C-17 for a jump results in fewer soldiers fitting. A conservative estimate can be reached by adding a generous additional 30 flights.

Number of flights generated per hour: The time required for a force to deploy by air can be calculated in several ways. Analysts can start with the throughput of a base and the flight time, and work up to the total time needed. The throughput of the base can be calculated by accounting for the "parking space for aircraft refueling, maintenance capacity, and the ramp space at the airbase for storing and assembling the [BCT] equipment. All of these factors taken together are typically referred to as the *maximum on ground* (MOG) for the aircraft" (Vick et al. 2002, 21). Vick et al. (2002) in their work at RAND, move from the top down, starting with the number of flights that can be generated per hour and work backward into how this affects other parameters. Throughput is often a function of the number of planes the unloading airport can sustain at once because of limits on unloading space, fuel, and the integrity of the airstrip itself. Vick et al. (2002) use values of 1, 2, and 3 flights per hour as reasonable values. These values may be higher than what is reasonable: rudimentary airports in Rwanda and Uganda were only able to generate 0.5 flights per hour over a sustained period (Kuperman 2004, Appendix C), though more developed airports should be able to

support up to 4 per hour. The loading speed at the departure point also limits the number of sorties that can be generated per hour. During Operation Desert Storm, the 82nd Airborne was only able to generate 1 flight per hour (Vick et al. 2002, 21–22), though a greater availability of strategic airlift and much more experience with deployments after 13 years of war would probably greatly increased this speed by the spring of 2014.

Number of C-17 (equivalents) needed at peak: This term is not itself a parameter, but is rather the result of the sortie production per hour parameter and several hard-coded parameters. The sortie per hour parameter defines how many flights could be in the air at one time. The hard-coded parameters define how many sorties each C-17 can generate per 24 hours. The required throughput per day divided by the number of round trips each plane can fly per day produce the peak plane requirements for the operation. Air Force Pamphlet 10-1403: Air Mobility Planning Factors provides time requirements for C-17s: loading/fueling and unloading/fueling each require 3.25 hours (2011). Refueling en route takes approximately 3 hours, with personnel transports requiring more time than equipment transport flights as passengers must disembark during fueling. AFP 10-1403 also requires a 16.5 hour crew rest period between flights. I assume that the number of crews matches the number of planes, so flights will be limited by crew rest time. Note, as is clear from Figure 3, that the space to park C-17s in Donetsk during crew rest periods is limited, and the risk of small arms fire damaging parked planes is high. I assume that crews fly in an out of Donetsk and take their rest period at their refueling stop on their return flight in Germany or Spain.

Based on the default parameters I use in the analysis, the peak number of C-17s that would be needed during the airlift operation is around 60. This represents about 32% of the total C-17s on active duty in the Air Force. Although 32% perhaps does not seem excessive on face, it is the percentage of C-17s that were in usage at any given time during peak operations in the lead-up to Desert Storm. This analysis assumes that enough planes are available to allow maintenance time and to cycle out planes in need of longer term maintenance. This simplifying assumption becomes less tenable as the proportion of C-17s needed increases. One the other hand, while I adopt C-17 equivalent cargo loads as a unit of account as RAND and the US Army do (Vick et al. 2002, US Army 25th Infantry Division (2014)), other strategic airlift assets could be used, including the C-5 and C-130.

Friction: The final term in the speed calculation is an arbitrary delay parameter. Some degree of delay

should be expected in each of these steps, meaning that the most accurate assessment of timing should include a delay factor or friction. Each simulation adds an extra friction percentage taken from the range set by the sliders (in Figure 5, between 5% and 20%). This allows the analysis to be robust to some amount of unforeseen delay, expressed in terms of a percentage of the total operation.

Using relatively conservative values for all of these parameters results in time from annexation to complete deployment of around 16 days. The vertical line in Figure 5 marks the date when separatist rebels seized important buildings in Donetsk and throughout Donbass. Intervention after that point carries higher risks and a lower probability of success, as Russian forces and support increase after that point and threats to aircraft grow (as became obvious after a Ukrainian Air Force jet was shot down on approach to the Luhansk airport on June 14 and the destruction of MH-17 by an Buk surface-to-air missile on July 17).

Even with relatively conservative parameters and two separate ways of incorporating uncertainty, using range sliders and the friction multiplier, US forces could have arrived before major violence began if they had deployed immediately after the annexation of Crimea. By deploying this quickly they would have been able to disrupt the first stages of the hybrid campaign and would have had a much better chance of defeating the threat than if they had deployed months later.

Conclusion

The paper presents a non-sensationalist understanding of hybrid war, a strategy for countering it, and an example of how it would look in a hypothetical intervention into the most recent example of hybrid war. Several conclusions can be drawn from this study, both about the nature of hybrid war and how to combat it, but also about the specific ability of the US military to do so.

The first and most narrow finding of this study concerns about US infantry Brigade Combat Teams and their usefulness for counter-hybrid war. An infantry BCT is the best force for this mission, for the reasons I outline above. Its ability to project power into the areas outside the cities or to move between cities is crippled by the lack of organic transport in modern BCTs. The stationing of armored Humvees, Stryker vehicles, and MRAPs in Iraq and Afghanistan gave the illusion that infantry brigades can move themselves. In fact, infantry BCTs deploy with only enough mobility assets to move around a quarter of their personnel at one time. If Ukrainian forces, aviation assets, and special forces had not been available to secure the area

outside cities, the mission would not have been feasible with an infantry BCT.

The second conclusion of this paper is that hybrid war should be understood not as a wholly novel form of warfare, but rather as one comprised of several existing and relatively well understood components. Its central technique is to create ambiguity and uncertainty on the part of the defender in order to delay a response until the attacker's objectives become *fait accompli*. It generates this ambiguity by using deniable forces, mixing conventional and unconventional warfare, by using information operations to create confusion and doubt, and by using all in concert to create instability. Instability on its own can be enough to achieve the attacker's objectives, as was the case in eastern Ukraine, or it could be the opening phrase of a "New Generation" war. Information operations are an important component of this process, but hybrid war should be kept analytically distinct from most Russian hacking efforts.

The third point comes out of my understanding of hybrid war and how to counter it, and concerns the importance of speed in countering hybrid war. Hybrid war achieves its gains when victims of a hybrid war do not muster a response quickly enough to prevent the attacker from making gains, and cannot then muster the greater military and political power needed to reverse those gains once they are frozen in place. This scenario assumed rapid response, and this speed was crucial in achieving effects without large scale force.

Finally, the scenario reveals the gamble against conventional escalation is the heart of my strategy of counter-hybrid war. The intervening counter-hybrid force has to be large enough to ensure that it can defeat the hybrid threat, but not so large that it risks conventional escalation from the hybrid attacker. It also assumes that the objectives of the hybrid attacker are important enough to justify a hybrid war, but not so large that the attacking state would go to war to achieve them. If this assumption turns out to be a miscalculation, sending a US or NATO force to defend a country against a hybrid threat would only have the effect of risking direct fighting between US and Russian forces, a tremendously dangerous situation. Leaders considering the counter-hybrid war strategy I outline need to be very confident that they are not merely pushing the opponent to invade conventionally.

References

Altman, Dan. 2016a. "The Long History of "Green Men Tactics–And How They Where Defeated." *War on the Rocks*.

———. 2016b. "By Fait Accompli, Not Coercion: How States Wrest Territory from Their Adversaries."

Anderson, Noel. 2014. "Peacekeepers Fighting a Counterinsurgency Campaign: A Net Assessment of the African Union Mission in Somalia." *Studies in Conflict & Terrorism* 37 (11): 936–58.

Barnes, Julian E. 2016. "NATO Works to Adapt to More Ambiguous Warfare Techniques." *The Wall Street Journal*, Feb. 8.

Bērziņš, Jānis. 2014. "Russia's New Generation Warfare in Ukraine: Implications for Latvian Defense Policy." 2. National Defence Academy of Latvia Center for Security; Strategic Research. Policy Paper.

Boot, Max. 2013. "Political Warfare." Council on Foreign Relations, Policy Innovation Memorandum No. 33.

Calha, Julio Miranda. 2015. "Hybrid Warfare: NATO's New Strategic Challenge?" NATO Parliamentary Assembly 051 DSC 15 E.

Chekinov, Col. SG, and Lt. Gen. SA Bogdanov. 2013. "The Nature and Content of a New-Generation War." *Military Thought* 22 (4): 12.

Chen, Adrian. 2015. "The Agency." *The New York Times Magazine*, June 2.

Davis, John R. Jr. 2015. "Continued Evolution of Hybrid Threats: The Russian Hybrid Threat Construct and the Need for Innovation." *The Three Swords Magazine*.

France-Presse, Agence. 2015. "NATO Allies Brace for Russia's 'Hybrid Warfare'."

Galeotti, Mark. 2016. "Hybrid, Ambiguous, and Non-Linear? How New Is Russia's 'New Way of War'?" *Small Wars & Insurgencies* 27 (2): 282–301.

Gordon, Michael R., and Andrew E. Kramernov. 2014. "Russia Continues to Train and Equip Ukraine Rebels, NATO Official Says." *The New York Times*, November 3.

Greenhill, Kelly M. 2001. "Mission Impossible? Preventing Deadly Conflict in the African Great Lakes Region." *Security Studies* 11 (1): 77–124.

Institute for International Security Studies. 2014. "Chapter Five: Russia and Eurasia." In *The Military Balance*. Vol. 114. 1. 10.1080/04597222.2016.1127566.

———. 2016. "Chapter Five: Russia and Eurasia." In *The Military Balance*. Vol. 116. 1. 10.1080/04597222.2016.1127566.

Kofman, Michael. 2016. "Russian Hybrid Warfare and Other Dark Arts." *War on the Rocks*, March.

Kofman, Michael, and Matthew Rojansky. 2015. "A Closer Look at Russia's 'Hybrid War'." *Wilson Center, Kennan Institute, Kennan Cable*, no. 7.

Kuperman, Alan J. 2004. *The Limits of Humanitarian Intervention: Genocide in Rwanda*. Brookings Institution Press.

Kyiv Post. 2014. "Armed Pro-Russian Extremists Launch Coordinated Attacks in Donetsk Oblast, Seize Regional Police Headquarters, Set up Checkpoints," April 12.

Landau-Wells, Marika. 2008. "Capital Cities in Civil Wars: The Locational Dimension of Sovereign Authority." Development Studies Institute, London School of Economics; Political Science, Occasional Paper 6.

Lavrov, Anton. 2014. "Russian Again: The Military Operation for Crimea." In *Brothers Armed: Military Aspects of the Crisis in Ukraine*, edited by Colby Howard and Ruslan Pukhov, 135–86. Eastview Press.

Limnéll, Jarno. 2016. "The Use of Cyber Power in the War Between Russia and Ukraine." *Council on Foreign Relations: Net Politics*.

Mearsheimer, John J. 1982. "Why the Soviets Can't Win Quickly in Central Europe." *International Security* 7 (1): 3–39.

Posen, Barry R. 2013. *Inadvertent Escalation: Conventional War and Nuclear Risks*. Cornell University Press.

Puyvelde, Damien Van. 2015. "Hybrid War – Does It Even Exist?" *NATO Review*.

Reuters. 2015. "U.S. to Pre-Position Tanks, Artillery in Baltics, Eastern Europe," June.

Roth, Andrew, and Sabrina Tavernise. 2014. "Russians Revealed Among Ukraine Fighters." *The New York Times*.

Saunders, Paul J. 2016. "Why America Can't Stop Russia's Hybrid Warfare." *The National Interest*.

Seibert, Bjoern H. 2007. "African Adventure?: Assessing the European Union's Military Intervention in Chad and the Central African Republic." MIT Security Studies Program.

Shlapak, David A, and Michael W Johnson. 2016. "Reinforcing Deterrence on NATO's Eastern Flank." RAND Corporation.

Simmons, Katie, Brue Stokes, and Jacob Poushter. 2014. "NATO Publics Blame Russia for Ukrainian Crisis, but Reluctant to Provide Military Aid in Russia, Anti-Western Views and Support for Putin Surge." Pew Research Center.

Spaulding, Hugo. 2015. "Putin's Next Objectives in the Ukraine Crisis." *Institute for the Study of War: Backgrounder*, February.

Swinton, Ernest Dunlop. 1916. *The Defence of Duffer's Drift*. United States Infantry Association.

United States Air Force. 2011. "10-1403: Air Mobility Planning Factors." http://static.e-publishing.af.mil/production/1/af_a3_
1403/afpam10-1403.pdf.

United States Army Special Operations Command. 2014. "Counter-Unconventional Warfare."

United States General Accounting Office. 2003. "MILITARY TRANSFORMATION: Realistic Deployment Timelines Needed for Army Stryker Brigades."

US Army 25th Infantry Division. 2014. "25th Infantry Division Contingency Playbook."

US Department of the Army. 2005. "FM 3-05.302: Tactical Psychological Operations Tactics, Techniques, and Procedures."

US Joint Chiefs of Staff. 2014. "Joint Publication 3-13: Information Operations."

Vick, Alan J, David T Orletsky, Bruce R Pirnie, and Seth G Jones. 2002. *The Stryker Brigade Combat Team: Rethinking Strategic Responsiveness and Assessing Deployment Options*. Rand Corporation.

Voice of America. 2014. "NATO Recon Shows 40,000 Russian Troops, Hardware on Ukraine Border," April 10.