Militarization and Perceptions of Law Enforcement in the Developing World: Evidence from a Conjoint Experiment in Mexico

Gustavo Flores-Macías  
Cornell University  
gaf44@cornell.edu  

Jessica Zarkin  
Cornell University  
jz684@cornell.edu  

DRAFT June 5, 2020

Abstract
Although a growing body of research suggests that the constabularization of the military for domestic policing is counterproductive, this increasingly prevalent policy has nonetheless enjoyed widespread support in the developing world. This study advances our understanding of the consequences of militarization for perceptions of law enforcement: whether visual features shape perceptions of effectiveness, respect for civil liberties, proclivity for corruption, and acceptance of militarization in one’s own neighborhood. Based on a nationally representative, image-based, conjoint experiment conducted in Mexico, we find that military weapons and uniforms enhance perceptions of effectiveness and respect for civil liberties. We also find that gender shapes perceptions of civil liberties and corruption, but we find no effect for skin color. The findings suggest that a central feature of militarization linked to greater violence—military weapons—is paradoxically a key factor explaining favorable attitudes, and that women can play a crucial role in improving perceptions of law enforcement.

Keywords: Militarization; policing; law enforcement; perceptions; conjoint experiment; effectiveness; civil liberties; Latin America; Mexico.
Across the world, governments have increasingly militarized law enforcement. Although in the developed world militarization has taken place in the form of police adopting characteristics of the armed forces—as with the proliferation of SWAT teams and the use of military gear in local police departments—in broad parts of the developing world it has also taken the form of constabularized militaries taking on domestic law enforcement roles. The constabularization of the armed forces has become prevalent in many Latin American countries, such as Bolivia, Brazil, Colombia, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Peru, and Venezuela, as well as some southeast Asian countries, including Indonesia and the Philippines (Jakarta Globe 2017; Moore 2017). In all of these examples, the armed forces conduct domestic law-enforcement tasks traditionally reserved for civilian police in democratic contexts, including patrolling neighborhoods, staffing checkpoints, conducting arrests, and serving as prison guards.

Although a growing body of research suggests that the constabularization of the armed forces for domestic policing in the developing world is ineffective at best and counterproductive at worst (Flores-Macías 2018; Flores-Macías and Zarkin 2019; Lessing 2017; Osorio 2015; Pérez Correa et al 2015),¹ the policy has enjoyed widespread public support in Latin America (Bailey et al 2013). According to the Americas Barometer (2019), over 60% of Latin Americans approved of the military participating in law enforcement in 2014.

However, the relationship between constabularization and public opinion remains poorly understood. While some research has begun to explore public attitudes toward the militarization of law enforcement, it has dealt exclusively with the US and has therefore focused on attitudes toward police becoming more like militaries (e.g., Moule Jr. et al 2019). Further this research has been

¹ For research with comparable findings for the militarization of police in the United States see American Civil Liberties Union 2014; Baker 2011; Bickel 2013; Delehanty et al 2017; Lawson Jr. 2018; Mummolo 2018. For an exception see den Heyer 2013.
mostly correlation-based and qualitative in nature (e.g., Fox et al 2018; Lockwood et al 2018). In contrast with the growing interest in the trend towards “tough-on-crime” policies in American politics and other industrialized democracies (Enns 2016; Jennings et al 2017; Roberts et al 2003; Wenzelburger 2016), the study of punitive populism in the developing world has lagged considerably. Scholars have yet to understand the consequences of constabularization in general, and for public opinion in particular.

To advance our understanding of constabularization in the developing world, we pre-registered and embedded an image-based conjoint experiment in a nationally representative survey in Mexico in August 2018. Respondents were presented with two similar images of security personnel. Controlling for relevant factors, including pose, size, facial expression, body, and background, these images randomly varied in four attributes: uniform, weapon, gender, and skin color. Respondents were then asked to rate each image in terms of perceived effectiveness, respect for civil liberties, proclivity for corruption, and support for that person conducting law enforcement in the respondent’s neighborhood.

This study advances existing literature by (1) evaluating attitudes toward tough-on-crime policies beyond the US context, (2) testing whether visual features of constabularization affect perceptions of law enforcement regarding effectiveness, respect for civil liberties, corruption, and support for presence in one’s own neighborhood, (3) studying constabularization in combination with other physical attributes that might also shape citizens’ perceptions, and (4) employing images rather than text to more closely approximate reality. By providing a first step in understanding the relationship between constabularization and attitudes toward law enforcement, these findings

---

2 The hypotheses, procedures, and models presented here were conducted as pre-registered.
contribute to the literatures on punitive populism, police-society relations, and civil-military relations in the developing world.

We find that both military uniforms and military weapons increased perceptions of effectiveness and respect of civil liberties. We also find that gender had no effect on perceptions of effectiveness, but female individuals increased perceptions of respect for civil liberties and reduced perceptions of corruption. We did not find an effect for skin color. Further, we find that military weapons increased support for constabularization in the respondent’s neighborhood, while male images decreased support. These findings suggest that female security personnel can enhance perceptions of respect of civil liberties and integrity, but also that a key feature of militarization associated with greater levels of violence—the use of military weapons—is a central factor contributing to the favorable attitudes among the public.

This article is organized as follows. The first section presents an overview of the literature that can help inform hypotheses about public perceptions regarding the four features investigated in this article (uniform, weapons, gender, and skin color). The second section discusses the case selection and research design. The third section presents the results from the image-based conjoint experiment conducted in Mexico. The final section concludes by reviewing some policy implications for the developing world.

**Punitive Populism and the Popularity of Militarization**

Punitive populism refers to the promise of easy solutions to address society’s problems related to crime and law enforcement (Pratt 2007). One of its main forms is politicians’ favoring tough-on-crime approaches to try to gain the population’s political favor, even when the effectiveness of such policies is in doubt (Flom and Post 2016). Punitive populism tends to be politically expedient because punitive approaches resonate among publics in need of solutions to pressing problems.
Examples of policies meant to deter crime because of their severity include so-called three-strike laws, mandatory sentences, capital punishment, and the militarization of law enforcement.

Most of the literature on punitive populism and public attitudes has focused on incarceration policies in industrialized countries (e.g., Enns 2016; Jennings et al 2017; Lerman and Weaver 2014), but our understanding of the militarization of law enforcement remains limited even for that part of the world. Research on its prevalence, causes, and consequences remains underdeveloped, with a few scholarly studies on attitudes toward militarization focusing on individual-level correlates of support—including respondents’ gender, party ID, and education—for militarized policing in the developed world (Fox et al 2018; Lockwood et al 2018). Further, findings have often been based on convenience samples, such as research by Wyrick (2013), who found that the militarization of police is associated with decreased trust in the police among a college-student sample. An exception is Mummolo’s survey experiment (2018), which found that militarized police can inflate perceptions of crime and depress support for police funding and presence.³

Although these mostly US-centered studies have begun to scratch the surface to understand how citizens view the militarization of police, we know even less about attitudes toward the constabularization of the armed forces for domestic policing, especially in the developing world. We still need to understand whether constabularization affects attitudes toward law enforcement and which factors might shape perceptions favorably. Although the political science literature has made advances regarding democratic policing (Bailey and Dammert 2006; González 2017; Moncada 2009), criminal violence (Cruz and Durán-Martínez 2016; Osorio 2015; Snyder and Durán-Martínez 2009; Yashar 2018) and victimization (Bateson 2012; Berens and Dallendörfer 2019; Zechmeister and Zizumbo-Colunga 2013) in Latin America, remarkably little research has

³ Mummolo (2018) used survey experiments that randomly assign images of police officers in news reports.
been conducted in the developing world on punitive populism in general and public attitudes toward constabularization in particular (Brown and Benedict 2002). This is a major oversight, especially in the context of the growing trend toward constabularization of the armed forces in the global south (Flores-Macías and Zarkin 2019).

**Latin America’s Constabularized Militaries**

The constabularization of the armed forces for domestic policing has become generalized in Latin America. Not only has the region experienced the generalized trend of police adopting military weapons and tactics, but in several countries soldiers have become permanent fixtures in the daily law enforcement landscape. In Mexico, for example, more than 67,000 troops have participated in widespread policing operations since 2006 (Ordorica 2011). In Brazil, the armed forces have increasingly assisted in anti-drug efforts in the Amazon and helped state governments regain control of urban areas, with soldiers patrolling city streets nearly 100 days in 2016 (*The Economist* 2017). In Honduras, the government created the Military Police for Public Order (PMOP) in 2013 to combat drug trafficking and close to 6,000 soldiers take part in joint Army-police operations—a number that has reached 21,000 during electoral years (Secretaría de Defensa Nacional de Honduras 2013). Even countries that historically have lacked a military, like Costa Rica and Panama, are considering proposals to militarize law enforcement.

---

4 Although not strictly about public attitudes, Chevigny’s overview (1995) on the rise of the fear-of-crime politics in Latin America, Flom and Post’s (2016) study on political incentives for punitive populism in Buenos Aires, and Holland’s (2013) discussion on the use of tough-on-crime (*mano dura*) policies to boost electoral support in El Salvador are exceptions.
Figure 1. Support for Militarization of Law Enforcement in Latin America.

Note: Bars indicate support for whether “the armed forces should combat crime and violence,” based on data from the Latin American Public Opinion Project (LAPOP) gathered in the 2014 wave of the Americas Barometer. The 2012 wave shows similar levels of support.

Governments have justified the constabularization of the armed forces by pointing to several shortcomings of police, including their ineffectiveness, disregard for civil liberties, and corruption, and the popularity of the policy has facilitated its adoption. As Figure 1 shows, a majority of respondents in every Latin American country supports the armed forces becoming involved in law enforcement tasks. This is the case even in countries with historically low levels of crime, such as Chile and Uruguay. The more we understand the logic behind public support for constabularization, the better we can inform the public about the policy’s virtues and flaws.

Appearance as Heuristic for Perceptions

Appearance has been found to serve as a low-information heuristic that people rely on to form opinions about others’ competence, honesty, intelligence, or trustworthiness (Benjamin and Shapiro 2009; Zebrowitz et al 2002). The political science literature has found that an individual’s appearance affects others’ attitudes and behavior (e.g., Lawson et al 2010; Valentino et al 2002;
Weaver 2012), even after brief exposure to a visual stimulus, such as a still image. For example, Lawson et al (2010, 561) found that even snap judgments—“perceptions formed by looking briefly at images of candidates’ faces”—can have an effect on people’s support for a particular candidate, and that these perceptions are highly predictive of actual electoral results.

Building on existing literature on how individuals’ appearance affects others’ perceptions, we evaluate whether the type of uniform, weapon, gender, and skin color have an effect on perceptions regarding possible sources of support for constabularization, including effectiveness, respect for civil liberties, and proclivity for corruption. We also evaluate the effect of uniform, weapon, skin color, and gender on the degree to which respondents support the individuals in the images conducting law enforcement in their own neighborhood.

Military Uniform

Clothing communicates different things about the wearer (Harris et al 1983). Uniforms are no exception: they affect how others perceive the person wearing them. Bickman (1974), for example, finds that people wearing private guard uniforms obtained more compliance with their requests than people who dressed as civilians, in part because the uniform can be a symbol of legitimate authority. Since we are not aware of any studies comparing military uniforms with those of police, we turn to the few existing studies that compare police with civilian attire. For example, scholars have found differences in the public’s perceptions of police wearing traditional (i.e., non-paramilitary) uniforms compared to those in civilian attire. Traditional police uniforms increase perceptions of professionalization and even reduce aggression towards officers (Tenzel and Cizankas 1973; Tenzel et al 1976; Bell 1982; Gundersen 1987), inspire trust and induce subordination (Singer and Singer 1985; Balkin and Houlden 1983). Mauro (1984) also finds that police officers wearing traditional compared to civilian uniforms are perceived as “better”, more helpful, and more competent—generating a halo effect.
While these studies provide important initial evidence to the claim that people’s perception can vary based on differences between police and civilian uniforms, they are less informative to understand the developing world, where soldiers coexist with civilian police in law enforcement. Whether perceptions might vary between police and military uniforms remains to be tested. Additionally, these studies do not account for other aspects of an individual’s appearance beyond the type of uniform worn. Other characteristics, such as the type of weapon, gender, and skin color might also serve as heuristic for perceptions and thus need to be considered simultaneously when studying attitudes toward constabularization.

**Military Weapon**

As with the uniform, the weapon employed in conducting law enforcement tasks can make a difference in shaping perceptions. A “weapons effect” has been documented in the psychology literature, in which the presence of weapons can shape behavior, whether increasing aggression or eliciting obedience (Berkowitz and Lepage 1967; Boyanowsky and Griffiths 1982). For example, based on a field experiment to study extortion along truck routes in Indonesia, Olken and Barron (2009) show that truckers offered larger bribes to officers whose weapons were visible, compared to those whose weapons were concealed.

However, the literature on how weapons affect perceptions of police or the armed forces is scarce and unable to distinguish between the effects of uniform and weapon. In particular, Mauro (1984) found that police officers with a traditional—i.e., non-militarized—uniform and a visible weapon were perceived as more competent, active, honest, helpful, and “good” than officers wearing a civilian-style uniform (blazer) and no visible weapon. However, no attempt was made to distinguish between the effects of the uniform and the weapon, which were conflated in the study.

**Gender**
That a differential exists in the way men and women are perceived while performing the same job has been long established (McKee and Sherriffs 1957). While considerable research in political science on gender-based perceptions has focused on attitudes toward candidates running for office (e.g., Huddy and Terkildsen 1993; Kahn 1992) or in office (Schwindt-Bayer and Reyes-Householder 2017), surprisingly little has been written about state bureaucracies, such as the police or the military. Although studies on gender and policing exist, their emphasis has been on the structural barriers policewomen face (Brown 1998), their attitudes toward gender issues (Page 2008), and their own views about their police duties (Burke and Mikkelsen 2005).

Research on the public’s perceptions of women in the police and military has been sparse and with mixed findings. On the one hand, Leger (1997) found in a US study that the majority of respondents do not penalize female officers for their perceived physical ability and competence in policing. However, other US studies have found that women are perceived as less effective than male counterparts when conducting most policing tasks (Breci 1997), but also less corrupt (Barnes et al 2018), less aggressive, more approachable, and friendlier (Simpson 2017). In developing contexts outside of the US, Karim (2017) found that increases in the ratio of women to men in police forces improves trust in Liberia, and Córdova and Kras (2019) found that women’s police stations in Brazil result in higher levels of perceived legitimacy among women. A similar disparity in perceptions has been found among the armed forces, with women viewed as less suitable for combat roles in the US military (Drake 2006; Hicks 1978; Segal et al 1977). In the developing world, Calderón (2010) found through an ethnographic study that women are perceived as fragile and less effective in Ecuador’s military.

**Skin color**

A broad literature has documented how skin color affects perceptions of competence, leading to double standards placed on disadvantaged groups (Foschi 2000). In the context of policing,
research has uncovered bias in police behavior toward different ethnic groups (White 2015), but the literature has remained surprisingly silent regarding how law enforcement personnel’s own skin color might affect public perceptions about them (Nanes 2018).

The few existing studies point to mixed findings. A study of three communities in Washington, DC suggests police were perceived as “blue” rather than through racial lens (Weitzer 2000). Yet, a study by Cochran and Warren (2012) in the US suggests that an officer’s race is an important factor in shaping citizen perceptions of the legitimacy of encounters during traffic stops, particularly for minority citizens, with encounters with non-white officers seen as less legitimate on average. The literature is even more limited outside of the US, where insights about skin color in law enforcement are virtually non-existent. Notable exceptions are Weitzer and Hasisi’s (2008) study about perceptions of ethno-religious differences among police in one police district in Israel and Nanes’ (2018) research on demographic inclusion in Israel and Iraq. Their results provide some evidence that people prefer officers from their own ethno-religious groups and that perceptions of police inclusion affects how citizens relate to the state.

HYPOTHESES

We draw on these insights from the literature to inform hypotheses regarding the four factors’ effects on perceptions of effectiveness, respect for civil liberties, propensity for corruption, and support for conducting law enforcement in one’s neighborhood. Since the literature on these issues in the developing world is even more scarce than research focused on industrialized democracies, we extend the expectations from the literature to these previously unexplored dimensions in the Latin American context as follows:

Uniform

Although the armed forces’ reputations have been tarnished in many Latin American countries because of their role in authoritarian rule, the armed forces are more highly regarded than
the police across the region (Bailey, Parás, and Vargas 2013). Therefore, we expect the military uniform to elicit favorable perceptions across several dimensions: greater effectiveness, less corruption, and more support for conducting law enforcement in one’s neighborhood. Given the tradeoffs between effectiveness in law enforcement and respect for civil liberties (Comey 2006), and because of the military’s involvement in widespread human rights violations, we expect the military uniform to increase perceptions of abuse.

**Weapon**

Since weapons are a symbol of authority (Olken and Barron 2009), we expect a visible military-grade weapon to elicit favorable perceptions regarding several dimensions: greater effectiveness, less corruption, and more support for patrolling one’s neighborhood. Given the tradeoffs between effectiveness and respect for civil liberties, we expect the assault rifle to increase perceptions of abuse.

**Gender**

Female stereotypes characterize women as weaker or less authoritative than men (McKee and Sherriffs 1957), which leads us to expect lower perceptions of effectiveness. However, women are also perceived as more caring, honest, and less threatening (Barnes et al 2018), which leads us to expect greater perceptions of respect for civil liberties, less corruption, and greater support for their presence in one’s neighborhood.

**Skin color**

Since skin color correlates with socioeconomic status in Latin America (Trejo and Altamirano 2016), we expect lighter skin to elicit favorable perceptions across dimensions: greater

---

5 Military rule—both left-wing as in Peru and right-wing as in Argentina, Brazil, Chile, and Uruguay—was characterized by widespread human rights abuses. More recently, the armed forces have also been involved in grave human rights abuses as in Colombia’s false positives scandal and Mexico’s massacre in Ayotzinapa.
effectiveness, respect for civil liberties, less corruption, and more support for patrolling one’s neighborhood.

CASE SELECTION AND RESEARCH DESIGN

We followed an image-based conjoint design to simultaneously test the effect of military uniform, military weapon, gender, and skin color on attitudes toward law enforcement personnel. Choice-based conjoint analysis has been widely used in marketing because it allows researchers to understand which characteristics of a product are most important to consumers (Shamir 1995). Conjoint analysis is an excellent tool to use in political science to understand precisely which combination of attributes are favored over others, since it enables researchers to estimate component-specific treatment effects simultaneously (Hainmueller et al 2013).

Rather than presenting respondents with a text-based list of attributes for each individual, as is most commonly found in the political science literature (e.g., Carnes and Lupu 2016; Hainmueller and Hopkins 2015; Horiuchi et al 2018), we conducted an image-based experiment. We consider this an improvement over text-based experiments because images more closely approximate real-world situations in which respondents encounter security personnel. Although images might remain unable to elicit the same reaction as a real-world encounter would, the image-based approach enhances ecological validity compared to text since most people’s encounters with law enforcement are visual, passive, and without any formal interaction or engagement (Simpson 2017).

The image-based conjoint experiment was embedded in a nationally representative omnibus survey in Mexico between August and October 2018. The omnibus survey was funded through an open call for proposals by a university’s social science experimentation lab and fielded by a Mexican polling firm. Respondents were selected based on a nationally representative, probability-based
sample. The survey was conducted face-to-face at the respondent’s home, and a total of 1,206 of people were surveyed.

We conducted the experiment in Mexico for three main reasons. The first is that it is a country where both the police and the armed forces perform law enforcement tasks on a regular basis, which is important for the ecological validity of the experiment. Although the armed forces had assisted in anti-narcotic efforts since at least the 1960s, in 2006 President Felipe Calderón (2006-2012) sharply increased the military’s involvement in law enforcement. More than 60,000 troops have been constabularized across the national territory for this purpose, staffing checkpoints, patrolling urban and rural areas, conducting arrests, and in some municipalities replacing local police departments altogether. Second, Mexico is not atypical in this regard. Rather, it is one of several Latin American countries where the armed forces regularly participate in law enforcement, including Colombia, El Salvador, Guatemala, Honduras, Nicaragua, and Venezuela. Thus, Mexico presents a context in which the survey questions are meaningful and where the findings are likely to travel to other countries. Third, the research on perceptions of law enforcement in Mexico is virtually non-existent, and this study’s findings can shed significant light on virtually uncharted territory.\(^6\)

The first part of the questionnaire included a series of pre-treatment questions on baseline measures of interest, including gender, age, income, education, victimization, ideology, party ID, and trust in the military. After answering the socioeconomic and demographic questions, respondents were asked to read a short sentence with instructions explaining that they would look at images and then proceed to answer some questions about them. Following the statement, respondents were presented with two similar images side-by-side. The images randomly varied in

\(^6\) To our knowledge, the only study that exists (Brown et al 2006) relied on a convenience sample of law school students in the northern state of Tamaulipas and asked about attitudes toward municipal, state, and federal police.
the four attributes of interest (uniform, weapon, gender, skin color) for a total of 16 different profiles, but maintained other relevant factors constant—e.g., body, pose, size, height, complexion, facial expression, background (see table 1). These images were created using Photoshop to make sure that they were identical in every respect except the four attributes of interest.

**Table 1. Images of the 16 profiles**

As shown in table 1, the four features varied in subtle but important ways as follows. The police version of the uniform included features typically associated with police, such as being all blue in color, showing a police badge on the chest, and carrying a police baton on the belt. The
military uniform replicates the police uniform in all respects, but is olive green with camouflage, has no badge, and carries no baton. Both police and military uniforms include a helmet, but the police uniform has a face shield lifted over the head, whereas the military uniform does not.

There is a range of images that can be chosen from the law enforcement continuum found in Latin America to evaluate whether constabularization shapes perceptions. We chose these images to generate a difficult test to evaluate whether very subtle changes have an effect in perceptions. Whereas a broad spectrum exists for law enforcement personnel in the developing world, from non-militarized police to constabularized armed forces, we focus on images representing the threshold at which law enforcement switches from civilian police to the armed forces. The distance between (c) and (d) in figure 2 is where law enforcement moves from militarized police—those with many visual attributes of militarization (e.g., tactical uniform for combat readiness) but preserving features that typically distinguish them from the armed forces, such as the color blue and a badge—to constabularized armed forces. Crucially, not only does this choice constitute the hardest test for the uniform hypothesis—compared to the much sharper but less interesting contrast between (a) and (d) in figure 2, for example—but it also allows us to hold most other visual features constant, since the uniforms of militarized police and constabularized military are visually closest.7

7 For example, both often include bulletproof vests, combat boots, and helmets.
Further, as shown in table 2, the images of militarized police and constabularized military shown in the experiment are fairly typical in many Latin American countries. This is important to enhance the ecological validity of the experiment. Whereas exploring the use of images in traditional, non-militarized police uniform would also be interesting, given limited resources,\textsuperscript{8} attention to ecological validity, and that this might not generate a conservative effect, we opted for images that would help evaluate whether a subtle change from a militarized police baseline to constabularized armed forces would have a noticeable effect on perceptions.

\textsuperscript{8} To our knowledge, our study may be the first to conduct a nationally representative, image-based survey experiment on attitudes toward law enforcement in a developing country.
<table>
<thead>
<tr>
<th>Police</th>
<th>Military</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Municipal police in Nayarit, Mexico" /></td>
<td><img src="image2" alt="Soldier in Nuevo León, Mexico" /></td>
</tr>
<tr>
<td>National Police in Santander, Colombia</td>
<td>Soldiers in Bello, Colombia</td>
</tr>
<tr>
<td><img src="image3" alt="National Police in Tegucigalpa, Honduras" /></td>
<td><img src="image4" alt="Soldiers in Tegucigalpa, Honduras" /></td>
</tr>
<tr>
<td>National Police in El Alto, Bolivia</td>
<td>Soldiers in La Paz, Bolivia</td>
</tr>
</tbody>
</table>

9 *El Confidencial* 2016.  
10 *Agencia Anadolu* 2019.  
12 *El Colombiano* 2019.  
13 *El Heraldo* 2014.  
14 *Prensa Libre* 2014.  
15 *MDZ* 2019.  
16 *Miamimundo* 2019.
As with the uniform, the weapon varied in a subtle way as well. Whereas the baseline version shows no rifle, the other version showed parts of a military-grade assault rifle behind the person—the stock is visible over the shoulder and the barrel next to the opposite thigh, but the middle part is hidden behind the person. That the assault rifle is partially concealed would also likely lead to a conservative effect compared to a more prominently displayed weapon.

Variation in skin color is also relatively subtle, since only the face and part of the neck are exposed in the images. One version presents light skin and the other darker skin. The face is the same, but the difference in skin color was generated by modifying the contrast on Photoshop.

For gender, we varied the face but maintained the rest of the image constant, including the body, height, and complexion. A woman’s face was included in one version, and man’s face was included in the other. Both faces have a similar, relatively stern expression. All 16 images have a plain gray background.

Below each pair of images respondents were asked questions about their perceptions of the effectiveness, respect for civil liberties, and propensity for corruption of the individuals in the images. Respondents were also asked whether they would support the personnel in the images conducting law enforcement tasks in their own neighborhood. The images appeared at the beginning of every question to ease the cognitive burden, rather than having to memorize the profiles.

To identify which components of the images were influential, we followed Hainmueller et al.’s (2013) non-parametric approach to component-specific treatment effects. Our causal quantity of interest is the average marginal component effect (AMCE). We measured the AMCE with completely independent randomization (i.e, no restrictions on the possible attribute combinations) because we are interested in how different values of the $l^{th}$ attribute of $j^{th}$ profile influence the rating an image receives. The AMCE represents the marginal effect of attribute $l$ over the joint distribution.
of the remaining attributes and can be interpreted as the average change in an image’s rating when we include certain attribute values instead of the baseline attribute value.

RESULTS

Figure 3 summarizes the effects of weapon, uniform, gender, and skin color on the four outcomes of interest. Military weapon and military uniform had a significant effect when respondents were shown a pair of images and asked to rate the effectiveness of each on a 10-point scale (rescaled from 0 to 1), from not at all effective to very effective. On the 0 to 1 scale, individuals with a military weapon receive ratings 0.13 standard deviations higher than those without one, and the effect of wearing a military uniform was about half of that of the military weapon. Additionally, we do not find a significant effect for gender or skin color on perceptions of effectiveness.
Figure 3. Effects of attributes on the rating of security personnel.

Note: This plot shows estimates of the effect of randomly assigned attributes (uniform, weapon, gender, and skin color) on the rating of a security personnel image, measured in standard deviations. Estimates are based on the benchmark OLS model with robust standard errors clustered by respondent. The black bars represent 95% confidence intervals and gray bars represent 90% confidence intervals. The points without bars represent the reference category for each attribute. Effectiveness is measured from not at all to very effective; civil liberties is measured from never respects to always respects; corruption is measured from not at all prone to very prone to commit acts of corruption; and neighborhood is measured from strongly oppose to strongly support.

Regarding civil liberties, both weapon and uniform had a significant effect on respondents’ views. The assault rifle increased the perception of respect for civil liberties by 0.13 standard deviations. The military uniform increased perceptions of respect for civil liberties by about half the magnitude of the effect of weapon. Male personnel decreased perceptions of respect for civil liberties by one tenth of a standard deviation compared to female images. We do not find an effect for lighter skin on perceptions of respect for civil liberties.

Regarding corruption, military uniform decreased perceptions by 0.07 standard deviations. Military weapon increased perceptions of corruption but did not reach statistical significance. Male images increased perceptions of corruption by about a tenth of a standard deviation. Skin color did not shift perceptions of corruption.
For the question of whether respondents would support or oppose the personnel in the images conducting law enforcement in their own neighborhood, military weapon increased support by about a tenth of a standard deviation, but military uniform showed no effect. Male images reduced support, but the estimate falls short of significance at conventional levels. There was no effect for differences in skin color.

We also estimated whether causal effects differed by respondent subgroup. As shown in the Appendix, we find little support for heterogenous effects. For example, differences in AMCEs are similar for individuals who live in more violent municipalities compared to those that live in less violent municipalities, for victims and non-victims of crime, for wealthier and less affluent respondents, and for those who have higher levels of trust towards the military versus those that have little to no trust, to name a few.

Discussion

The findings suggest that two visual aspects of constabularization, the weapon and uniform, consistently affect public perceptions of law enforcement. Although for both attributes we expected a tradeoff between perceptions of effectiveness and respect for civil liberties, we found no evidence for such tradeoff. Instead, there was an effect in the opposite direction: the military uniform and military weapon actually increased perceptions of respect for civil liberties. This suggests that the perception of authority conveyed by the military uniform and weapon prevail over the many human rights scandals the Mexican armed forces have been involved in over the last several years, including accusations of extra-judicial killings, enforced disappearances, and torture (Human Rights Watch

---

17 The Appendix also shows estimates of absolute levels of favorability toward profiles by attribute for each subgroup using marginal means as suggested by Leeper, Hobolt and Tilley (2020).
This might be explained by both a halo effect generated by the more authoritative-looking weapon and the Mexican police’s reputation of routinely engaging in human rights violations.

Although military weapon and military uniform share favorable effects on effectiveness and respect for civil liberties, important differences are worth highlighting as well. The first is the differentiated effect on perceptions of corruption. Whereas we expected a decline in perceptions of corruption for both military weapon and military uniform because of the armed forces’ greater discipline and reputation of integrity, only the uniform generated an effect in line with expectations. This result reflects the prevailing belief in Mexico that police are synonymous with corruption. For example, data from the ENVIPE survey show that over 70% of Mexicans think that municipal police officers are corrupt compared to 27% who think this of soldiers.

The other differentiated effect has to do with support for patrolling the respondent’s neighborhood. Military uniform fell short of expectations in that it did not move public attitudes, but the military weapon did. This is ultimately a hard test of support because, rather than asking in the abstract, it brings the prospect of militarization close to home.

Gender also played a role in some cases. Although gender did not affect perceptions of effectiveness, male images reduced perceptions of respect for civil liberties, increased perceptions of corruption, and reduced support for patrolling the respondent’s neighborhood. Whereas the literature on gender and security sector has offered mixed results (e.g., Breci 1997; Calderón 2010; Karim 2017), we find that women are associated with desirable features—such as being less corrupt and more respectful of civil liberties—but not perceived as less effective. This finding suggests that policies to recruit more female officers and increase the sex ratio in security forces might have positive effects on the prevailing sentiment towards security sector institutions.

---

18 The 2014 disappearance of 43 students in Ayotzinapa, in southern Mexico, is a prominent example.
The inability to find an effect for skin color was surprising because Mexico—as most of Latin America—is a fairly hierarchical society along ethnic lines. As Trejo and Altamirano (2016) have pointed out, greater discrimination occurs with darker skin color. Although there is a slight movement in perceptions of images with lighter skin color as more effective, more respectful of human rights, less corrupt, and enjoying greater support for patrolling the respondent’s neighborhood, this change in attitudes is very small and certainly not significant.

The effects discussed above are likely to be larger in the presence of less subtle treatments. For example, a more prominently displayed assault rifle could result in larger effects. The same can be said for the difference between military uniform and traditional police uniform, instead of the militarized tactical police uniform shown in the images as the reference category.

Finally, a common challenge for experimental work is ecological validity, or the extent to which it can approximate real-world conditions. Although images are not quite as realistic as videos or actual interactions, they improve on the text-based or vignette-style experiments that have dominated the conjoint experiment literature in political science. Since most people’s interactions with law enforcement personnel are visual, passive, and without any formal dialogue or engagement, the visualization of images is not far removed from the type of distant visualization that takes place for the vast majority of the population (Simpson 2017).

CONCLUSION

This study’s findings make several important contributions for theory and policy. While public opinion surveys had pointed to the broad popularity of militarization, our results are the first to shed light on how the constabularization of the armed forces affects perceptions of law enforcement in the developing world.
In particular, we show that both military weapons and uniforms elicit perceptions of greater effectiveness and respect for civil liberties among the public, and that the effect of the military weapon is greater than that of the military uniform. However, the effects of weapon and uniform are nuanced for perceptions of propensity for corruption and support for operating in the respondent’s neighborhood. Whereas military weapon led to greater support for operating in one’s neighborhood, the military uniform reduced perceptions of propensity for corruption. As for the other visual features, although we did not find an effect for skin color, female personnel can generate greater support for patrolling the respondent’s neighborhood, as well as higher perceptions of respect for civil liberties and integrity.

The results suggest a conundrum: the feature that elicits the most favorable attitudes toward law enforcement—the use of military-grade weapons—is also the very aspect that has been most associated with greater levels of violence resulting from militarization more broadly. A number of US-based studies have found that the use of military weapons for policing purposes results in more suspects wounded or killed by police (e.g., Delehanty et al 2017; Lawson Jr. 2018). Employing military weapons can have an effect on those carrying them to feel like they are in a conflict scenario where greater violence should be used (Doherty 2016, 446). This “weapons effect” results in behavior becoming more violent as a function of the availability of weapons (Berkowitz and Lepage 1967).

Further, because of the considerable leeway involved in policing, the more potentially damaging the weapon at hand, the greater violence that will result from encounters with suspects. As research on state bureaucracies has shown, policing is an activity with a fair amount of operational discretion on the ground (Wilson 1978; Mastrofski 2004). While protocols guiding

---

19 For an exception finding the opposite effect see Bove and Gavrilova 2015.
police action exist, decisions on the ground often must be made in split second calculations, without continuous supervision, following ambiguous regulations or laws, and under considerable stress.

Operational discretion is even greater in the developing world, where standard operating procedures are less developed and legal uncertainty is prevalent. In line with the evidence from the militarization of police in the US, there is evidence from the Mexican case that constabularization has contributed to greater violence (Flores-Macías 2018; Flores-Macias and Zarkin 2019; Lessing 2017; Osorio 2015; Pérez Correa et al 2015)—although studies have not disentangled how much of it is a product of military training or tactics and how much of the weapons themselves.

In short, one of the aspects identified as contributing to greater violence from constabularization in the form of wounded and deaths is also a key main driver of favorable attitudes. In addition to advancing the scarce scholarship on attitudes toward punitive populism in Latin America, this finding contributes to the literature on why citizens support ineffective policies or those that run counter to their own interests (Caplan 2007; Gelman 2010). Although further research must be conducted, this article begins to make sense of the reasons behind this disconnect. This is a vastly unexplored, but promising field of research.

The findings also have important implications for policymakers, international organizations, and NGOs concerned with good governance reforms in the security sector, as well as strategies to improve people’s opinions of security forces worldwide. Our results suggest that strategies to change police uniforms to signal deeper organizational changes to the police department can be effective. In places where perceptions of the police stand to be improved, the adoption of military-style uniforms can enhance perceptions of effectiveness, respect for civil liberties, and corruption. Although the effect of military uniform is smaller than that of weapon, in the absence of changes in training, tactics, or weapons the uniform can bring the benefits in perceptions without the costs in greater violence. Additionally, the findings suggest that, in line with findings from the literature on
women in policing and peacekeeping (Barnes, Beaulieu, and Saxton 2018; Karim 2017), relying on women for law enforcement can elicit desirable perceptions—including greater integrity and respect for civil liberties.\textsuperscript{20}

\textsuperscript{20} This finding is consistent with the practice in some police departments, as in Ciudad Nezahualcóyoítl in the State of Mexico, to only allow female police officers to issue traffic tickets.
References


Nanes, Matthew. 2018. “Policing in Divided Societies: The Importance of Perceptions,”


