Maintaining American Bases Abroad: International Implications of Servicemembers' Adverse Behaviors and Experiences

1. Introduction

The fundamental basis of power projection, regional influence, and crisis management by global powers has been through the deployment and maintenance of a global military basing network (Harkavy 1989; 2007). While scholars and practitioners have used or proposed other models of regional influence (e.g. empire-building or off-shore balancing), the enduring model adopted by the United States, since the end of the 19th century, is the use of military bases (Layne 1997; Ikenberry 2004). Having a military force present in a region allows immediate reaction to emergent threats, reassurance of allies, and effective extended deterrence (Schelling 1966). While capital-intensive technology has increased the capacity of the U.S. to respond to some threats at a distance, it is unlikely to replace the presence of forward, globally deployed military personnel in the near future. Diplomatic tensions that arise from servicemember behavior and changing political climates jeopardizes the viability of long-term bases overseas (Moon 1997, Calder 2007, Cooley 2008). In particular, criminal offenses by U.S. military personnel have sparked national conversations across host-states such as Germany, Japan, South Korea, and the Philippines. In several instances, negative interactions have sparked or fueled protests that have encouraged host-states to remove U.S. personnel, in part or in whole, from host-states. Despite these pivotal interactions having large-scale global effects, we know very little about the frequency and the cause of them.

This project focuses on answering the question: *What are the characteristics, causes, and consequences of adverse interactions between servicemembers and host-state civilians?* This project goes beyond previous scholarship by surveying military personnel directly about their interactions with foreign populations. The project surveys veterans about their previous deployments, stateside bases to compare domestic deployments to overseas deployments, and a subset of the thirty-five major U.S. bases overseas. Our innovative approach uses traditional and experimental survey methodology and allows for a direct measure of latent and blatant social interactions that reported statistics fail to capture. We draw upon literature in criminology, international relations, and political psychology to examine the nexus of offending and victimization behavior between two distinct populations (U.S. servicemembers and host-state civilians) and draw upon opportunity theories to assess the cause of negative interactions between military personnel and foreign civilians. Our research will provide improved understanding on the conditions where the opportunity for criminal offenses could occur and prove important to both the U.S. government as well as any of the over 150 governments that host U.S. servicemembers on their soil. The analysis in this project will provide answers to the interdisciplinary research questions while also providing public data that will fuel the research of scholars in multiple disciplines.

2. Background and Theory

This multi-level interdisciplinary project has foundations in structural and individual-level theorizing. At the macro-level, this project is relevant to scholars and policymakers in areas of international relations, security studies, and foreign policy. At the micro-level, criminological theory, with roots in sociology, psychology, and economics, offers the foundation for our causal hypotheses directed at interpersonal behaviors. The project provides three unique data sets not found in contemporary social science research, tests criminological hypotheses in a unique context not observed previously and provides answers to questions about troop interactions with host-state civilians that are fundamental to international relations and policymaking. We first discuss the macro-level context in this section and transition to how theories of the individual behavior and social interactions provide useful hypotheses to understand these processes.

A. International Relations Theory

World War II marked a turning point in U.S. military and diplomatic history where, through the Lend-Lease program of the 1940s and the maintenance of overseas operations of the evolving Cold War, the U.S. established and continues to maintain an unprecedented number of troops overseas. In very real ways, the overseas troops of the United States serve not only as the forefront of U.S. hard power, but also the forefront of diplomacy and soft power. Foreign nationals are more likely to interact with a U.S. servicemember than any other U.S. government official. Only now has research delved into the positive and negative externalities of U.S. deployments abroad in quantitative ways. Starting in 2004, with Kane's work providing annual estimates of U.S. troops deployed globally, an emergent literature has begun to tally the total security and non-security effects of deployments. Researchers now link the presence of U.S. troops with increased economic growth (Jones and Kane 2012), development (Kane 2012), foreign direct

investment (Biglaiser and DeRouen 2007), trade activity (Biglaiser and DeRouen 2009), decreased defense spending among non-allies (Martinez Machain and Morgan 2013), increased defense spending among North Atlantic Treaty Organization allies (Allen, Flynn, VanDusky-Allen 2016; 2017), lower respect for human rights (Bell, Clay, Martinez Machain 2017), and increased internal stability (Braithwaite and Kucik 2017). While this literature provides an encouraging base for work, it is far from complete in understanding the effects of deployments as much of it examines aggregate data and makes inferences based on those data. Such ecological inferences are problematic, especially when we consider a topic as important as the servicemember participation in crime (King 2013).

Beyond ecological inference issues, this initial and pivotal point of contact between the United States and other countries is fundamental in shaping relations between two countries, the security dynamic within a country, and the United States' long-term objectives regionally and globally. There is qualitative research on the topic that examines news reports of events, government policy, limited interviews, or aggregated data (Bryant 1979, Enloe 1989, Moon 1997, Allen and Flynn 2013, Arévalo 2016). These projects provide insight, reliance upon news reports or government policy focuses on egregious cases and may be sensationalized. One recent study uses aggregate data to evaluate the implications of servicemember crime and victimization but relies on highly aggregated data that makes inference problematic (King, Rosen, and Tanner 2004). In essence, we have small snapshots of the issue, but not enough information to fully understand the scope, implications, or causes of servicemember victimization and offending. Additionally, while there have been some surveys of existing military personnel regarding risky and self-harming behaviors (Bray, Pemberton, Lane, Hourani, Mattiko, & Babeu 2010; Thomsen, Stander, McWhorter, Rabenhorst, & Milner 2011) and criminal offending/victimization between U.S. servicemembers (Bostock & Daley 2007; Sparrow, Dickson, Kwan, Howard, Fear, & MacManus 2018), there remains a gap in regards to surveys directed at servicemember-local civilian interactions. Such data address important questions that are fundamental to basic research that intersect areas of international relations, criminal justice, economics, and sociology.

Beyond the direct substantive area of crime, there are projects just beginning to use surveys to look at interactions between these two populations. Allen et al. (2020)[1] surveys 14,000 respondents across 14 countries and finds that interpersonal contact between U.S. servicemembers and host-state civilians and civilian economic reliance on the military increases host-state civilian support of the U.S. military presence within that country. Flynn et al. (2019) find that humanitarian missions improve views of the U.S. military and U.S. government. These articles examine positive interactions between the two populations and find positive results, but do not offer novel insight into negative interactions.

In this project, we propose to better understand one form of deleterious interaction between U.S. servicemembers overseas and local community members by identifying the prevalence of such interactions, describing their characteristics, and asking what causes negative interactions between servicemembers and host-state civilians. We focus specifically on crime victimization and offending that occurs between a U.S. servicemember and a member of the local community. This is a notable departure from previous research in both policy and academia as most research focuses on offending within the military (Stander and Thomsen 2016; Thomsen and Stander 2011; Trevillion Williamson, Thandi, Borschmann, Oram, & Howard 2015; Turchik and Wilson 2010;Valente and Wright 2007) or offending by former military as civilians (Bouffard 2003; Craig & Connell 2015; Sampson & Laub 1996). Much media attention has focused on high profile cases of servicemembers' victimization of local citizens and has mobilized popular opinion against the presence of troops in key states such as Germany, the United Kingdom, Japan, South Korea, and others (Calder 2007, Cooley 2008). These incidents have had varying effects on the long-term durability of U.S. bases, such incidents are likely to continue to occur and garner more attention given social media. While media attention highlights some instances of criminal behavior, there remains little data on U.S. servicemembers' engagement in criminal behavior against host-state

---

[1] This particular manuscript is notable in terms of this project for additional reasons beyond substance. First, one of the co-PIs of this proposal, Allen, was on this project suggesting viability of this proposal, especially in regard to survey related work. Second, the manuscript was published in the *American Political Science Review*, suggesting both the novelty and importance of this research area.

civilians and/or experiences of crime victimization by local civilians. These interactions signal relational issues that impact beliefs about the legitimacy and authority of the U.S. presence.

B. Criminological Theory

There are many explanations as to why some servicemembers may engage in crime or be victimized during interactions with host-state civilians. The theoretical framework we adopt in this project is derived from the opportunity perspective. Theories in the opportunity perspective evolved from fields such as human ecology, sociology, and economics and focus on identifying the circumstances that increase the likelihood of crime (or victimization) occurring. Scholars have used this framework to explain offending, victimization, and situational prevention through emphasis on the intersection of time, place, people, and circumstances (Tillyer 2015; Wilcox 2015). Developing from the opportunity perspective, lifestyle-routine activities theory is potentially well-suited to contextualizing crime and victimization between military and civilians. In particular, the theory has received cross-cultural support, has been explored for its explanatory role in linking work with criminal opportunity, and allows for the identification of common situational factors that can relate directly to policy response. The theory has been prominent in the discipline since the 1980s and refined over time with focus on articulation of the key concepts and their measurement. Review of the theory's status concludes that "empirical evidence testing the theory's applicability to multiple types of crime is generally supportive [...and] it can be widely used as a basis for successful crime prevention efforts," (McNeely 2015, p. 40). The theory is adaptable to explain crime at both the individual and structural level, depending on application. Given the interpersonal nature of adverse interactions between persons, and the broader situational context of military bases in foreign countries, theory that can consider multiple levels of opportunity is advantageous.

Lifestyle-routine activities theory is the integration of routine activity explanations of crime and lifestyle-exposure explanations of victimization. Cohen and Felson (1979) proposed a routine activities theory of crime in order to explain U.S. crime rate trends in the decades following World War II. They argued that focus on the circumstances of crime could provide an explanation for increasing crime trends as "structural changes in routine activity patterns can influence crime rates by affecting the convergence in space and time of the three minimal elements of direct-contact predatory violations: (1) motivated offenders, (2) suitable targets, and (3) the absence of capable guardians" (Cohen & Felson 1979, p. 589). The case of rising rates of household property crime exemplified their hypothesis: changes in patterned behavior during this time period, e.g., increases in out-of-town travel, access to employee vacation time, and women's increased participation in the labor force, created more opportunity for property crimes as homes were less likely to be attended during the day. At the same time, valued consumer products became more affordable, transportable, and common in the home (e.g., televisions, small appliances) leading to an expansion of suitable targets. Thus, the opportunity for theft and burglary expanded during this period resulting in increased property crime rates. Routine activities theory continues to be developed and applied to explain a wide range of offenses in home, work, and other social settings, and in the context of crime prevention (Hollis, Felson, & Welsh 2013; Tillyer & Eck 2010; Wilcox 2015).

During the same era, Hindelang, Gottfredson, and Garofalo (1978) published a theory of personal victimization based on analysis of the first National Crime Survey (NCS)[2] in the United States. NCS data revealed that victimization was not random but patterned, resulting in proposal of a lifestyle-exposure theory. The theory proposes that a person's demographic characteristics, moderated by societal expectations and structural constraints, influence lifestyle, which influences the likelihood of victimization. Hindelang and colleagues defined lifestyles as routine daily activities and specified that these routine activities or lifestyles influence a person's exposure to "times, places, and people conducive to criminal activity" (Fisher, Reyns, & Sloan 2015). Given similarities in routine activities theory and lifestyle-exposure theory's core concepts it is not surprising that theoretical development led to a merged lifestyle-routine activities theory (see Garofalo 1987) emphasizing four concepts: exposure to risk, proximity to motivated offenders, target attractiveness, and lack of capable guardianship. The theory has been the subject of numerous empirical analyses across disciplines and, though not without caveats, analyses indicate the theory has empirical validity (McNeely 2015; Spano & Freilich 2009).

---

[2] Later renamed the National Crime Victimization Survey, this survey is administered by the Bureau of Justice Statistics annually and remains the most prominent source of national victimization data in the U.S.

The relationship between military and crime is of interest to the criminological discipline, though it has not received as much attention as other government, political, and social institutions. Studies in criminology considering military service have primarily examined the impact that service has on life-course trajectories of offending, specifically the influence of service on crime involvement post-service (Bouffard 2003; Craig & Connell 2015; Sampson & Laub 1996). In addition, studies across disciplines have increasingly focused on the influence of military service as a risk factor for interpersonal violence including sexual victimization and domestic violence (e.g., Jones 2012; Stander & Thomsen 2016; Trevillion et al. 2015; Turchik & Wilson 2010; Valente & Wight 2007). These bodies of research, while important, do not address the occurrence of crime and victimization *during* service and in *interaction with host-communities*. Describing and explaining these interactions is necessary to develop promising responses and policies aimed at reducing offending and victimization risk while potentially maintaining or enhancing military-host country relations.

There are four advantages to utilizing lifestyle-routine activities theory in this project: 1) testing the theory's explanatory power among servicemembers is important given the unique circumstances of military service and base life: potential work in high risk environments, regimentation, deployment, less demarcation between work and home life, and separation from family and outside support networks. Apel and Horney's (2017) research on the relationship between work and crime argues for a nuanced understanding of the relationship between employment and opportunities for offending, emphasizing situational factors and inducements including work-related norms pertaining to drinking. Their argued expansion of routine activities theory to include substance use *as a routine activity* is one factor that may hold particular relevance for this population; 2) lifestyle-routine activities theory allows for consideration of how environment shapes individual opportunity. This flexibility provides avenues for understanding individual crime events in a larger environmental context, such as individual victimization and offending in the context of an overseas base; 3) much crime theorizing focuses on offending exclusively, but opportunity theories help to explain both offending and victimization. Utilizing lifestyle-routine activities theory allows for exploring offending, victimization, and the oft-neglected nexus of offending and victimization. The latter is particularly important, as research documents that one often correlates with the other (Jennings, Piquero, & Reingle 2012); and 4) applications of lifestyle-routine activities theory have been wide ranging and the theory has developed over time in response to critiques and changes in society. Applying lifestyle-routine activities theory to better understand the adverse interactions between servicemembers and host-state civilians represents a novel test of the theory, which has implications for the theory's continued assessment and extension in the criminological discipline and related social sciences.

C. Research Objectives and Hypotheses

To understand these important dynamics, we propose a three-year project to build three novel, comprehensive survey databases related to servicemember behavior abroad. Much of this work is exploratory in nature – we know relatively little about offending and victimization patterns of US servicemembers, especially regarding how the two interact. Each data set is novel to social science, enables us to answer our research questions, and provides a platform for other researchers to test their derived hypotheses in a unique setting. In year 1, we will deploy a targeted nation-wide survey of current servicemembers and recent veterans (having served overseas in the last ten years) to build a data set on their recollected experiences overseas. Additionally, we will survey 1-2 stateside bases to build a baseline database to compare to our future overseas findings. These surveys will serve as independent research projects that will become peer-reviewed articles and serve to establish a comparison for our overseas research. Through year 1, we will contact a set of thirty-five military base commanders and work on establishing a subset of overseas bases that we can survey during year 2. In year two, we will deploy our survey to a subset of major U.S. military installations globally. This survey will provide the backbone to our research and will give us a current condition examination based on servicemember self-reporting. We devote year three to analysis and publication of research gained from the project as well as a site visit(s) to foreign deployed bases. Absent buy-in from base command, we will be able to test our predictions using recent veterans, rather than active duty members, through a set of surveys and survey experiments.

- **Overarching Research Question:** *What are the characteristics, causes, and consequences of adverse interactions between servicemembers and host-state civilians?*
- Descriptive Research Questions

- What is the prevalence of criminal victimization and offending by U.S. servicemembers? Among those servicemembers involved in crime, what proportion report offending-only, victimization-only, and both offending and victimization experiences?
- Among U.S. servicemembers, what forms of criminal offending and victimization are most common?
- Do servicemember self-reported adverse experiences match country-level data on crime victimization and offending?
- What are the characteristics of servicemembers involved in crime?

- Theoretical Hypotheses
  - Contextual factors will influence offending and victimization – servicemembers will be more likely to offend, and be victimized, abroad compared to domestically. Servicemembers will be more likely to offend when they are not easily identifiable as a servicemember. We expect easy identification as a servicemember to influence victimization, but this effect may depend on the type of victimization.
  - Servicemembers that experience higher levels of guardianship – close friends, sense of belonging, and frequency of being with peers off-base – will have a lower likelihood of criminal offending and/or victimization.
  - Servicemembers that present as more attractive targets – carrying cash off base, access to items that could be sold for profit, and sense of welcome in local community - will have a higher likelihood of criminal victimization experiences.
  - Servicemembers that have more exposure to potential offenders - time off-base in uniform, days per month spent at local bars, frequency of being recognized as non-local, whether time spent off base was during day or night – will have a higher likelihood of criminal offending and/or victimization.
  - Servicemembers that have been exposed to risk factors – history of offending, childhood abuse, and/or substance abuse – will have a higher likelihood of criminal offending and/or victimization.

3. Preliminary Findings

In Fall 2019, we deployed a preliminary survey (contracted to Bovitz, Inc) among former military to both examine our survey instruments and to examine if our hypotheses have support in a trial. A panel of 516 individuals self-identified as military veterans. We recruited a diverse, but not representative, sample of veterans (46% were Army veterans, 24% Navy, 18% Air Force, 12% Marines, and 1% Coast Guard). The average age of respondents was 53 years old, with ages ranging from 19 to 96. Thirty-three percent of respondents saw combat, while 67% did not. The sample was 85% male, and 72% white. The survey included numerous items about types of criminal offending, including larceny, burglary, assault, occupational theft, sexual assault, drug use, prostitution, public intoxication, and driving under the influence during their time in the military. For criminal victimization, we ask about larceny, burglary, assault, sexual assault, drug sales, and being offered money in exchange for sex.[3]

We first examine the prevalence of overall offending and victimization among military veterans. A majority (62.98%) of respondents reported at least one of these offenses while they were active duty members of the military. Most reported only 1 offense, but 3 or more offenses were reported by 9.69% of all respondents. Victimization was rarer, with 32.56% reporting at least one instance of crime victimization (but note that there are fewer potential categories for victimization). Of these, 5.04% reported being victimized by 3 or more offenses. We see that offending and victimization are also correlated–26.94% report both offending and victimization, while only 5.62% report victimization-only and 36.05% report offending-only.

We next examine which types of offending are most common. By far the most common offending behavior was public intoxication, reported by 54.8% of all respondents. Next was driving under the influence, reported by 22.6% of all respondents, followed by prostitution, reported by 12.8% of all respondents. Other behaviors were rarer, with 5.8% reporting committing assault, 3.1% reporting illegal

---

[3] We created each question using terminology accessible to the average adult and developed from national surveys on crime and victimization.

drug use, 2.1% larceny, 1.9% sexual assault, 1.7% occupational theft, and 1.2% burglary. Significant correlations between these offenses also appear. The largest correlation ($r = 0.33$) emerges between public intoxication and driving under the influence. Drug use is significantly correlated with a host of other offenses, including larceny, assault, sexual assault, prostitution, public intoxication, and DUI. Burglary, larceny, and occupational theft offenses are all correlated with each other, perhaps unsurprisingly since all fall into a similar class of offenses. (Fig. 1)

      Turning to victimization, the most common type of crime victimization for servicemembers was larceny, with 38.4% reporting this victimization. Next was burglary, at 19.8%, followed by assault at 13.9% and drug sales at 13.4%, while only 1.6% indicated they were offered money for sex. Sexual assault was reported by 7.8% of all respondents, though gender differences emerge, with 17.1% of women (n=76) reporting victimization, compared to 6.1% of men (n=440). Here, the largest correlations between types of victimization are burglary and larceny, which are correlated at $r = 0.31$. Other correlations between types of victimization are only small in magnitude. *These results show that offending and victimization occur at relatively high rates among members of the military, and that there is variation between types of offenses.*

      Next, we turn to analyses to determine how aspects of one's situation while in the military influence the likelihood of offending and victimization. We first look at guardianship and target attractiveness. We use three measures of guardianship – the number of fellow servicemembers one reports as being close friends with while an active duty member of the military,[4] the strength of their sense of belonging with their unit[5], and how often they were with other servicemembers while off-base.[6] Measures of target attractiveness include how often one carried cash with them off-base,[7] if their position gave them access to items that could be sold for profit,[8] and how welcoming they felt the local community was to them.[9] These variables were then used to predict whether someone ever committed an offense, or was ever victimized, using logistic regression.

Table 1. *Effects of Guardianship and Target Attractiveness*

	Offending	Victimization	Offending	Victimization
# Close Friends	0.068** (0.034)	-0.013 (0.033)		
Belonging	-0.308*** (0.111)	-0.218** (0.108)		
With Others	0.460*** (0.111)	0.226** (0.110)		
Carry Cash			0.371*** (0.104)	0.254** (0.111)
Access to Items			0.747*** (0.239)	0.595*** (0.220)
Community not Welcoming			0.136 (0.114)	0.236** (0.114)
N	494	494	492	492
pseudo R^2	0.1090	0.0518	0.1073	0.0693

Table entries are logit coefficients with standard errors in parenthesis. All models include demographic controls for age, gender, sexual orientation, marital status, race, ethnicity, education, branch, time served, combat status, and serving overseas. * $p<0.1$, ** $p<0.05$, *** $p<0.01$

      Recall that we predict that guardianship should reduce offending and victimization, and that target attractiveness should increase victimization (with no predictions related to offending). We find mixed evidence for the guardianship hypothesis. While a sense of belonging with one's unit does indeed predict a decrease in both offending and victimization, the number of close friends predicts an *increase* in offending, while spending time off-base with other servicemembers predicts an increase in both offending and victimization. Perhaps this is because spending time with groups of others off-base could increase social offending behaviors, such as public intoxication. Indeed, examining the effect of guardianship on each individual behavior demonstrates this pattern, where close friends and spending time off-base with

---

[4] This ranges from 0-10, with all respondents who indicated more than 10 close friends recoded to equal 10.
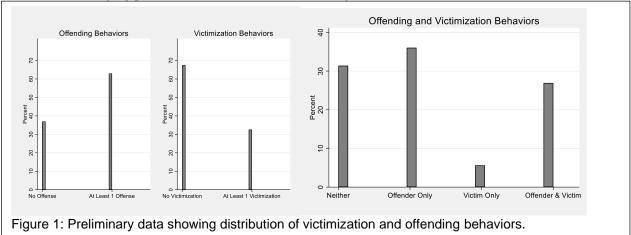[5] Response options are not strong (1), somewhat strong (2), strong (3) and very strong (4).
[6] Response options are never (1), rarely (2), sometimes (3), often (4), and always (5).
[7] Response options are never (1), rarely (2), sometimes (3), often (4), and always (5).
[8] Coded as Yes (1) or No (0).
[9] Response options are always (1), most of the time (2), sometimes (3), only occasionally or only certain aspects of the community (4), and relations between the base and locals were unwelcoming or tense most of the time (5).

others predicts an increase in public intoxication, but a sense of belonging predicts a decrease. Similarly, a sense of belonging predicts a decrease in DUI offending.

Figure 1: Preliminary data showing distribution of victimization and offending behaviors.

We considered how target attractiveness influences crime occurrence. Here, we find that all three indicators of target attractiveness increase the likelihood of being a victim of crime. Interestingly, we also find that individuals who carry cash and have access to items they can sell are also more likely to offend – unsurprisingly, for access to items, as this predicts an increase likelihood to commit larceny, burglary, or occupational theft. When individuals are perceived as a more attractive target by locals, or when tensions between the base and locals are high, individuals are more likely to report that they are victims of crimes.

Next, we examine how exposure to potential offenders and risk factors influence offending and victimization while serving in the military. To measure potential exposure, we ask how often individuals spent time off-base while remaining in uniform[10], how many days per month they spent at local bars, on average[11], how often they were recognized as a non-local while off-base[12], and whether they spent more time off-base during the day or at night.[13] To measure risk for offending and/or victimization, we ask questions about whether an individual was ever convicted of a felony or misdemeanor, whether they suffered physical, sexual, or emotional abuse as a child, and whether or not they have ever been told to seek treatment for substance abuse.[14] We again use logistic regression to predict the likelihood of any offending or victimization with these variables.

Table 2. *Effects of Exposure to Offenders and Risk*

	Offending	Victimization	Offending	Victimization
In Uniform	-0.365***(0.114)	-0.014(0.105)		
Days at Bars	0.224***	.089***(0.022)		
	(0.042)			
Non-Local	0.283***(0.098)	0.223**(0.095)		
Off-base at Night	1.188***(0.320)	0.096(0.306)		
Felony			0.706* (0.425)	0.283 (0.351)
Misdemeanor			1.373*** (0.305)	0.594** (0.248)
Physical Abuse			0.200 (0.326)	0.541* (0.305)
Sexual Abuse			0.411 (0.361)	0.890*** (0.315)
Emotional Abuse			0.053 (0.275)	0.243 (0.279)
Substance Abuse			0.486 (0.339)	0.341 (0.283)
_cons	-0.711 (0.827)	-1.267 (0.790)	0.028 (0.694)	-1.352* (0.703)

---

[10] Response options are never (1), rarely (2), sometimes (3), often (4), and always (5).
[11] Ranges from 0 days per month to 31 days. Mean = 4.37, s.d. = 5.11.
[12] Response options are never (1), rarely (2), sometimes (3), often (4), and always (5).
[13] Coded as 0 for mostly during the day, 0.5 for about equal, and 1 for mostly at night.
[14] Each of these variables is coded 0 for no, and 1 for yes. For substance abuse treatment, we code both those who have entered treatment and those who have been told they should enter treatment as 1.

N	490	490	490	490
pseudo R^2	0.2301	0.0930	0.1385	0.1027

Table entries are logit coefficients with standard errors in parenthesis. All models include demographic controls for age, gender, sexual orientation, marital status, race, ethnicity, education, branch, time served, combat status, and serving overseas. * $p<0.1$, ** $p<0.05$, *** $p<0.0$

We predict that exposure will lead to greater offending and victimization and find substantial support for this hypothesis. Spending more time at bars, being viewed as a non-local, and spending more time off-base at night all predict an increase in offending behavior. Wearing one's military uniform off-base, in contrast, predicted a decrease in offending behavior – perhaps not surprisingly, as offenses committed while wearing one's uniform would likely be easier to report back to the military base. For victimization, results are more mixed. Wearing one's uniform, and spending more time off-base at night, do not predict a change in the likelihood of victimization. However, spending more time at bars, or being more easily viewed as a non-local, do predict an increase in victimization. Last, we examine how exposure to common risk factors influence offending and victimization, predicting that this exposure will increase both outcomes. We find less evidence here. Most strongly, those who have been convicted of a felony or misdemeanor at some time in their lives are more likely to offend. Whereas those convicted of a misdemeanor are more likely to be victimized. A history of childhood physical and sexual abuse predicts an increase in the likelihood of victimization while in the military, but not offending. There is little evidence to suggest a history of emotional or substance abuse influences either outcome.

These preliminary results provide some compelling evidence to give an initial description of offending and victimization among members of the military, and some important evidence to test key hypotheses. However, this study is not without limitations. Primarily, the sample is a convenience sample, not benchmarked to any representative standards of the community of veterans in the United States. While we can provide descriptive statistics showing rates of offending and victimization within the sample, we cannot necessarily draw inferences to the population of veterans as a whole. Our hypothesis testing is on firmer ground, since we have no reason to expect that explanatory factors influence behavior differently in this sample than in the population at large, but we are still limited by a small sample size. This is problematic given the overwhelmingly white and male characteristics of our sample, making it hard to draw inferences about gender or racial differences in offending and victimization. Further, we focus only on recalled experiences of veterans, some of them decades removed from service. This introduces potential bias into the results, where those who served more recently may be better able to recall their experiences than those who served farther in the past. By conducting a similar survey only on active duty military members, we will be able to alleviate these concerns.

4. Broader Impacts

The importance of this topic to both policymakers and researchers in fields of security, criminal justice, sociology, economics, and international relations is immense, but the research on the topic is lacking to a degree such that informed decision-making is not viable. As a basic science research project, we answer questions regarding criminal offending and victimization of servicemembers with host-country civilians. In foreign policy and security studies, trust and acceptance by both civilian and military populations is fundamental to both U.S. and host-state foreign policies; understanding the context in which trust and acceptance may be damaged and the extent to which it actually may be happening is important. The current National Security Strategy has several broad areas that it covers, and the U.S. basing network is fundamental to each of these areas (including protection, prosperity, maintaining peace, and dealing with regional challenges). If interactions between U.S. servicemembers abroad and local citizens are negative, this fundamentally undermines the pursuit of other U.S. goals in national, regional, and global contexts. This research will allow us to answer specific questions as to the correlates and causes of servicemember interactions with crime and pave the way to test how these experiences track with national attitudes towards the U.S. in various countries and regions. Our research speaks to policy-related decisions directly as it isolates the correlates of the most damaging aspects of overseas deployments and offer guidelines for how to craft Status of Forces Agreements and how the Department of Defense and base commanders alike can better shape the off-base environment to decrease the likelihood of negative interactions.

Beyond the direct implications of how servicemember behavior affects the long-term trajectory of U.S. power, deterrence, and escalation management, there are other implications for basic research. In

criminology, understanding the interaction between the U.S. deployment of troops and a civilian host population lacks important depth, but this unique interaction can allow us to test important theories related to opportunity, as well as examining offending, victimization and the overlap (or nexus) of offending and victimization. In terms of sociological research, we can better determine if the interactions that produce criminal outcomes are markedly different due to the interactions between these populations or if they are more sensationalized and reported upon because of the composition of the two different groups. Finally, in the economic sciences, crime offers an alternative utility path from non-criminal behavior and the avenues for crime to be profitable may be higher when there are interactions between populations with different social and political rules. Having self-reported data from U.S. servicemembers is important to several fields of academic inquiry, which do not have clear answers to these questions.

U.S. post-War primacy fell to the Cold War, but the U.S. regained it after the Soviet Union's fall; however, the change in the National Security Strategy directly identifies the nascent challenges from Russia and the People's Republic of China in a competitive world. Understanding the full extent of how micro-behavior by servicemembers magnifies and becomes national and regional issues that undermine extant security arrangements is fundamental in maintaining U.S. power projection capabilities.

In the Philippines, South Korea, Japan, the United Kingdom, and Germany, there have been notable incidents in which United States servicemembers' criminal behavior has caused local outrage, grown to national news discussion, and invigorated a debate about a country's utility in continuing to have U.S. forces deployed within their country. Understanding the dual dynamic of U.S. populations interacting with foreign populations is pivotal to understanding the likelihood of these cases continuing and the viability of long-term forever projection as a mainstay of U.S. foreign policy. Currently, the U.S. diplomatic situation that allows for the presence of U.S. troops is fragile and further points of contention can undermine current agreements. As such, having a servicemember perspective of the frequency of criminal acts both perpetrated by and perpetrated against U.S. servicemembers can both give us an understanding of how rocky the foundation of interpersonal contact is and what may be causing it. Ignoring these dynamics is perilous and threatens to undermine competing against other global powers (specifically China and Russia) as envisioned by the current National Security Strategy. Understanding the full extent of U.S. servicemember behavior is fundamental to address current challenges to U.S. deployments; if such challenges become successful, then the U.S. range of credible force projection and immediate response to militarized threats will wither. Finding new sites for alternative deployments is time consuming, enormously costly, rare, and rebasing troops domestically is even more expensive.

This project will have practical impacts on research and science beyond the direct outcomes associated with the research purpose. The composition of the project contributes to science in additional meaningful ways. The research team developed with the explicit purpose of engaging in interdisciplinary research on this topic. Each investigator hails from a distinct disciplinary background and brings unique expertise to answering the overarching research question. In addition to diversity in topical expertise, the team is purposeful in including diverse and underrepresented voices in the project. There is gender diversity among the principle and co-principle investigators, and our recruitment of a research assistant will target NSF defined groups of underrepresentation in the sciences by advertising we will take such status into primary consideration when hiring for the position. Additionally, we will use this project to host two events on Boise State's campus that will target graduate and undergraduate students. The first event will be a workshop on experimental design in surveys that will use our research to exemplify how to get meaningful data in a traditionally observational situation. Second, we will host a brown-bag research presentation for the general community that helps to disseminate our results, lessons learn, and methodological insight for the community. Finally, all three researchers regularly teach graduate level courses that deal with elements contained within this project and will incorporate the research into those courses by demonstrating a basic science research design that tests pivotal questions in our world politics, quantitative methods, and criminology graduate courses.

5. Technical Plan and Methodology

The project is staged in three 12-month periods of execution to collect unique, public data across three different domains, use experimental survey data to elicit causal responses to questions, analyze causal relationships established by our research questions and hypotheses, and advance theory defining debates in criminology and international relations. The project provides a unique nexus to test criminology theories in a novel way while also informing the micro-foundations of international relations theory. Year

1 focuses on refining existing questions to maximize their utility and responsiveness and deploying the survey to two samples that act as comparison cases: Veterans and soldiers in state-side bases. Both act as unique comparison groups to our primary target of troops deployed overseas. Year 2 executes the survey to a subsample of major bases globally. Year 3 finalizes data cleaning, analysis, and supplements the quantitative data with a base site visit, in-person interviews, and qualitative assessment.

A. Survey Design and Experiments

Our primary means of assessing these relationships is through survey methodology and experimental survey design. In criminology, we know that crime victims do not always choose to officially report crimes due to a variety of institutional, cultural, and social barriers to reporting; likewise we know that many more crimes occur than come to the attention of authorities. The comparison of crime and victimization surveys with official (most commonly police) records illustrates this gap between actual crime and officially reported crime commonly referred to as the "dark figure of crime." Furthermore, crime is a relatively infrequent occurrence in the general population so it imperative to use a methodology that suits the collection of large samples. Survey methodology facilitates large sample collection, which has direct implications for the statistical power and generalizability of findings rooted in rare or low frequency events. Thus, survey data play an important role in examining crime and victimization. With surveys, we can anonymously ask individuals about their participation in offending behavior and their experience with victimization. Direct surveys evaluating interactions between military and civilian personnel that target servicemembers generally do not exist or are not publicly available for basic research. Thus, our strategy here marks an important step in creating data that researchers presently do not have. We have carefully designed an instrument that ensures a useful set of data for both our intended hypotheses and provides a base for future research as well.

We have developed an online survey and piloted it as discussed in section 3. The survey is a flexible instrument that expands or contracts the number of items based on respondent answers and assesses several measures including demographic, socio-economic, personality, ideology, experience, victimization, and criminal incident exposure. We devote another fifteen questions that directly relate to theoretically derived hypotheses and variables. The survey takes between 20-25 minutes to complete. We have deployed the survey to veterans using a panel provided by Bovitz, Inc. We have designed the survey to be flexible and deployable to different populations while providing cross-sample comparisons.

Directly asking about respondent participation in offending and victimizing behavior is a difficult task as there are obstacles to getting truthful or accurate responses. However, the barriers to reporting servicemember infractions in the military and to civilian governments is extremely high and we expect that official counts of such behavior to be biased downward substantially, especially regarding more serious infractions like sexual assault. For this reason, the choice to focus primarily on survey data is advantageous in examining our topic among this particular population.[15] Additionally, we have taken several steps to increase the quality of information we get from respondents. When asking about particular interactions, we use descriptions of the illicit behavior instead of just the title of the offense. For example, when asking if a respondent ever witnessed another servicemember commit larceny, we ask "While assigned to/living on a base, did you ever witness another servicemember steal or take without permission something from a civilian that did not belong to them?" Using the technical term may obfuscate responses while a description will more effectively prompt the respondent. We use similar strategies for questions about burglary, assault, sexual assault, drug related crimes, and prostitution.

We also plan to collect detailed data from each individual who reports each type of offending or victimization. If someone answers that they have not offended/been victimized to a question, they move on to a question about the next behavior. If they answer yes, they are then asked to estimate how many times they committed this act, if they did it to more than one person, their relationship with anyone they committed this offense against, whether the actions were ever reported, and what, if any, consequences there were for this action. This creates a rich dataset, focused not only on *whether* an individual committed an offense or was victimized, but important details about how various offenses were treated.

---

[15] An in-depth discussion on the advantages and disadvantages of official record data and survey data in crime research can be found in Mosher, Miethe, and Hart (2010).

Additionally, the survey contains experimental questions to evoke how cross-cultural differences may elicit permissive attitudes towards particular in- or out-groups relative to the U.S. military. One set of experiments include scenarios that examine reactions to bribery, the effect of wearing a uniform or civilian clothing, and domestic or abroad situations. The variation in the questions and the scenarios can facilitate understanding how particular circumstances make offending or victimization more likely. Additionally, there is a high likelihood that respondents will not openly admit to participating in some behaviors or being victims of crimes that they have been party to. A consistent method to elicit truthful accounts from people is to use list experiments, which have been implemented to study outcomes where social desirability influences responses, such as racial attitudes (Sniderman and Carmines 1997), drug use (Coutts and Jann 2011), and voting fraud (Ahlquist, Mayer and Jackman 2014) . For this research, we use this approach to include and exclude various kinds of offending behaviors that individuals would be likely and not likely to admit to directly, but instead list four to five items and ask them how many they have engaged in. By removing or adding a fifth item to a control and treatment group, we can estimate the frequency of respondents engaging in that behavior without asking them directly. We can use this data to both uncover data that is hard to observe (likelihood respondents are misrepresenting the truth) and compare that rate to the direct questions about similar behavior. This also allows us to compare our results with official data by the United States or other countries to get a better baseline of offending behavior by U.S. personnel. The researchers in this project have had considerable success both with online surveys regarding U.S. military matters (Allen et al. 2020), examining sensitive topics like prejudice (Rhodes-Purdy, Navarre and Utych 2020) and victim services (Gillespie, King, Bostaph, & Goodson 2019; Richards, Gillespie, Kafonek, & Johnson 2019), analyzing secondary survey data relating to the overlap of victimization and offending (Richards & Gillespie 2019), and conducting experimental studies on discrimination (Utych 2018; Engelhardt and Utych 2019; Utych, Navarre and Rhodes-Purdy n.d.).

In Wave 1, after conducting focus group (a panel of experts on the military and military culture to discuss survey, implications, and framing) feedback on the pilot survey, we deploy it to a larger sample than the pilot and survey 1,000 veterans. In the first quarter of Year 2, we will deploy the survey to one to two (depending on commander willingness to participate) stateside bases to build a comparative sample of servicemember experiences while stateside. In the 2nd and 3rd quarter of Year 2, we then deploy the survey to a subset of the 35 major global installations. In our data analysis, we draw upon each survey individually and collectively to provide evidence for our theoretically derived hypotheses.

B. Survey Wave I

Survey Wave I will distribute the survey to a population of 1,000 veterans within the United States who are currently not on active duty. After getting quotes from relevant firms, we will distribute the survey online to the firm-solicited panel. We will balance the panel to mimic existing servicemember demographics to include approximate representation for gender, sexual orientation, and branch. This survey will provide a basis of comparison to examine both people's recalled experiences as well as their relative rate of reporting compared to those who are engaged in active duty. This research alone may provide foundational work in criminology as it presents an unexplored, but important sample.

C. Survey Wave II

In the first quarter of Year 2, we will deploy the second wave of the survey. The second wave focuses on servicemembers currently deployed stateside and asks them about their relationship with the local community within the United States. We will target up to two bases for comparative purposes and aim for geographically distinct parts of the United States. To encourage commander acquiescence for our surveying request, we will keep the base anonymous in our research and only refer to it by vague geographic description such as "a base located in the Southwest of the United States." Additionally, as per recommended best practices by the Department of Defense, we will propose to email the survey to a random sample of possible respondents to minimize the sense of survey overload by servicemembers. We currently have one target site where we are developing a relationship to conduct a Wave II survey and have several potential options for a second location.

D. Survey Wave III

Survey Wave III occurs during the 3rd and 4th quarter of Year 2. We will contact the appropriate public relations person (or other relevant contact point if there is no PR position) at the 35 major U.S. bases globally and ask for permission to survey their servicemembers. Like with the stateside bases in Wave II, we will keep the bases anonymous barring larger geographic descriptions and also use randomized

sampling to recruit respondents. We do not expect that all 35 bases will comply, but our research methodology and expense estimates are robust for any number of willing bases between one and thirty-five. However, if our initial list of 35 does not yield any participants, we will proceed to contact an additional 35 facilities as alternative options. As such, any subsample of the major bases will prove sufficient for analysis. This final research wave will allow us to assess the base rate of offending (as self-reported by military members across various ranks), compare it to what kinds of crimes receive national and international attention, and compare the rates to the two comparison groups of veterans and those deployed domestically. Our goal is to recruit between 5-10% of the servicemember population at any given base. We will pair the results of this survey with previous research on community perceptions of servicemembers, proximity to bases, and victimization experiences (Allen et al. 2020).

E. Base Site Visit

In the first quarter of year 3, we will visit a European (Germany, Italy, or the United Kingdom) or East Asian (South Korea or Japan) country to do select interviews with servicemembers, internal base stakeholders (officials), and external base stakeholders (e.g. local government officials, state department) at a military base. This qualitative data collection effort will target a base that we have surveyed in Wave III, or if no base fits that criteria, we will target a base that has a sizeable presence in a community (e.g. Rammstein Airforce Base in Germany). Additionally, we will consider other factors in the site visit including size of deployment and national news coverage. The goal of this component is to gather qualitative data to add additional texture to interpreting our quantitative results. Additionally, this will serve as a culminating opportunity for base leaders and local officials to provide input into our inferences. If desired by the on-site stakeholders, the team will also write a report analyzing our findings in the context of the base and any suggestions or inferences we can draw about the base's unique circumstances.

F. Data Analysis

Our data analysis will use quantitative econometric modeling to test our hypotheses. The basic statistics from the surveys will provide useful analysis about the trends among the three different groups that we survey. This basic-level data will prove valuable in presenting the data to public audiences, especially for high-impact public articles like those found on *The Conversation* and *The Monkey Cage.* The second stage of our analysis will use regression techniques, ranging from standard ordinary least squares to maximum likelihood estimation depending on the dependent variables we evaluate, to provide correlative evidence for our hypotheses. Finally, the experimental questions will allow us additional controls to provide causal evidence about the relationship in-group and out-group attitudes as well as the conditions that makes adverse behavior and experiences more likely to occur. The experimental questions present scenarios where a key item alternates a theoretically derived item that we think will elicit different responses based on which item we present. For example, one question we provide in the pilot asks about a servicemember's willingness to assist someone in transporting stolen goods for payment. The question varies whether the servicemember is in uniform. Our expectation is that the rate of people answer positively to this question is low, but there are some people that would be willing to do this. Additionally, the rate at which people respond positively to the scenario is conditional upon whether they are in uniform or not due expectations from our criminology theories. While most survey methods can only provide observational and correlational data, experimental methods provide causal evidence with carefully worded questions and variation. Each of the five experimental questions here serve the potential of offering a standalone research manuscript dependent upon our findings.

7. Dissemination Plan

We will target dissemination of our research through both academic and popular channels. First, for academic channels, we will target one conference a year presenting the work to both criminology and international relations scholars. The conference presentations will provide both avenues for advertising the research and data to proper channels while also receiving critical feedback as we move towards finalizing data analysis. We propose conference presentations annually for the duration of the project.

Second, we will pursue publication in two journals, one targeting criminology audiences with the other targeting international relations audiences. The first avenue will allow us to demonstrate the novel data while also illustrating the critical theory testing we are able to do in a criminology framework by examining in-group/out-group behaviors in crime offense and victimization. This research is novel to criminal justice research and provides a ripe avenue for us to test theories about opportunity with potential implications for economic theories of crime as utility maximization and behavioral/political psychology.

For foreign policy and international relations audiences, the research offers an avenue in pursuing the microfoundations of power and power projections. Understanding the positive and negative externalities of U.S. troop deployments abroad is a subfield in its infancy and our contribution provides ample evidence and data for understand how servicemembers participate in and become victims of illicit activity. These interactions have proven to be catalysts for anti-basing movements in several countries and our research will provide insight to understanding those trends.

For broader audiences, we expect to pursue publishing our preliminary findings in high-impact online articles. Specifically, we will craft articles for online venues that target the nexus between basic research and contextualizing that information through current events like *The Conversation*. Pursuing such avenues will raise the visibility of our research for the general public, policymakers, and other researchers outside of criminology and international relations. Such pursuits, in addition to the basic research publications within academia, increases the likelihood that our data will reach other interested scholars who wish to build upon our foundational research.

8. Deliverables

Our goal is to provide the following deliverables. Any data published from the project will be made available publicly to allow researchers and community members to build from our research.

- The first nationally representative survey of serving and recent veterans that examines their self-reported involvement in criminal activities, both as offenders and victims.
- A new survey data set containing a survey deployed to stateside bases that mirrors the nationally representative sample but takes into account individuals' experiences at their current deployment. This survey will be valuable on its own and serve as a baseline for our international survey.
- The first survey of cross-base experiences by U.S. servicemembers globally. The survey will be similar to the one deployed stateside but instead look at the context of interacting with non-American populations globally.
- Two articles that target high impact blog or newspapers sites such as the *The Conversation* or *The Monkey Cage.*
- Two peer reviewed articles submitted to journals in criminology and international relations.

9. Project Management and Timelines

A. Team Management

The team will be divided into separate tasks based on co-investigator strength with the Principle Investigator being responsible for management and delegation of new tasks as they arise. In addition to the three investigators, the team will include one graduate student hired from either the criminal justice or political science master's programs. Primary responsibility for training and mentoring for the graduate student will be by Lane Gillespie when we have a criminal justice student and Michael Allen when the team includes a political science graduate student. The other two members of the project will be engaged in co-mentoring as the student's interests aligns with the members of the team. The team will organize workflow and communication through Discord, a threaded-chat program which allows for file sharing, collaboration, and real time text and voice conversation. Additionally, the team will have a standard biweekly meeting to discuss immediate and long-term issues as well as evaluate project progress and remedy any existing shortfalls in expectations through additional delegation or re-assignment of work. The meetings will occur on Zoom but will default to in-person meetings when feasible.

B. Relevant PI experience, education, and project management roles

a. Allen

Associate Professor in the School of Public Service, Boise State University. Research addresses the positive and negative externalities of US troop deployments, and the conflict and cooperation between powerful and weak actors in the international system. Allen has published widely in assessing the effects of troop deployments including on defense expenditures, regional influences on troop deployments and defense expenditures, servicemembers effect on crime rates, and using surveys to demonstrate how troop deployments affect perceptions of the U.S. military, government, and people. Allen has served as Principal Investigator on funded work related to troop deployments (FOA#W911NF-18-1-0087). His methodological training is in quantitative methods. Allen's primary responsibilities will be in developing international relations (IR) theory, connecting empirical results to IR theory and policy, lead development of the IR-focused paper, co-manage and mentor graduate students, lead development of relevant public articles, coordinate the project's academic output, manage the budget in coordination with Boise State

OSP, monitor funded research progress, delegate additional work to capture any shortfalls in productivity, lead official reporting compliance, and coordinate contact and communication with military bases.

b. Gillespie

Associate Professor in the School of Public Service, Boise State University. Research addresses victimization, gendered violence, and program evaluation. Gillespie has contracted with state government departments to provide research and evaluation relating to victimization, in addition to contributing peer-reviewed research on program evaluation, victim-offender overlap, and media representations of crime victimization. Gillespie will co-manage and mentor graduate students, oversee instrument design and implementation, construct relevant criminology theoretical frame, lead development on the criminology-focused paper, and connect results to those frames.

c. Utych

Assistant Professor in the School of Public Service, Boise State University. Research addresses political psychology and behavior, with a focus on experimental and survey methodology. Utych's primary responsibility will be in instrument design, human subjects compliance, survey deployment, experiment implementation and analysis, and general quantitative analysis of results. Utych has extensive experience collecting original data using web-based surveys and has experience programing complex survey logic. Utych has extensively published using original survey and experimental data and brings expertise to the team on design and analysis of observational and experimental survey data.

d. Graduate Student

We will recruit and fill at the beginning of the project. The graduate student will be responsible for data collection, data cleaning, data coding, information gathering (e.g. details about targeted bases domestically and abroad), additional coding of data, attend meetings and take notes, and proofing or copyediting documents. We will also encourage and mentor the student in using their work on this project for their own research.

C. Project Timeline

Project Tasks and Timeline

	Year 1				Year 2				Year 3			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Formative Tasks												
Host virtual focus group	■											
Contact Information Gathering		■										
Contact Domestic Base		■	■									
Contact Global Bases				■	■							
Base Site Logistics Planning							■					
Implementation Tasks												
Retrospective Survey		■										
Domestic Base Survey					■							
Global Base Survey						■	■	■	■	■	■	
Data Cleaning			■				■	■			■	
Base Site Visit										■		
Data Analysis			■	■			■	■	■	■	■	■
Dissemination Tasks												
Conference Presentations (3)			■			■				■		
Manuscript Submission (2)					■							■
Online Blog Article (2)							■	■				
Workshop/Public Forum							■			■		

Year One
- Host virtual focus group of experts on the military and military culture to discuss survey, implications, and framing
- Deploy a retrospective, online survey targeting the national population of currently serving servicemembers as well as veterans
- Compile list of contact information for targeted global bases for year 2
- Conference
- Finalize first manuscript, submit to at least one journal. Target one academic journal in criminology (e.g., *Criminology and Public Policy or British Journal of Criminology*).

Year Two
- If Year 1 paper is not published, submit to two additional outlets
- Conference
- Draft and submit article a high impact blog (*e.g. Monkey Cage*) discussing research implications
- Deploy survey to at least one domestic base to serve as a comparison group for global surveys
- Contact approximately 35 bases to survey globally
- Deploy survey to subset of 35 bases
- Host workshop on experimental survey design at Boise State University
- Establish logistics for base site visit

Year Three
- Site visit of one high profile military base and surrounding area relevant to the study
- Continue survey for any bases that delay granting permission
- Final cleaning of survey data.
- Conference
- Target one public oriented blog site (e.g. *The Conversation)* for public discussion of final results
- Target one academic journal in international relations *(e.g. International Studies Quarterly or Foreign Policy Analysis)* for publication of ancillary hypotheses
- Host public forum on research at Boise State University

D. Project Risks

One of the current risks/barriers is related to COVID-19 response and implication for research activities. This project is well adapted to proceed in the context of limited person-to-person interactions. We are primarily relying on collection of online survey data and have already adapted year 1 focus groups to be virtual rather than in-person (a strength as we can include individuals not proximate in physical location). The COVID-19 response has strained many organizations and the timeline of this project allows for the study population and research team to make adaptations prior to international data collection. In our conversations with survey firms on other projects, online survey response rates have gone up during the pandemic and may increase our expected response rate.

Base buy-in will be critical to success. Preliminary contact with local servicemembers and bases has been positive and show promise for establishing relationships and buy-in from military leaders. We can garner meaningful, publishable, and high-impact results from only one base abroad as it would provide a comparable foil to our domestic sample. We are attempting to alleviate the risk of not gaining access to survey a base by reaching out to 35 major bases abroad. If somehow all 35 bases reject our request, we have a backup set of smaller bases that we will reach out to in year 2 as alternatives. However, given the strength of our initial work to establish relationships with leaders at military bases and our success in the conducting interviews on base sites (Allen et al. 2020), we feel confident that we will be able to secure participation, especially given our positive relationship with Military Science faculty at Boise State. Cognizant of survey fatigue, we will use our pilot survey results to streamline the survey. As stated in the survey description, we will offer randomized sampling of participants to minimize the burden on any given base and increased the likelihood of buy-in. Finally, if our initial plan and backup plan both fail, we will redirect funds from our base visit plan and instead use those funds to procure a sample of actively serving, overseas personnel to deploy the survey to conduct our analysis on a broad sample of servicemembers from across the globe. We expect this sample to have less localized depth and be more costly (hence the redirection of funds) but will provide ample opportunity to complete the project.

10. Results from Prior NSF Support

The investigators have not received prior NSF support.