

Hassling: How States Prevent a Preventive War*

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Abstract

Low-level military operations outside of war are pervasive in the international system. These activities have been viewed as destabilizing by both academics and policymakers, as miscalculations or missteps in conducting low-level operations can risk escalation to war. I show the opposite can be true: these operations can prevent escalation to a greater war. I examine a type of low-level conflict that I call “hassling” in the common framework of bargaining and war. The critical feature of hassling is that it weakens a targeted state. I find that when a rising power rules out peaceful bargains, hassling the rising power can prevent a preventive war, with efficiency gains for those the involved states. This intuition is formalized in a dynamic model of conflict and is explored through examinations of Israel’s Operation Outside the Box (2007), the United States’ involvement in Iraq (1991–2003), and Russia’s operations in Ukraine (beginning in 2014).

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“Heavy as they are, the costs of action must be weighed against the price of inaction. If Saddam defies the world and we fail to respond, we will face a far greater threat in the future... [M]ark my words, he will develop weapons of mass destruction. He will deploy them, and he will use them. Because we’re acting today, it is less likely that we will face these dangers in the future.”

Bill Clinton on Operation Desert Fox, December 16, 1998

1 Introduction

Interstate war is a rare event. Limited costly military operations, however, are pervasive in international politics. There are many contemporary examples. Pakistan sponsored numerous terrorist operations in India and Afghanistan. Israel bombed a developing Syrian nuclear reactor (2007) and, with the U.S., deployed the Stuxnet virus to destabilize Iranian centrifuges (discovered in 2010). Iran supported Palestinian liberation groups and Shia Special Groups in the U.S.-Iraq War. Russia conducted cyberattacks against Estonia (2007). And the U.S. conducted a limited strike against Saddam’s weapon of mass destruction (WMD) facilities in Operation Desert Fox. As these examples illustrate, both strong and weak states frequently conduct costly military operations using a wide range of military tools and degrees of force.

Why do states undertake costly limited military operations? There are multiple plausible reasons, one of which I will focus on here. States sometimes undertake costly and destructive military operations aimed at undermining a target’s military capabilities in the pursuit of a peaceful settlement. I term these actions “hassling.” For example, when the United States bombed Iraq in 1998 during Operation Desert Fox, it did not result in regime change, policy concessions, or the complete destruction of Saddam’s arsenal and weapons facilities, but it

did degrade Saddam’s military capabilities and, for a time, prevented the need for a more robust military response. As I define it, hassling serves an important function: it provides a solution to or delays the commitment problem opposing states face when one state is rising or declining in power (Fearon, 1995; Powell, 2006). Hassling thus allows states to prevent a preventive war.

I present a theory that incorporates hassling into the common framework of bargaining and war. States may choose to resolve their issues diplomatically (peace), enter a decisive conflict that resolves the political issue at the heart of the crisis (war), or conduct low-level operations that undermine the other state’s capabilities and affects but does not end interactions between parties (hassling). With these available actions, when states are unable to reach peaceful bargains, hassling can prevent war. In this paper, I focus on the role of hassling in the context of a rising power.¹ When a state faces a rising power, a peaceful bargain may fail to exist because the rising power cannot commit to not exploit its opponent in the future; as a result, the non-rising state may find it in its interest to initiate a preventive war today rather than make concessions to a more powerful adversary in the future (Levy, 1987; Fearon, 1995; Powell, 2006). In my model, the non-rising power now has another option: it can hassle its opponent in order to slow its rise to be within an acceptable level. In a dynamic international system, hassling can function like a relief valve — as states rise and fall and alliances shift, hassling may be the only way to diffuse an unstable system and prevent a conventional or nuclear war. I illustrate this point formally and show that in settings where peaceful equilibria do not exist, an equilibrium where one state hassles the other can exist and is mutually preferred to war.

For hassling to prevent war, three conditions must be in place. First, states must be unable to reach a peaceful equilibrium. This condition can arise when one state, through economic

¹Similar to Fearon (1995) and Powell (2006), so long as State A believes State D is more likely to win a war in the future relative to winning a war today, then State D is classified as a “rising power.”

growth, weapons development, or the possibility of new alliances, is a rising power, and the resulting commitment problem rules out a peaceful political equilibrium.² Second, hassling must be effective at slowing the rising power's rise. Third, hassling must be relatively inexpensive to implement and to experience. When the first condition does not hold, states can reach a peaceful bargain through diplomacy, making hassling unnecessary. When the second or third condition does not hold, hassling is suboptimal and either the non-rising state finds an alternate way to weaken the rising power, such as through sanctions, arming, or containment (McCormack and Pascoe, 2017; Coe, 2018), or else the non-rising state will go to war.

As an empirical contribution, the intuition that hassling can prevent a preventive war is borne out in several examples, including Israel's Operation Outside the Box, a limited air raid on Syrian nuclear facilities in 2007; U.S. operations in Saddam Hussein's Iraq between 1991 and 2003; and Russia's handling of Ukraine after the Euromaidan Revolution. In all three cases, evidence suggests that hassling was conducted in an attempt to weaken the targeted state and avoid a dramatic power shift. Thus, while limited military operations are often classified as revisionist or escalatory, this paper finds evidence that such operations can, in some cases, actually prevent war (Schultz, 2010; Mazarr, 2015). Additionally, the model explains several notable or unexpected features of these operations, including the following: why, after Operation Outside the Box, Israel secretly reached out to Assad to say that Israel was prepared to keep quiet about the strike; why the United States eventually stopped hassling Iraq in favor of the 2003 invasion; and why Russia invaded Crimea but used proxy actors in Eastern Ukraine.

As a technical contribution, the modeling technology deployed here builds on existing work in an attempt to better describe what occurs in the real world. In my model, hassling is a

²Hassling can prevent war when issue indivisibility, information asymmetry, and a difficult policymaking environment rule out peace equilibria, as shown in the Online Appendix.

flexible, stand-alone action outside of war and peace, where in hassling a state deliberately “pulls-its-punches” as to not enter into a decisive conflict. That states have the option to select multiple types of conflict actions that do or do not lead to a decisive war effectively describes a case like Operation Desert Fox or Operation Outside the Box, where, in the latter, the pre-operation letter to pilots explicitly stated that “[t]he intention is for this action... to minimize the potential for broader war” (Opall-Rome, 2018). Of course, this is not the only model to show that states may use costly activities to slow a rising power as a substitute to a preventive war (McCormack and Pascoe, 2017; Coe, 2018). Outside of substantive differences, this model captures that states can implement a wide range of possible actions to slow a rising power by making the degree of hassling endogenous.

I proceed as follows. In Section 2, I define hassling and describe how hassling can be used to prevent wars. In Sections 3 and 4, I present a model where one player is a rising power and the other player can use hassling against the rising power. I use the model to identify situations in which (1) peaceful equilibria do not exist, (2) an equilibrium where one player uses hassling to curb the rising power does exist, and (3) the equilibrium with hassling is mutually preferred to war. In Section 5, I describe how the model can explain Russia’s hassling of Ukraine (2014-2018). In Section 6, I discuss extensions and limitations to the model, and, in Section 7, I conclude.

2 A Theory of Hassling

2.1 Defining Hassling

In 2009, Iran was pursuing nuclear weapons; in the standard logic of commitment problems, Iran was a rising power, and the U.S. and its allies were concerned over what a nuclear-armed Iran would mean for their political future. In response, the United States and Israel deployed what became known as the Stuxnet computer worm, that destroyed a limited

number of Iranian centrifuges over the course of many months. In launching Stuxnet, the goal of Israel and the U.S. was not regime change or the wholesale destruction of the Iranian nuclear program. Instead, this costly and destructive operation, conducted in the shadow of commitment problems, was part of a prolonged effort by the U.S. to slow Iran's weapons development while working to reach a peaceful settlement over Iran's nuclear program. And, while Stuxnet was discovered in 2010, eventually the U.S. was successful and an explicit bargain, what came to be known as the "Iran nuclear deal," was made.

I define hassling as the limited use of costly and destructive military technology with the intent of blunting power shifts to allow for bargaining to occur. The example of Stuxnet meets all the criteria defined here. Stuxnet was a limited operation that was costly to build and destructive to its target. And, before it was discovered, Stuxnet succeeded in blunting – not destroying – Iran's progress towards becoming a nuclear power, thus moderating Iran's rise. And finally, because Stuxnet was not a decisive blow to Iran's program, it maintained the possibility for negotiations over the program and eventually allowed for an explicit negotiated settlement.

A similar example that would not be hassling was the 2003 U.S. invasion of Iraq. This invasion was conducted around similar concerns of commitment problems and could be considered a "limited" use of military means.³ However, the 2003 invasion was conducted to insure that Iraq could not develop WMDs, thus destroying – not blunting – Iraq's future power shift, and the invasion eliminated the possibility of future peaceful negotiations with the Baathist government by overthrowing it. What made Stuxnet hassling and the 2003 Iraq invasion not hassling was not a matter of scale or tactics, but rather it was the intent of the operation.

³Because the United States could have deployed more military force, the 2003 invasion would fall under many definitions as limited war. I describe this more in Section 2.4

Hassling can describe a range of limited operations outside of actions against WMD production, including providing third-party support to insurgent groups. For example, Russia's recent operations in Ukraine could qualify as hassling. Since 2014, Russia has undertaken a series of operations, including sending military personnel and weapons to separatist militants in Eastern Ukraine (Mitrokhin, 2015). If these activities were conducted with the intent of preventing Ukraine from strengthening connections and alliances with the West – a proposition put forward in Mearsheimer (2014) – then these activities could be interpreted as Russia hassling Ukraine to slow its (potential) rise while still allowing for negotiations between other political matters of Russian and Ukrainian interest. However, supporting militants is not always hassling, as U.S. operations in Guatemala in 1954 demonstrate. At the time, the U.S. was alarmed by the actions of Guatemalan president Jacobo Árbenz, who appeared to be leading his country towards communism. In response, the United States provided arms, funds, and training to Guatemalan rebels, who overthrew Árbenz and installed right-wing dictator Castillo Armas. In this case, the U.S. deployed similar limited means, but deployed these means with the intent to overthrow Árbenz rather than to pursue future negotiations.

2.2 Features of Hassling

Hassling has three key features. First, hassling is costly to both the target and initiating state. Second, hassling weakens (but does not destroy) the targeted state's military capabilities. Third, hassling is not decisive, thereby allowing the hassling and targeted states to continue bargaining.

Hassling creates immediate costs for all states involved. The hassling state incurs the costs that are needed to implement the hassling. This could be the costs of an aerial bombing campaign, building a cyberattack, or the costs of providing arms to rebels. The targeted state also faces costs. Being the target of terrorist or militant attacks fosters political

instability and destroys lives and capital. Even relatively benign forms of hassling, like Russian information operations in Ukraine that accuse Kiev of war crimes, undermine the targeted state's government and may require costly mitigation (Reid, 2015, pp. 283-284).

Hassling weakens the targeted state's future wartime capabilities. Importantly, this is not the wholesale destruction of the targeted state's ability to rise – which is typically how preventive war is modeled⁴ – but rather an attempt to dampen a rising power's rise in ways that make greater escalation unnecessary. Hassling can weaken the targeted state's capabilities through at least three channels. First, hassling can degrade the targeted state's interstate military capabilities. The Stuxnet Worm degraded Iranian centrifuges. As another example, hassling could indirectly degrade a target; if Israel is combating Iranian backed militants, then Israel will have fewer resources to prepare for a conventional confrontation with Iran.

Second, hassling can slow the targeted state's economic growth. This can occur mechanically by destroying capital or by denying the targeted state access to resources, or indirectly through deterring foreign investment. For example, Russian hassling in Ukraine has denied Kiev tax revenues from its eastern regions under siege, has prevented Kiev from developing the hydrocarbon extraction in Eastern Ukraine, and has (likely) reduced foreign direct investment in Ukraine (Melkozerova, 2018).

Third, hassling can deter future alliances. For example, Russian activities in Ukraine creates complications for Ukraine's would-be allies. Despite the pro-Western government that came to power in Ukraine in 2014, Western states and NATO have not embraced Ukraine. A natural reason for this hesitation is that doing so would put NATO in direct conflict with Russia (Mearsheimer, 2014). Additionally, hassling can reduce the domestic demand for new alliances. Russian anti-NATO information operations in Ukraine have attempted to foster

⁴See Fearon (1995) and Powell (2006) as examples.

domestic hostility towards NATO (Reid, 2015, pp. 283-284).

Finally, hassling is conducted to maintain opportunities to bargain. In other words, during or after hassling, states can still come to the negotiating table or still escalate to war. For example, when Pakistan supports militants that conduct terror attacks in India, India still faces a menu of possible policy responses, including diplomacy and war. This is in contrast to, Iraq's invasion of Kuwait, where following the successful invasion, Kuwait was under Iraq's control and there was no possibility of future negotiations between the two countries. Additionally, as this point highlights, it would be imprecise to label specific tactics like precision strikes against weapons facilities as "hassling" because these tactics could also be used in wartime to secure political aims.

It is worthwhile mentioning that while this paper emphasizes instances of hassling occurring after the Cold War, by the definition above, hassling certainly existed before this point. State-sponsored piracy in the 1500s and 1600s could qualify as hassling, as could France supporting American revolutionaries during their war of independence. While outside the scope of this paper, extractive economic and political institutions could be viewed as a form of hassling (Acemoglu and Robinson, 2012). However, in the international arena, two factors may make hassling particularly prevalent in contemporary times. First, the proliferation of the technology used for precision, drone, and cyber attacks make hassling fairly cheap and accessible. Second, the high costs of war between nuclear-nuclear or nuclear-non-nuclear dyads may encourage states to use low-level operations.

2.3 Hassling Can Prevent Preventive Wars

Hassling is costly, destructive, and only holds the door open to negotiations rather than attempts to resolve the issue. So why would states ever hassle? One answer is that states hassle because they are "stuck" in an inefficient equilibrium. This is unsatisfying because if

there is a mutually improving equilibrium, some combination of negotiations and third-party mediation could plausibly move states out of ex-post inefficient equilibria.

Rather, I consider hassling in the context of what other scholars have identified as bargaining failures, or cases where peaceful political bargains do not exist. In this paper I primarily consider hassling in the context of a rising power. Similar to foundational research ([Fearon, 1995](#); [Powell, 2006](#)), I show that an expected shift in power may rule out the existence of an ex-post efficient peaceful equilibrium; past research suggests that in this setting, states will enter into a preventive war. However, in the context of a rising power, when hassling is a possible course of action, a hassling equilibrium can exist where the non-rising power hassles the rising power, and all parties prefer this hassling equilibrium to going to war.

This is the first paper to discuss and formally show that limited military operations can serve as a Pareto improving alternate to war within a broad range of settings where bargaining failures exist.⁵ This is in contrast to existing studies like [Schultz \(2010\)](#) that suggests states do not bargain out of costly limited military operations so long that they remain covert. The findings here differ from those in [Schultz](#) because this paper considers fundamentally different circumstances: I consider settings where peaceful equilibria are ruled out by factors like dynamic shifts in actors' capabilities. Additionally, [Schultz](#) models operations where attribution is uncertain (such as covertly supporting rebels), while this paper speaks to limited military operations where attribution is known or partially known.

That hassling, a costly political activity, can prevent a preventive war, has similarities to [McCormack and Pascoe \(2017\)](#) and [Coe \(2018\)](#) on sanctions and arming. However, this paper is substantively different in that it characterizes and explores a phenomena in international relations – limited military operations that produce shifts in capabilities that

⁵Notably, I am not the first to make the observation that strikes against WMD facilities can resolve commitment problems ([Reiter, 2005](#); [Fuhrmann and Kreps, 2010](#)).

allow for negotiations – that is neither well defined nor well explored. This paper is also theoretically different; treating hassling, sanctions, and arming as similar kinds of modeling technology, this paper allows the level of hassling to be endogenous rather than exogenously fixed.

This paper also complements the work on signaling in the bargaining process. For example, [Slantchev \(2011\)](#), discusses how military threats serve as signals of intent or commitment during bargaining. While some types of threats would not be classified as hassling (such as moving warships or troops), other threatening behavior certainly would be (such as engaging in limited bombing runs). Thus, this paper offers a new justification for low-level military operations outside of signaling, demonstrating that low-level operations are useful outside of broadcasting intent or capabilities in environments with incomplete information and uncertainty.

The theory that hassling can prevent preventive wars has fundamental empirical implications for the relationship between power and conflict. To date, the empirical relationship between power shifts and preventive wars is controversial ([Reiter, 1995](#); [Lebow and Valentino, 2009](#); [Lemke, 2003](#); [Bell and Johnson, 2015](#)). The theory here illustrates that in cases of hassling, power shifts could still lead to preventive wars, but these preventive wars may not ultimately occur because there is a less costly option (hassling). This paper suggests that any perceived dearth of preventive wars may not indicate that power shifts do not matter, but rather may indicate that states are relying on hassling as a substitute to preventive war. Additionally, as I describe in the Online Appendix, this paper includes a discussion of how hassling may introduce measurement or interpretation problems in estimating expected power shifts (as done in [Bell and Johnson \(2015\)](#)) or in using wartime success to estimate military capabilities (as done in [Carroll and Kenkel \(2016\)](#)).

2.4 Positioning Hassling Relative to Other Types of Conflict

Hassling can be viewed as a type of limited war. Limited war is commonly characterized by one (or multiple) states deliberately deploying limited military means in a confrontation (Corbett, 1988; Powell, 2015). In a limited war, states “pull their punches” and do not use their full force because a limited arsenal or a certain amount of finesse can be as (if not more) productive for them in the conflict. Under these general terms, because hassling also uses limited means, it can be interpreted as a type of limited war. Additionally, under contemporary definitions of preventive war, hassling can sometimes also be viewed as a type of preventive war. For example, Levy (2008) defines preventive war as “a state strategy to use military force to forestall an adverse shift in the distribution of power between two states.” When hassling is used to prevent a preventive war, it is consistent with the definition in Levy.⁶

However, hassling is not equivalent to limited war, preventive war, or both. To illustrate this point, consider Operation Desert Fox and the 2003 U.S. Invasion of Iraq. To the best of my knowledge, no characterization of limited war, preventive war, or both would exclude the 2003 U.S. Invasion of Iraq.⁷ However, as described earlier, this invasion would not be hassling. In contrast, Operation Desert Fox was both hassling and a limited preventive war. In summary, not all limited and preventive wars qualify as hassling.

There is theoretical value in delineating hassling and preventive war. While using limited operations to prevent commitment problems is conceptualized in Levy (2008) and others, it is not theoretically evaluated or formalized as its own concept. Considering this topic formally is particularly important because nearly every other model of commitment problems and preventive conflict has the preventive conflict terminate the game rather than allow for

⁶For a discussion of some other definitions of preventive war that would also include some forms of hassling, see Levy (2011).

⁷Other sources discussing limited wars have applied the term to the Korean War (Kim, 2012), the Iran-Iraq War (Sigler, 1986), and World War II (Schelling, 1957) – I conjecture that the 2003 U.S. invasion was more “limited” than many of these conflicts.

continued bargaining.⁸

Additionally, sometimes preventive war theory cannot explain hassling. The preventive war literature considers limited conflict in cases when commitment problems are the cause of a potential war (Levy, 2008; Renshon, 2006; Doyle, 2008; Levy, 2011). But, as I discuss below and in the Online Appendix, it is also the case that a state might resort to hassling when the risk of war is caused by uncertainty, issue indivisibility, or a challenging policymaking environment. This means that my theory predicts hassling in cases that are outside of the scope conditions for a limited preventive war. To the best of my knowledge, this is a novel theoretical contribution.

Admittedly, the delineation between hassling and other forms of conflict is not always clean because it relies on knowing whether the state conducting the low-level operations intended to blunt (hassling) or to altogether destroy (not hassling) its target's capabilities. For example, beginning in 1980, the U.S. funded Afghan militants fighting the Soviet-backed government of Afghanistan, and, in 1988, the Soviet Union withdrew its troops from Afghanistan. This could have been a limited war for the duration of the conflict, or what started as hassling could have evolved into something more decisive; without knowing the decision making process, these are observationally equivalent. While I cannot resolve this delineation problem in all cases, this paper can speak to cases where the intent does not appear to be the wholesale destruction of capabilities.

⁸As examples of this, see Fearon (1995), Powell (2006), Bas and Coe (2012), the main model in Debs and Monteiro (2014), and Bas and Coe (2016). Additionally, models of limited war similarly treat the (limited) conflict action as a game-ending move – see Powell (2015).

3 Model and Payoffs

3.1 Game Structure

Two states, A and D, are in a full-information, infinite-horizon crisis bargaining game where D is a rising power. State D begins the game in control of a fully divisible asset (or has proposal power for a policy) with per-period normalized value of 1. So long that D has not lost in a war, D decides the share of the asset that A receives. This game structure resembles the infinite horizon games explored in [Fearon \(1995\)](#) and [Powell \(1999\)](#), with the crucial modification that State A can hassle State D. Of course, this is not the only modification to these works; for example, the model here also assumes that the rising power has proposal power.⁹

I assign $t \in \{1, 2, 3, \dots\}$ to denote periods. If period $t - 1$ did not experience war, then period t begins with D making A an offer of $x_t \in [0, 1]$. A responds by selecting a level of hassling $h_t \in [0, 1]$. Following the offer and hassling choices, both states simultaneously choose to “accept” the offer-hassling pair or to declare “war.” If both states accept in period t , the game moves forward to period $t + 1$. If either state declares war, then the states fight and the outcome of war is determined probabilistically. After war, states continue receiving their war payoffs but they no longer make offers or engage in hassling. Referring back to the earlier definitions, this war could be a limited war or a total war; the salient feature of war as modeled here is that states will fight and the political issue will be resolved. Under this game form, hassling is not a crisis-ending move, but declaring war is.

The function $P(\mathbb{1}(t > 1), h_{t-1})$ defines the probability that A wins in war in period t , where $\mathbb{1}(\cdot)$ is the indicator function. The function P is a mapping from whether the game is in the

⁹By virtue of the equilibrium assumptions and the model having states declare war simultaneously (both described below), letting A have proposal power would not change any of the existence results below as the proofs of Propositions 2 and 4 illustrate.

first period or not and the previous period's level of hassling, or $P : \{0, 1\} \times [0, 1] \rightarrow [0, 1]$. To capture the impact of hassling on D's future wartime capabilities, more hassling today helps A's likelihood of military victory tomorrow, or, for $h_{t-1} \leq h'_{t-1}$, $P(1, h_{t-1}) \leq P(1, h'_{t-1})$. Additionally, A does not hassle D before the game begins, making $h_0 = 0$. To capture D as a rising power, I assume that there is a positive exogenous¹⁰ shock to D's wartime capabilities between periods 1 and 2, and that there is no level of hassling that can fully reverse D's rise. In other words, even with hassling, A is less likely to win a war in periods $t \in \{2, 3, 4, \dots\}$ than in period $t = 1$. I formalize this assumption as "Assumption 1." While Assumption 1 is a technical convenience, it also "stacks the deck" against the existence of hassling equilibria by making hassling less appealing to State A than it would be if it could reverse D's rise altogether.

Assumption 1: $P(1, 1) \leq P(0, 0)$.

Both hassling and war create costs. War generates a fixed cost for both states, with $c_A > 0$ and $c_D > 0$ denoting A's and D's costs of war. Following Fearon (1995), I model the costs of war as a one-time cost. The cost of hassling for both A and D is a function of the level of hassling, with functions $K_A(h_t)$ and $K_D(h_t)$ denoting A's and D's per-period costs of hassling. More hassling creates more costs for both states, and a greater level of hassling creates marginally greater costs than a lower level. Formally, $K_A(h_t)$ and $K_D(h_t)$ are twice differentiable, weakly increasing, and weakly convex, or $K'_A(h_t) \geq 0$, $K''_A(h_t) \geq 0$, $K'_D(h_t) \geq 0$, and $K''_D(h_t) \geq 0$. There are no costs if A chooses not to hassle, or $K_A(0) = 0$ and $K_D(0) = 0$.

I also assume that the costs of hassling cannot exceed the costs of war. This assumption

¹⁰Previous research has challenged the notion of an exogenously rising power (Debs and Monteiro, 2014; Spaniel, 2019). In the Online Appendix, I include a model where a state endogenously invests in technology that makes it rise.

embraces the treatment of hassling as being limited relative to war. While it is possible to imagine some forms of hassling that create costs that exceeds the costs of a limited war, I will not consider these technologies. Because hassling is not a game-ending move, to capture the idea that hassling is less costly than war means that war's one-time costs of c_A are greater than the present value of a prolonged hassling campaign $K_A(1)/(1 - \delta)$.

Assumption 2: $\frac{K_A(1)}{1-\delta} \leq c_A$ and $\frac{K_D(1)}{1-\delta} \leq c_D$.

3.2 Expected Utilities

The expected payoffs are summarized below. In period $t \geq 1$, after states select an offer-hassling (x_t, h_t) pair, the payoffs depend on whether states accept or go to war.

If either state declares war, then states go to war. State A's present value of going to war in period t is $-c_A + P(\mathbb{1}(t > 1), h_{t-1})/(1 - \delta)$, and State D's present value of going to war in period t is $-c_D + (1 - P(\mathbb{1}(t > 1), h_{t-1}))/(1 - \delta)$, where δ is the common discount factor. If both states "accept" the offer pair (x_t, h_t) , then the game proceeds to period $t + 1$. Following "accept-accept" in period t , State A receives payoff $x_t - K_A(h_t)$, and State D receives payoff $1 - x_t - K_D(h_t)$.

4 Equilibria

4.1 Equilibria Types

Below I reference several types of equilibria. In the first type of equilibria, war occurs.

Definition: In a *War Equilibrium*, in some period $t \in \{1, 2, 3, \dots\}$, A, D, or both declare war.

In the second type of equilibria, neither hassling nor war occurs.

Definition: In a **Peace Equilibrium**, for each $t \in \{1, 2, 3, \dots\}$, D offers $x_t \in [0, 1]$, A selects $h_t = 0$, and both players accept.

In the third type of equilibria, D makes offers to A , A sometimes hassles, and both parties always accept.

Definition: In a **Hassling Equilibrium**, for each $t \in \{1, 2, 3, \dots\}$, D offers $x_t \in [0, 1]$, A selects some $h_t \in [0, 1]$ (with $h_t \in (0, 1]$ for at least one t), and both players accept.

I will at times refer to Peace Equilibria and Hassling Equilibria as "Non-War Equilibria."

Before moving into the existence conditions, it is worthwhile to discuss where the analysis is going. To date, the political science literature has been concerned with when Peace Equilibria do not exist because, as modeled in the past, this is when war occurs. To show that hassling can prevent war, I will show that a Hassling Equilibrium can exist when Peace Equilibria do not exist. In doing so, I demonstrate that sometimes states cannot form a peaceful bargain but can avoid war through hassling. By analyzing where Hassling Equilibria exist and Peace Equilibria do not, I am not simply showing that an ex-post inefficient equilibrium with hassling can exist in an infinite horizon dynamic game, which, based on the folk theorems, would be unsurprising. Put another way, I am not claiming that Peace and Hassling Equilibria can exist simultaneously and so we may expect hassling to sometimes occur in the real world; rather, I conjecture that when both Equilibria types exist, Peace Equilibria will probably be realized.¹¹ Instead, I identify the conditions where

¹¹To describe why, we might expect ex-post efficient equilibria (Peace Equilibria) to be particularly appealing and therefore "focal." For another, third-parties often try to end conflicts and may encourage equilibrium selection into Peace Equilibria. For another, in many cases Hassling Equilibria are Pareto dominated by Peace Equilibria, implying that a peaceful equilibrium constitutes a utility improvement

no Peace Equilibria exist and at least one Hassling Equilibrium does exist, as when these conditions hold, hassling is the only substitute to a preventive war.

4.2 Existence Conditions

Here I present the existence conditions for subgame perfect War, Peace, and Hassling Equilibria. This discussion will be brief and mostly technical. I delay a discussion of comparative statics until after I present all existence conditions.

A War Equilibrium always exists. When both A and D declare war, there are no unilateral deviations that generate better outcomes because both states would still be at war.¹²

***Proposition 1:** A War Equilibrium, with war occurring in some period $t \in \{1, 2, 3, \dots\}$, always exists.*

Proposition 1 facilitates the existence of Non-War Equilibria. The Non-War Equilibria below rely on a strategy where deviations from an offer-hassle schedule results in the "punishment" of both parties committing to war. Because both states declaring war in any period is a subgame perfect equilibrium, both states declaring war after a deviation from on-path play is a credible off-path punishment.

Under select conditions, Peace Equilibria can be sustained through off-path punishments. Proposition 2 replicates the well-acknowledged finding that the threat of a rising power can lead to a preventive war (Fearon, 1995; Powell, 1999).

for both actors. This all being stated, these conjectures ultimately boil down to an equilibrium selection argument, which should always be taken with caution.

¹²In the Online Appendix, I show that ruling out the possibility of the war-war equilibrium does not change the substantive result that hassling can prevent a preventive war.

Proposition 2: *If and only if*

$$1 \geq \frac{P(0,0) - \delta P(1,0)}{1 - \delta} - c_A - \delta c_D, \quad (1)$$

then a Peaceful Equilibrium exists.

Proof: See Online Appendix.

Under select conditions, Hassling Equilibria can also be sustained through off-path punishments.

I define these conditions in Proposition 3.

Proposition 3: *Let action pairs $(x_1, h_1), (x_2, h_2), \dots$ with $h_t > 0$ for at least one $t \in \{1, 2, \dots\}$ denote on-path equilibrium play. These actions can constitute a Hassling Equilibrium if the following constraints hold:*

$$\sum_{i=1}^{\infty} \delta^{i-1} (x_i - K_A(h_i)) \geq \frac{P(0,0)}{1 - \delta} - c_A, \quad (2)$$

$$\sum_{i=j}^{\infty} \delta^{i-2} (x_i - K_A(h_i)) \geq -\delta^{j-2} c_A + \sum_{i=j}^{\infty} \delta^{i-2} (P(1, h_{j-1})) \quad \forall j \in \{2, 3, 4, \dots\}, \quad (3)$$

$$\sum_{i=1}^{\infty} \delta^{i-1} (1 - x_i - K_D(h_i)) \geq -c_D + \frac{1 - P(0,0)}{1 - \delta}, \quad (4)$$

$$\sum_{i=j}^{\infty} \delta^{i-2} (1 - x_i - K_D(h_i)) \geq -\delta^{j-2} c_D + \sum_{i=j}^{\infty} \delta^{i-2} (1 - P(1, h_{j-1})) \quad \forall j \in \{2, 3, 4, \dots\}. \quad (5)$$

Proof: Follows from construction.

Inequalities 2 and 3 imply that A is better off staying on the equilibrium path rather than deviating and going to war in period 1 (2) or all other periods $j \in \{2, 3, 4, \dots\}$ (3). Inequalities 4 and 5 imply that D is better off staying on the equilibrium path rather than deviating and going to war in period 1 (4) or all other periods $j \in \{2, 3, 4, \dots\}$ (5).

Admittedly, Proposition 3 is unwieldy. However, without imposing any additional structure on the Hassling Equilibria, this is the simplest formulation of the necessary conditions for a Hassling Equilibrium to exist. This makes it difficult to compare when Peace Equilibria do not exist but Hassling Equilibria do exist. To simplify the analysis, I consider a natural subset of hassling equilibria, “Stable Hassling Equilibria,” where A always selects some fixed hassling level h .¹³

Definition: *In a Stable Hassling Equilibrium, D offers $x'_1 \in [0, 1]$ in period $t = 1$ and $x'_2 \in [0, 1]$ for all $t \in \{2, 3, 4, \dots\}$. A selects some fixed $h_t = h$ for all t . So long that both players remain on the defined offer-hassle schedule, both players accept; otherwise, if there is a deviation in period t , then both states declare war in that period.*

Under Assumptions 1 and 2, I can express when a Stable Hassling Equilibrium exists.

¹³In the Online Appendix, I also consider Hassling Equilibria where A hassles for only a single period, and I discuss when short-term hassling is better suited to preventing war than long-term hassling (and vice-versa). To provide some empirical grounding, a Stable Hassling Equilibrium better represent long-term instances of hassling, like Russia supporting rebels in Ukraine, while a Short Term Hassling Equilibrium represents a one-off activity like bombing a reactor.

Proposition 4: *Let Assumptions 1 and 2 hold. If and only if for some $h \in (0, 1]$*

$$1 \geq \frac{P(0, 0) + K_A(h) - \delta (P(1, h) - K_D(h))}{1 - \delta} - c_A - \delta c_D, \quad (6)$$

then a Stable Hassling Equilibrium exists.

Proof: See the Online Appendix.

4.3 Comparative Statics

In this section I elaborate on the existence of Peace, Hassling, and War equilibria. The most relevant case is discussed in Observation 3, when Hassling Equilibria exist, but Peaceful Equilibria do not.

Observation 1, On the Existence of Peace Equilibria: *Peace Equilibria exist when the costs of war are high (high c_A and c_D) and D 's rise is negligible (low $P(0, 0) - P(1, 0)$).*

Observation 1 states what Fearon (1995) has shown before. When war is cheap and when a state rises dramatically, then a non-rising power is more willing to go to war today rather than make concessions in the future.

Observation 2, On the Existence of Stable Hassling Equilibria: *Stable Hassling Equilibria exist when the costs of war are high (high c_A and c_D) and there exists some level of hassling h that is both inexpensive (low $K_A(h)$ and $K_D(h)$) and effective at slowing D 's rise (low $P(0, 0) - P(1, h)$).*

What makes hassling an equilibrium here is that state A is able to affect the future balance of power enough via hassling, and at a low enough cost, to make an offer-hassling combination

more attractive than going to war.

Observation 3, On the Existence of Stable Hassling Equilibria when Peace Equilibria do not exist: *Stable Hassling Equilibria exist when Peace Equilibria do not exist when D would rise quickly without hassling (high $P(0,0) - P(1,0)$) and there exists some level of hassling h that is both inexpensive (low $K_A(h)$ and $K_D(h)$) and effective at slowing D 's rise (low $P(0,0) - P(1,h)$).*

Observation 3 combines the previous two Observations to describe when hassling can prevent a preventative war. In situations where D would rise quickly absent intervention, Peace Equilibria may fail to exist: A prefers going to war today, before the balance of power shifts, to facing unfavorable political offers in the future. However, if hassling is low cost and effective at slowing D 's rise, then it may be in A 's interest to hassle D rather than declaring war. Figure 1 shows the intuition of Observation 3 where, for a fixed discount rate and costs of war, when D rises quickly but hassling is effective, a Stable Hassling Equilibrium can exist when Peace Equilibria do not (the gray region of the graph labeled “Stable Hassling Eqm”). Put another way, this gray region defines a range of parameters where, even if states can bargain their way to an ex-post efficient equilibria, hassling can exist in the international system by being the least costly way to handle a rising power.

–Insert Figure 1 about here –

4.4 Empirical Implications

Observation 3 has several empirical implications. First, if a state is on the cusp of a dramatic rise, then we should observe its opponents resorting to hassling or war. As one way to evaluate this implication, I consider situations where states are likely to swiftly increase their power, and then I determine if these states are commonly met with hassling or war. As suggestive

evidence, consider the set of countries that, after the Cold War (1992 and later), began pursuing or continued pursuing nuclear weapons (using the coding in [Bleek \(2017\)](#)): Syria, Iran, Libya, Iraq, and North Korea. Of this set, Israel bombed Syria's nuclear reactor in 2007; the United States and Israel deployed the Stuxnet computer worm to break Iranian uranium centrifuges (2010); U.S. and British intelligence operations interdicted the *BBC China*, a ship carrying uranium centrifuge parts to Libya in 2003 ([Tobey, 2017](#)); from 1993-2003, the international community combined a near-total trade embargo, overt and covert support to militant opposition groups such as the Iraq National Congress, and bombed Iraqi WMD facilities and military sites in Operation Desert Fox to slow Iraq's nuclear weapons development ([Marr, 2004](#), pp. 274-275). And, while North Korea did not experience (publicly known) hassling, it was subjected to economic sanctions in the lead up to its weapons development, which can serve a similar role as hassling ([McCormack and Pascoe, 2017](#)).

A second empirical implication is that hassling must be low cost to both the target and initiator, or else either side may prefer to escalate to war. This implies that sometimes, the hassling state will make efforts to minimize costs for the targeted state, which is a departure from past research ([Slantchev, 2003](#)). As one instance of this, Israel took steps to minimize costs for Syria in Operation Outside the Box. Before the strike, Israel deployed a cyberattack that disabled Syrian air defenses, minimizing the risk of a destructive battle. Additionally, Israel struck before the reactor was producing plutonium to minimize the environmental impact and to limit the personnel killed ([Opall-Rome, 2018](#)). And, after the operation, Israel did not publicly disclose its involvement, but it did, though an intermediary, inform Bashar al-Assad of its involvement ([BBC, 2007](#); [Opall-Rome, 2018](#)). This gave Assad the opportunity to deny the extent and importance of the attack and to mitigate the domestic backlash, reducing the cost for the Assad government ([Opall-Rome, 2018](#)). This logic was expressed at the time by the newly appointed Israeli Chief of Staff Gabi Ashkenazi, who in a 2018 interview recalled the following: "At the cabinet meeting [following the strike] I

had already warned the ministers: Anyone who talks will be responsible for Assad reacting. Anyone who goes running to television risks causing a war” (Harel and Benn, 2018). A similar claim could be made for other hassling activities that similarly conceal attribution, with examples including Pakistan’s support for militants in Afghanistan, or Russia’s support for militants and cyberattacks in Ukraine. By concealing or obscuring attribution, the hassling state may face a weaker international backlash (lowering its own costs), and the targeted state does not know the full costs of hassling, thus reducing the perceived costs of hassling.

As a third empirical implication, changes that alter the perceived efficacy of hassling may cause the hassling state to forgo a prolonged hassling operation and instead declare a preventive war. As intuition, if hassling is ineffective, then the non-rising state will fear future exploitation and may find a preventive war to be the better strategy. This logic can be seen in the 2003 U.S. invasion of Iraq where, after years of sanctions and hassling, the United States changed strategies and invaded Iraq, thus deposing Saddam Hussein. What prompted the U.S. to go to war in Iraq is complex and still open to some debate. However, before the invasion, the U.S. intelligence community believed that the existing hassling and sanctions regime had failed to stop Saddam’s nuclear and biological weapons development (Silberman and Robb, 2004), and estimated that a war with Iraq would be relatively inexpensive (Flibbert, 2006). These data points are consistent with the theory: when one state is hassling another state, if the hassling state comes to view hassling as ineffective and high cost relative to war, then the hassling state may change strategies and go to war rather than accept a rising power.

5 Russian Hassling in Ukraine, 2014-2019

I examine Russian involvement in Ukraine outside of the Crimea invasion starting in 2014 through the present (early 2020, at time of writing). This case presents a theoretical puzzle:

why has hassling persisted in Ukraine without a diplomatic solution or war *despite attribution largely being known*? While [Schultz \(2010\)](#) can explain cases where hassling persists because the targeted state fails to attribute the low-level operations to the hassling state, here Ukraine generally knows that Russia is responsible for many of the low-level operations and therefore would be expected to find a diplomatic solution within that framework. Rather, I suggest that this is a case where hassling is being used to address commitment problems.

5.1 Background

The 2013-2014 Euromaidan protests followed Ukrainian President Viktor Yanukovich's refusal to sign a trade agreement with the EU that, in exchange for aid, would have required Ukraine to undertake a series of political reforms. Instead, Yanukovich signed a trade and billion-dollar loan agreement with Russia. Yanukovich's pro-Russia move, in conjunction with the public's discontent over Ukraine's stalled economic growth and corruption, drove citizens to take to the streets. Violent confrontations between the state police and protesters followed. On February 22, 2014, the Ukrainian parliament voted to remove Yanukovich from his post, and, around that time, Yanukovich fled to Russia ([Reid, 2015](#), pp. 258-269).

With the ousting of Yanukovich, there was uncertainty over how the new Ukrainian government would handle issues pertinent to Moscow. Russian-Ukrainian relations largely revolve around Kiev's Eastern-versus-Western alignment. Kiev's willingness to lease the naval base at Sevastopol to Russia was an ongoing issue; if Ukraine canceled this lease, Russia would become less effective at projecting power throughout the Black Sea ([Schneider, 2017](#)). Russian-Ukrainian trade relations have enriched Russian elites and created opportunities for Russia to have leverage over Ukraine. Russia has also expressed interest in Kiev's treatment of pro-Russian citizens and ethnic Russians within Ukraine. Even Kiev's policies towards corruption and hydrocarbon development falls on this East-West spectrum, as Ukraine's European integration is hindered by its corruption, and Ukraine's hydrocarbon development

reduces its (and potentially Europe's) reliance on Russia (Carpenter, 2018).

The Euromaidan Revolution positioned Ukraine as a rising power. The expulsion of Yanukovich and strong anti-corruption stance of the Euromaidan protesters set the possibility for a better functioning government and economic growth. Euromaidan also increased the possibility of Ukraine's future NATO membership, at least in the eyes of Moscow. This belief was plausible given that NATO had extended a Membership Action Plan to Ukraine in 2008 following its previous pro-democracy "Orange Revolution," as well as to Georgia after it experienced the "Rose Revolution" in 2003 (Traynor, 2004).

Russia's response to the Ukrainian Revolution was several-fold. Shortly after Yanukovich's removal, disguised Russian troops successfully annexed the Crimean Peninsula. Additionally, Russia sent manpower and capital to pro-Russian, anti-government protests and insurgency campaigns in Eastern Ukraine. Additionally, there is strong evidence that Russia conducted cyberattacks against Ukrainian institutions and energy infrastructure, shelled Ukrainian cities, and assassinated or attempted to assassinate journalists, government officials, and witnesses in the trial against Yanukovich (Sullivan and Kamensky, 2017; Mitrokhin, 2015; Peterson, 2017).

Despite Russian actions, Russia and Ukraine are not at war. Ukraine and Russia are still major trading partners, and, while there are disputes over natural gas shipments, Russia and Ukraine have sought to settle these disputes in Stockholm Arbitration Courts or by using the EU as a mediator (Antonenko *et al.*, 2018). Also, Ukraine has yet to label the conflict in the Donbass as a "war." Before January 2018, Ukraine labeled its activities in the Donbass as "anti-terrorism operations," then changed its definition of the conflict in the Donbass as a "temporary occupation," where Russia is the "aggressor" state (Ponomarenko, 2018).

5.2 Was Russia Hassling Ukraine in Lieu of War?

For Russian activities in Ukraine to qualify as hassling, they must create costs for both sides, weaken Ukraine, and not resolve political issues in dispute between Russia and Ukraine. To limit my scope, I first discuss Russian activities in Ukraine outside of Crimea, occurring 2014-2020.

Russian activities in mainland Ukraine have created costs for Ukraine through the destruction of thousands of lives, disruption of Eastern Ukraine's economy, and displacement of hundreds of thousands of civilians (Reid, 2015, pp. 287). Russia's involvement has also created costs for Russia through the damage to its international reputation, through sanctions imposed in retaliation for its actions, and through the loss of manpower and capital.

Russian activities in mainland Ukraine have undoubtedly weakened Ukraine's future wartime capabilities. Politically, any NATO membership action plan requires candidate states to have stable democratic systems, have good relations with their neighbors, and pursue the peaceful settlement of internal disputes. The ongoing conflict in the Donbass prevents Ukraine from meeting any of these criterion. Economically, the conflict in the Donbass slows Ukraine's development by severing Kiev's access to Ukraine's industrial Eastern sector and by denying Kiev access to the shale gas fields in the Donetsk region (Batkov, 2015).

Finally, Russian activities in mainland Ukraine do not resolve the political disputes between the two countries. Currently, Russia and Ukraine disagree over a broad range of political issues – like international economic ties and internal development, diplomatic relations between Russia and Ukraine, treatment of ethnic Russians, and internal reforms – all of which hassling is not attempting to resolve. Instead, Russia's prolonged efforts in Ukraine seem primarily concerned with creating instability. This is different from Russia's invasion of Crimea, which merits a deeper treatment.

That Russian actions in mainland Ukraine are hassling is put in clear relief when compared with Russia's Crimea invasion, which better resembles a limited war. In 2014, Russia deployed an estimated 90,000 troops to Ukraine and successfully annexed the Crimean Peninsula (Reid, 2015, pp. 272-273). In doing so, Russia resolved the Sevastopol issue, isolated Russians in Crimea, gained new maritime borders, and secured access to Black Sea oil deposits (Umbach, 2014). Thus, Russia resolved the political issues related to Crimea, making that operation better resemble a limited war. Why did Russia approach mainland Ukraine and Crimea differently? Observation 3 suggests that a hassling equilibrium will arise only when hassling is effective in stymying the rising power. In Crimea, it was uncertain how effective supporting a land-based insurgency (like Russia did in Eastern Ukraine) would be in, for example, keeping Ukraine from canceling Russia's lease on Sevastopol. This is in contrast to Russian hassling in mainland Ukraine, which successfully challenged the possibility of closer Ukrainian-NATO relations.

As discussed in Section 4.1, because hassling is ex-post inefficient and may be bargained out of, Hassling Equilibria are most plausibly realized when Peace Equilibria do not exist. To make the strongest possible claim that Russia's actions in mainland Ukraine constitute hassling, I conjecture that no peaceful equilibrium existed between Russia and Ukraine and that Russia was willing to go to war with mainland Ukraine if hassling were less effective. Admittedly, as with any analysis involving counterfactuals, these points are difficult to make conclusively because they involve discussing circumstances that did not occur; all points below should be taken as suggestive evidence.

There are several points to support the above claim. At the time of writing, that Russia has operated a hassling campaign for this long without resolution suggests that no peaceful equilibria exists. First, hassling has been occurring for years now; if a Peace Equilibrium

exists, it is difficult to understand why Ukraine, Russia, or relevant international actors could not broker their way to a better equilibria by now. Second, Russia's 2008 war with Georgia can be viewed as evidence of Russia's willingness to go to war over similar issues. In 2008, Russia invaded Georgia to undermine Georgia's movement towards joining NATO and to protect Russian-sympathetic ethnic minorities in Abkhazia and South Ossetia (Asmus, 2010, pp. 1-9). The political similarities between the two cases suggest that Russia could have been willing to go to war with mainland Ukraine in 2014 for the same reasons that it went to war with Georgia in 2008. Finally, Russia's handling of Crimea also informs Russia's willingness to go to war with Ukraine following Euromaidan. The scope of Russia's Crimea operation raised the risk of a clash between Russian and Ukrainian military forces, suggesting that war was a risk that Russia was willing to take. Together, this evidence suggests that a peaceful diplomatic solution between Russia and Ukraine did not exist, making war or hassling the two possible outcomes.

5.3 Alternative Explanations

Russia may have conducted hassling for reasons outside of slowing a rising power.

States might conduct limited military operations to maintain their military budget, to appease domestic actors, or to maintain the capabilities of their military. However, these explanations fail to explain both the variation in Russia's degree of hassling before and after the overthrow of Yanukovich.

Alternatively, Russia may have hassled Ukraine following Euromaidan to deter other states from aligning with the West. Through this "signaling" logic, Russia is threatening Eastern European and Baltic states to not follow Ukraine's Western shift. However, this explanation fails to address a critical question: what is preventing Ukraine and Russia, after this long, from forming a political bargain to prevent further costly and destructive hassling? It seems

entirely plausible that, by this point, the signal is sent.

Or, Russia may be hassling Ukraine because Ukraine cannot strike a political bargain with Russia. Perhaps domestic constraints are preventing Ukraine's leadership from forming a political bargain with Russia that accurately represents their disparity in power, and Russia is hassling Ukraine to shift the balance of power. This is similar to my theory, in which I claim that there is no feasible political action Ukraine can take to alleviate Russian concerns over Ukraine's growth and future alliance formation, and Russia hassles to ensure Ukraine does not rise. Ultimately, I cannot arbitrate between these two explanations, and it is entirely that plausible both mechanisms are in play. For that reason, I also provide a simple model in the Online Appendix where a challenging policymaking environment (the issue described here) rules out a Peaceful Equilibrium, but a Hassling Equilibrium can exist and prevent states from going to war. I also consider settings where information asymmetry and issue indivisibility introduce a risk of war that hassling resolves.

6 Modeling Limitations

In equilibrium, both states declaring war was used as an off-path punishment. I raise two comments on this. First, to alleviate the concern that this undesirable feature drives the results, the Online Appendix shows that completely ruling out off-path punishments does not change the substantive result that hassling can still prevent a preventive war. Second, the existence of a war-war equilibrium allows for credible punishments following deviations from equilibrium behavior, which is a desirable feature of the game. It is implausible to assume that states lack the ability to punish upon observing deviations from equilibrium behavior — this is the commonly accepted rationale for how free-trade agreements, arms control pacts, OPEC, and nonproliferation treaties function.

Readers may have noted that Stable Hassling Equilibria are long-term. I also examine short-term hassling in the Online Appendix, where I explore when short term hassling works better at slowing a rising power than long term hassling. I find short periods of hassling may be insufficient to slow D's rise when D rises dramatically. However, when hassling is marginally more expensive, shorter instances of hassling can prevent war in environments where prolonged, stable instances of hassling cannot.

Unlike other work that treats hassling as “measured revisionism” (Mazarr, 2015), I do consider hassling that shifts political outcomes in the model. In the Online Appendix, I include a model where such a shift occurs, and I still find that hassling can prevent a preventive war. For example, if a political crisis occurs over the development of a nuclear program, which can be viewed as both a policy outcome (see Schultz (2010)) and a way of shifting capabilities (see Debs and Monteiro (2014)), then this model can best represent reality.

In my model, I assume that State D is an exogenously rising state, which may be viewed as implausible (Debs and Monteiro, 2014; Spaniel, 2019). The exogenous rise feature plays a role in producing the result that hassling can be the most efficient outcome in an international crisis; this is distinct from results derived in Spaniel that assumes an endogenous investment in a power shift, and as a result of the endogenous shift derives efficient equilibria like states crafting peaceful solutions to avoid inefficiencies of war and weapons production are possible. I raise three comments on this. First, to offer a microfoundation of the “exogenous rise” assumption, in the Online Appendix, I include a simple model with an endogenously rising power, and I show that the substantive results still hold.¹⁴ Second, the Ukraine case discussed above suggests that, in some cases, the exogenously rising power assumption may be reasonable. In 2014, Moscow's concern about Kiev allying with the West made Ukraine a potential rising power. For Ukraine to slow its own rise, it would have needed

¹⁴To provide some intuition, a rising power will sometimes select to rise too fast when there is information asymmetry over how the rising power's opponent values the future.

to convince Russia that whoever took over Ukraine after Euromaidan would disregard the wishes of the protesters, who overthrew Yanukovich for his pro-Russia policy positions, and accommodate Russia, all of which would be difficult. And, even if NATO were a strategic third party, because the possibility of a third-party alliance can induce a power shift, it is unlikely that adding a strategic third-party would fully eliminate the possibility of an alliance (and therefore of a rising power). Third, even if there are concerns regarding exogenously (or endogenously) rising powers, hassling can be used to prevent wars in other settings where peaceful equilibria may fail to exist. As examples, issue indivisibility, information asymmetry, or a challenging policymaking environment may rule out peaceful equilibria, and hassling can serve as an alternative to war equilibria (as explored in the Online Appendix).

I also do not directly consider two-sided hassling. The equilibria with no off-path punishments (in the Online Appendix) offers some insights into why two-sided hassling may occur. When there is no off-path punishments, State A may select a level of hassling that is beyond what is necessary to slow D's rise to be within an acceptable level. In cases like this, D may also hassle A in order to give A less of the asset in dispute, but not enough to provoke A to declare a preventive war.

7 Conclusion

Hassling campaigns have undermined economic, social, and political development in countries around the world, with ramifications for the millions of civilians exposed to violence and instability. At first pass, the international prevalence of hassling could be viewed as a global political failure: why have states been unable to reach diplomatic solutions to end hassling, thereby improving the lives of their citizens? In examining this question, this paper presents a novel perspective on military operations outside of war. I show that these operations may be the only way to prevent war in an international system with shifting powers and alliances.

While I hope this paper has not discounted the devastating effects of hassling, I have also shown that hassling can function like a relief valve: in an unstable international system, hassling may be the only way to prevent a more devastating outcome.

The main conclusion of this paper, that in the context of a rising power, hassling may be the only alternative to war, should be taken with two caveats. First, this paper introduced one-sided hassling as an alternative policy choice to diplomacy or war, but a more complete perspective would acknowledge a broader policy space that included, for example, tariffs, sanctions, arming, and third-party diplomacy. While the existence of hassling in cases such as Ukraine suggests that hassling is lower-cost and more efficient than these other policies, other policies may still be effective at slowing a rising power's rise and preventing war. For example, Russia is using both hassling and the hydrocarbon trade to pressure Ukraine. If the Russian economy were less dependent on the hydrocarbon industry, then Russia could perhaps instead use more economic tools and less hassling with similar effects. Second, this paper has adopted the standard zero-sum crisis bargaining framework. If the international system can find a way to mitigate the concerns over a rising power or better distribute gains from a rising power, then hassling may become less useful and less prevalent.

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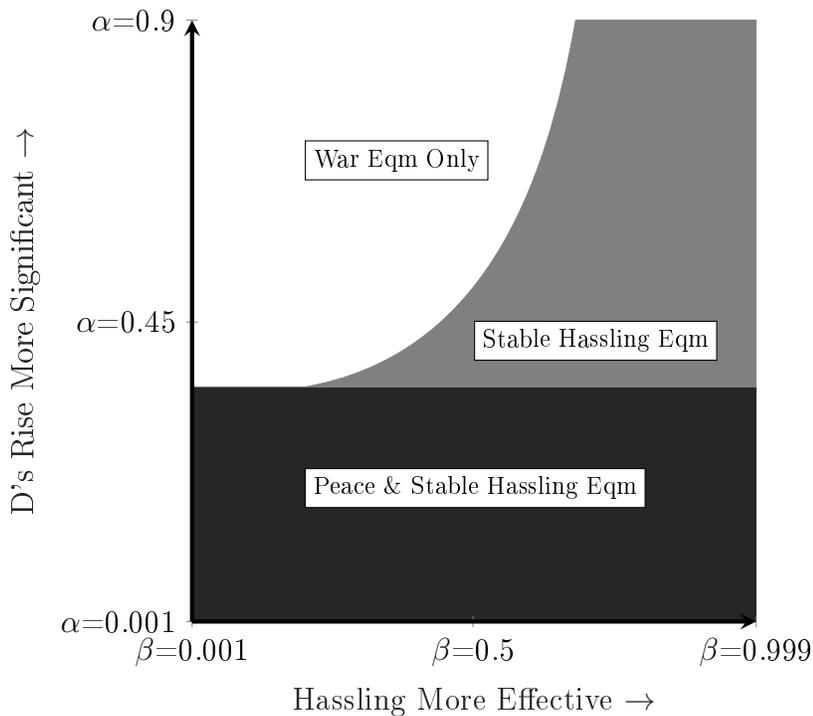


Figure 1: Visualization of Observation 3

Notes: Parameter values and functions are $c_A = 0.75$, $c_D = 0.75$, $\delta = 0.8$, $K_A(h_t) = 0.05h_t$, $K_D(h_t) = 0.05h_t$, and $P(\cdot, h_{t-1}) = 0.9 - \mathbb{1}(t > 1)\alpha(1 + \beta(h_{t-1}^2 - 2h_{t-1}))$. The gray parameter space is where Stable Hassling Equilibria exist but Peace Equilibria do not. The black parameter space is where both Stable Hassling and Peace Equilibria exist. The white parameter space is where only War Equilibria exist. Note that War equilibria always exist, but in the gray and black parameter spaces, Pareto improving Non-War equilibria also exist.