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Names and Behavior in a War

Štěpán Jurajda and Dejan Kovac

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Abstract

We implement a novel empirical strategy for measuring and studying a strong form of nationalism—the willingness to fight and die in a war for national independence—using name choices corresponding to previous war leaders. Based on data on almost half a million soldiers, we first show that having been given a first name that is synonymous with the leader(s) of the Croatian state during World War II predicts volunteering for service in the 1991-1995 Croatian war of independence and dying during the conflict. Next, we use the universe of Croatian birth certificates and the information about nationalism conveyed by first names to suggest that in ex-Yugoslav Croatia, nationalism was on a continuous rise starting in the 1970s and that its rise was curbed in areas where concentration camps were located during WWII. Our evidence on intergenerational transmission of nationalism is consistent with nationalist fathers purposefully reflecting the trade-off between within-family and society-wide transmission channels of political values. We also link the nationalist values we proxy using first name choices to right-wing voting behavior in 2015, 20 years after the war.

JEL Codes: D64, D74, Z1

Keywords: Nationalism, Names, Intergenerational Transmission

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1 Introduction

Nationalism has been a principle driver of wars and of political violence throughout modern history (Petersen, 2002; Biondich, 2011). Wars, in turn, have dramatic, long-lasting effects on a country’s political, cultural, and ethnic identity, according to a recent body of work based in large part on voting behavior (Mayhew, 2004; Bellows and Miguel, 2009; Anderlini et al., 2010; Petersen, 2012; Fontana et al., 2016; Rozenas et al., 2017). Experiencing war also strengthens in-group cooperation and altruism towards members of one’s group (Choi and Bowles, 2007; Voors et al., 2012), i.e., preferences supportive of nationalism. A key unanswered question in the literature is to what extent the persistence of the effects that wars have on political values and in-group cooperative behavior is underpinned by intergenerational transmission of values within families. It has been suggested that intergenerational transmission of political values affects economic development, political outcomes, and intergroup and inter-national tensions (e.g., Guiso et al., 2006; Dal Bó et al., 2009; Montgomery, 2010; Voigtländer and Voth, 2015), but the study of the effects wars have on political attitudes across generations is curbed by lack of data. There are now surveys offering direct measures of political values and of attitudes across recent generations (Albanese et al., 2014; Dohmen et al., 2012; Jennings, et al., 2009; Ojedaa and Hatemi, 2015; Lupu and Peisakhin, 2017), but such advanced surveys are not available to study important historical events including wars, which is why research on the persistence of political and cultural values often relies on proxy measures (e.g., Voigtländer and Voth, 2013; Fouka and Voth, 2013).

Ideally, such indirect measures of values should predict observable politically motivated behavior, be consistent over time and space, and be linkable across data sources. In this paper we implement a novel empirical strategy for identifying and studying nationalism and its intergenerational transmission based on child name choices corresponding to war leaders. Such measurement approach is applicable in countries that feature a sharply divided ethnic mix and in settings where leaders’ names are notoriously associated with their political beliefs. Given the availability of birth certificate records, the approach naturally lends itself to the
study of intergenerational transmission and is available in many historical settings.

We study 20th-century Croatia, where our approach allows us to measure a strong form of nationalism—the willingness to fight and die in a war for national independence—that is in principle difficult to elicit in surveys. This trait is of substantive interest to nations dealing with free-riding in active war service (Humphreys and Weinstein, 2008; Campante and Yanagizawa-Drott, 2015; Shesterinina, 2016). Specifically, we explore the links between WWII in Croatia and the War of Independence (hereafter WoI) fought between Croatia and Serbia during 1991-1995, one of Europe’s deadliest conflicts since World War II. We study volunteering for and dying in the WoI and the intergenerational transmission of values associated with this behavior.

As of the start of the WoI in 1991, Croatia had no regular army and so massive volunteering was critical to its defense, especially before the draft process began.\(^1\) We show that men who share their first name with the notorious leader(s) of the WWII Croatian state were significantly more likely to volunteer for war service in the Croatian army and that they were more likely to die during the full-scale armed conflict between Croats and Serbs. The analysis, based on the complete registry of almost half a million Croatian veterans of the WoI provides evidence on intergenerational transmission of political values within families as it implies that having a ‘nationalist’ first name predicts costly patriotic behavior in war, presumably due to values transmitted from parents.

The use of the names corresponding to WWII leaders ebbed in Croatia after WWII, but these names gained in popularity starting in the 1970s. The rise in the popularity of nationalist names thus foreshadows the WoI. Using the universe of over 3 million Croatian male birth certificates from 1930 to 2000, we show that this rise is curbed around the locations of WWII concentration camps, i.e., places where atrocities were committed by the Croatian WWII state. We also show that the use of the name corresponding to the Croatian WWII leader—Ante—for newborns reaches WWII levels in locations that experienced high combat

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\(^1\) At its peak, the volunteer force in active duty corresponded to about one sixth of the Croatian male population aged 25 to 54.
exposure during the Croatian-Serbian 1991-1995 war and spikes dramatically in locations affected by extended enemy siege or occupation after the siege (occupation) ended in 1995.

We thus demonstrate that first names corresponding to previous war leaders can contain an informative signal about one’s nationalism, a signal that correlates with extreme war experiences and that predicts the willingness to serve in a war for national independence. Armed with our proxy measure, we next inquire about the nature of the intergenerational transmission of nationalism. We focus on name choices made during the WoI when the use of nationalist names peaked and explore the importance of war exposure for intergenerational transmission of nationalism. The evidence is consistent with both memories of WWII atrocities and direct experiences of WoI carnage among veterans dampening the transmission from nationalist fathers. It is also consistent with the presence of a purposeful trade-off between within-family and society-wide transmission channels of traits across generations suggested by Bisin and Verdier (2001).

A priori, it is not clear how strongly the values we measure mix nationalism (patriotism) with right-wing political values (Hedl, 2005). We uncover a significant link between the nationalist signal in names and right-wing voting patterns in the 2015 Croatian parliamentary elections, twenty years after the war. Municipalities with a higher share of Antes among newborns allocate a higher share of their votes to right-wing parties. Antes are over-represented among candidates of right-wing parties and receive a disproportionately high share of preferential votes when they run on right-wing party slates in electoral districts directly affected by the WoI. These results are in line with the hypothesis that the effects wars have on political behavior is long-lived (e.g., Fontana et al., 2016). That name choices predict both war behavior and right-wing voting ties our main findings to the recent evidence of within-family transmission of right-wing attitudes over generations (e.g., Ochsner and Roesel, 2016).

The signal contained in name choices allows us to simultaneously study war service, regional patterns of political values, their intergenerational transmission, and voting behavior. The measurement approach we implement resembles that of the research on socioeconomic mobility, which deals with the lack of historical data by utilizing the fact that names provide
a signal about one’s socioeconomic standing (Clark, 2014; Güell et al., 2015; Olivetti and Paserman, 2015). Our evidence on political values adds an important dimension to the literature exploring the information content of child name choices, which already recognizes that the choice of first names can be an expression of cultural, ethnic, or religious identity (Lieberson, 2000; Fryer and Levitt, 2004; Haan, 2005; Aura and Hess, 2010; Mateos, 2014; Rubinstein and Brenner, 2014; Cook et al., 2016; Abramitzky et al., 2016; Fouka, in press).²

## 2 The War of Independence

In June 1991, Croatia declared its independence from the Yugoslav federation. The Croatian War of Independence, referred to as the Homeland War in Croatia, was waged from the summer of 1991 to the end of 1995 between the Croatian army and the Serb-controlled Yugoslav People’s Army (JNA) and local Serb forces opposing secession. During 1991 and 1992, the JNA conducted combat operations in Croatia and helped to establish the Republic of Serbian Krajina, covering the quarter of Croatian territory mostly corresponding to areas with high shares of ethnic Serbs. After the ceasefire of January 1992, the front lines were entrenched until 1995, when Croatia launched two offensives known as Operation Flash and Operation Storm, which effectively ended the war in its favor. Approximately 20,000 people were killed in the war, most of them civilians (Naimark, 2001; Tabeau and Bijak, 2005).

Our analysis of behavior during the war is based on the complete registry of military personnel of the Croatian Ministry of Veterans, which includes information on 480,092 male soldiers serving during the war,³ 97% of whom were involved in combat operations. During the roughly eight million man-months these soldiers spent in active duty during the war,

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²The literature on name choices, our study included, is unable to decompose the behavioral content of names into the part corresponding values inculcated by parents and the part corresponding to society’s or one’s own expectations about the identity of a person with a certain name, to the extent that such effects are plausible (Nelson and Simmons, 2007; Simonsohn, 2011).

³We exclude from the analysis the 5% of female soldiers who all served in non-combat support jobs.
6,060 of them (1.3%) were killed in action (KIA)—a category which in our case includes deaths caused by wounds sustained in action as well as deaths in captivity.\(^4\) As of the start of the war, Croatia had no regular army since the JNA was under Serbian control. The Croatian army was thus initially formed from volunteers\(^5\) and grew in size significantly in late 1991, when a draft process began based on the registry of Croatians who had served earlier in the JNA.\(^6\) Figure 1 shows the evolution of the size of the Croatian army and of its volunteer/draftee composition. In total, there were 162,267 male volunteers serving during the war and 317,825 draftees.

![Figure 1: Croatian Army Size and Composition](image)

Figure 2 shows the evolution of monthly death rates—the ratio of soldiers dying in a

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\(^4\) In total, 9,378 soldiers died during the war, 7,747 in active duty. For 7,346 of these, we observe the cause of death: 77% were killed in action. We assume the remaining 401 soldiers were also killed in action.

\(^5\) The status of a volunteer is governed by the Croatian Act of Homeland War Veterans; it affects welfare support available to veterans and their families.

\(^6\) Exemptions from service were possible on health grounds, but were seldom granted (UN, 1995).
given month to the number of active-duty soldiers as of the start of the month—separately for volunteers and draftees. The war was at its deadliest in the fall of 1991 (55% of KIA deaths occurred during the first six months of the war) and in August 1995. Soldiers drafted during 1991 faced particularly high risk of death. This could be due to selection. First, volunteers may be relatively more skilled soldiers, especially during the first few months of the war.\footnote{For example, Ante Gotovina, who became a leading general during the 1995 Operation Storm, already had combat experience in 1991 when he volunteered for the Croatian army.} Second, volunteers joined the army earlier and served longer; at a given point in time, they are thus more likely to serve in higher ranks than draftees. Unfortunately, our data does not include rank and this complicates the analysis of KIA death determinants as rank is generally negatively correlated with the chances of dying in a war.

![Figure 2: Monthly Soldier Death Rates](image)

Importantly for our analysis, we observe soldier’s place of birth. As of 2015, Croatia, a country of over 4 million, consisted of 21 administrative districts (‘županije’), 556 cities and municipalities (‘općine i gradovi’), and 6,750 settlements (‘naselje’). Most of the fighting
during 1991-1995 occurred in the 10 districts located along Croatia’s eastern border. Correspondingly, the settlements of Croatia were affected by the war in a most uneven fashion. Part of our analysis is based on merging the veterans registry with settlement-level data from the 1991 Croatian census based on the soldiers’ place of birth. In particular, a set of 177 settlements was directly exposed to extensive combat or was under extended occupation by the JNA during the war. Hereafter we refer to these locations as the ‘siege settlements’.8

3 Nationalist Names

Our first task is to classify the first (male) names appearing in the veteran register. We are chiefly concerned with studying names linked to the Croatian WWII leadership. But first, since we do not observe soldiers’ nationality, we infer it from names, i.e., we measure the nationality content of first names in order to identify ethnic Croats among Croatian army soldiers (who are all citizens of Croatia). We do this in order to construct a useful benchmark for studying correlates of the Croatian nationalist names in the multi-national mix of the Croatian army. Our first goal is thus to exclude Serbian and Muslim veterans from the analysis of nationalist names. We can do so because in the countries of former Yugoslavia, first names carry a strong nationality signal thanks to the close link between religion and nationality. As in most European countries, newborns’ names are chosen from a list of first names corresponding to an annual calendar of name days (which are celebrated similarly to birthdays). Croats are predominantly Catholic so that parents rely on a Catholic-saint name calendar while Serbs are predominantly Orthodox and use an Orthodox name calendar. Appendix 9.1 provides the details of this classification. We identify 74% percent of veterans as Croats, which is broadly in line with the fact that, based on the 1991 census, 78% of Croatia’s inhabitants were ethnic Croats. In most of our analysis, we thus focus on the 354,773 Croatian army veterans who have Croatian first names. In this Croatian sub-population of veterans, the basic features of the veteran registry remain intact including the

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8This set is defined in the Croatian Act on Areas of Special State Concern.
share of volunteers (at 35% in the Croatian sub-population, up from 33% in the universe of veterans) and the risks of KIA deaths (at 1.28%, up from 1.26%).

What names correspond to Croatian WWII leaders? During WWII Croatia was ruled by the Ustaše movement, which blended fascism and Croatian nationalism. The military wing of the movement became the army of the Croatian fascist state and its Ustaše government enacted race laws patterned after those of the Third Reich. It established concentration camps in Croatia and members of the movement murdered hundreds of thousands of primarily Serbs, Jews and Roma. The movement was founded and led (until its dissolution in 1945) by Ante Pavelić, who also acted as dictator during WWII. Ante is a Croatian form of Anthony and there are distinct alternative versions of Anthony in use in Croatia (Antun, Anto). In addition, we code an indicator corresponding to the first names (other than Ante) of the politicians and generals who received the most important Nazi decoration during WWII—the Knighthood of the Independent State of Croatia. Our purpose is to form a sufficiently wide group of names related to the WWII Croatian state so as to support (or reject) the interpretation that we attach to the primary nationalist name Ante. But this approach leads us to include in the ‘Other nationalist name’ indicator also names that have strong non-Ustaše nationalist connotations. Appendix 9.1 discusses the name classification in detail.

8,001 Antes served in the Croatian army during the 1991-1995 war, forming a group of 2.3% of Croatian-name veterans (1.7% of all veterans). 26% of Croatian-name veterans (21% of all veterans) carry other nationalist names. These shares suggest over-representation of nationalist names among those serving in the war, given the general popularity of these names in Croatia as implied by our secondary data source—the population of Croatian birth certificates from 1930 to 2000, which covers 3,002,491 live male births. As Figure 3 attests, the share of newborn boys named Ante and the corresponding share of other nationalist names on Croatian birth cohorts follow a similar pattern. These names experienced an increase in popularity during both wars. Following WWII, their share in birth cohorts declines by over

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9 The name Ante also refers to Ante Starčevec, the 19th century Croatian politician and writer who is considered to be one of the founders of Croatian nationalism.
a half, then rebounds during the 1970s and 1980s. This pattern is consistent with the use of these names corresponding to nationalist sentiments. We test this hypothesis below.

4 Names and Behavior in War

4.1 Volunteering

Our first question is whether there are nationalist-name patterns in the volunteering behavior of Croat males in 1991 and 1992. The goal is to estimate such patterns without data on non-active reservists, i.e. without a direct sample of the population at risk of volunteering. As documented in Figure 1, volunteering choices were largely made before the draft process

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10 This may suggest Croatian nationalism was increasing long before the breakup of Yugoslavia after being activated during the “Croatian Spring” movement of the early 1970s (Motyl, 2001).
started in earnest. Given that the draft was name-blind, the draftees names are not selectively picked from the reservist population after volunteering choices were made, so that our data on volunteers and draftees represent a choice-based sample. Because unobservables affecting the choice to volunteer directly affect the sampling probability, which is thus not independent of the dependent variable conditional on the explanatory variables, consistency requires that we weight the criterion function to be minimized by the inverse probability of selection (Wooldridge, 1999), which in our case corresponds to 1 for volunteers and to the cohort-specific draft rates for draftees.\footnote{The cohort-specific draft rates are highest, at 0.35, for the youngest cohorts born after 1973, and they gradually decline to 0.10 for the 1950 cohort.}

The first column of Table 1 shows the estimated coefficients from a linear probability model of the volunteering decision controlling for a step function in age, place-of-birth controls, and for the two name indicators of interest. (As motivated in the previous section, the base group consists of soldiers with Croatian names.) The regression implies that Antes are about 6 percentage points more likely to volunteer for service in the WoI than other Croat males. The difference in volunteering likelihood is somewhat smaller for those with other nationalist names, but both differences are statistically significant.

In column (2), we ask to what extent volunteering patterns may correspond to geographical differences in the prevalence of nationalist names correlated with the pattern of active military operations during the war. To this effect, the regression in column (2) additionally controls for a set of district fixed effects and also for an indicator of the place of a soldier’s birth being under siege (a property defined in the previous section). Further, we ask to what extent the effects estimated in column (1) correspond to having a generally popular name. If a name that is popular in Croatia is identified as particularly ‘Croatian’, then popular names could be nationalistic without any historical reference. Hence, we also condition on an indi-

\footnote{We confirm that the draft was name-blind by combining the birth certificate data with the veteran data: being named Ante or having another nationalist name does not predict the cohort-specific draft rate; the effect is close to zero and precisely estimated.}
Table 1: Predicting Volunteering

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ante</td>
<td>0.0572</td>
<td>0.0434</td>
<td>0.0411</td>
<td>0.0420</td>
<td>0.0397</td>
<td>0.0391</td>
</tr>
<tr>
<td></td>
<td>(0.0067)</td>
<td>(0.0036)</td>
<td>(0.0032)</td>
<td>(0.0035)</td>
<td>(0.0037)</td>
<td>(0.0037)</td>
</tr>
<tr>
<td>Other nationalist name</td>
<td>0.0364</td>
<td>0.0243</td>
<td>0.0197</td>
<td>0.0187</td>
<td>0.0253</td>
<td>0.0244</td>
</tr>
<tr>
<td></td>
<td>(0.0103)</td>
<td>(0.0067)</td>
<td>(0.0058)</td>
<td>(0.0052)</td>
<td>(0.0063)</td>
<td>(0.0068)</td>
</tr>
<tr>
<td>Top-10 name</td>
<td>0.0152</td>
<td>0.0150</td>
<td>0.0168</td>
<td>0.0057</td>
<td>0.0153</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.0068)</td>
<td>(0.0062)</td>
<td>(0.0068)</td>
<td>(0.0059)</td>
<td>(0.0070)</td>
<td></td>
</tr>
<tr>
<td>Siege settlement</td>
<td>0.0486</td>
<td>0.0710</td>
<td>0.0507</td>
<td>0.0785</td>
<td>0.0470</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.0056)</td>
<td>(0.0055)</td>
<td>(0.0047)</td>
<td>(0.0087)</td>
<td>(0.0057)</td>
<td></td>
</tr>
<tr>
<td>Ante * Siege settlement</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.0831</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(0.0057)</td>
<td></td>
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<tr>
<td>Other nat. name * Siege s.</td>
<td>0.0004</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>(0.0115)</td>
<td></td>
</tr>
<tr>
<td>Top-10 name * Siege s.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.0168</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(0.0157)</td>
<td></td>
</tr>
<tr>
<td>District fixed effects</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Excluding Civil Defence unit</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Serbian/Muslim fixed effects</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Only all-Croat settlements</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>354,773</td>
<td>354,773</td>
<td>322,706</td>
<td>480,092</td>
<td>225,444</td>
<td>354,773</td>
</tr>
</tbody>
</table>

Notes: Each column corresponds to an OLS regression explaining the binary volunteering indicator. Bolded coefficients are statistically significant at the 5% level based on clustering at the name level. All specifications control for age-in-years fixed effects, an indicator for top-10 non-nationalist names in births occurring prior to 1945, and for the following place-of-birth controls: settlement size, average age, share of employment in agriculture, and share living abroad, all from the 1991 census. The ‘Other nationalist name’ indicator corresponds to nationalist names other than Ante.

cator for popular first names; specifically, for the top-10 most popular Croatian names (other than Ante, but including the ‘nationalist’ Ivan and Josip) from the 2001 Census. These additional controls lower the coefficients for the Ante and ‘Other nationalist name’ indicators to about 4 (2) percentage points, respectively. Both coefficients remain highly statistically significant, but the ‘Other nationalist name’ coefficient, which is now chiefly based on names outside of the top-10 list, is statistically indistinguishable from the top-10-name coefficient.
To shed more light on the importance of having a popular vs. nationalist name, we additionally estimated the specification from column (2) on the subset of soldiers with names from the top-10 Croatian name list. When compared to all other top-10 names, Antes were over 2 percentage points more likely to volunteer (and this effect was statistically significant at the 5% level). Comparing the Ante coefficient to the coefficients for other specific popular names from the top-10 list implied that the volunteering share of Antes (conditional on location of birth and age) is statistically significantly larger (at the 10% level) than that of all other popular names, with the exception of Ivan, which is included in the ‘Nationalist name’ indicator. Hence, Ante and Ivan are two popular names that both have historical nationalist connotations and that both strongly predict volunteering, in comparison to all other Croatian names as well as in comparison to all popular Croatian names.\(^\text{13}\)

Next, we perform a number of robustness checks.\(^\text{14}\) A key concern is that nationalist name choices may be correlated with rural status. All specifications in Table 1 therefore control for a set of characteristics of soldiers’ places of birth measured at the detailed level of almost seven thousand settlements as of 1991. The upper panel of Appendix Table 5 additionally shows coefficients corresponding to column (1) of Table 1 estimated for subsets of birthplaces based on their size and share of agricultural employment. Both coefficients are similar in size and statistically significant in all subsets, suggesting that rural or agricultural status, which is closely linked to education, is not a quantitatively important factor. In column (3) of Table 1, we replicate the specification from column (2) after excluding the large unit of Civil Defense, which has a high share of volunteers, but low risks of KIA death. Doing so

\(^{13}\)Based on a referee’s suggestion, we have conducted a placebo test consisting of asking whether names of WoI leaders who only became notorious during the WoI affect behavior of the men we study who were born decades prior to the WoI. Such names had no effect on behavior; these results are available upon request.

\(^{14}\)In addition to robustness checks reported in this paragraph, we also estimated the specification from column (2) without the choice-based-sample weights and the estimates were not materially affected. Next, we compared the OLS coefficients reported here to probability derivatives corresponding to a Probit model. Again, the results were identical for all practical purposes. The results are available upon request.
does not affect the key coefficients.\footnote{Among volunteers Antes are -0.5 of a percentage point less likely to serve in the Civil Defense unit. This small effect estimated in a specification corresponding to that used in column (3) has a p-value of 0.08.} In column (4) we include in the estimation all veterans of the WoI, not only those with Croatian names, and we additionally control for having a Serbian or a Muslim name (as defined in the previous section). This again does not affect the estimated coefficients of interest.\footnote{In this specification, we find that compared to the base case of having a Croatian name, having a Serbian or a Muslim name lowers volunteering probability by 4 and 9 percentage points, respectively.} In column (5), we minimize the chances of including Croatian citizens of non-Croatian nationality in our analysis by restricting the set of soldiers with Croatian names (used in column (2)) to its subset consisting of soldiers who were born in settlements that, according to the 1991 census, had over 90% of ethnic Croats in them. The estimates in column (5) are again fully in line with those in column (2), except that the top-10-name coefficient is no longer statistically significant.

Our estimates imply that the effect of being named Ante on volunteering is quantitatively comparable to the effect on volunteering generated by one’s birth place being under enemy siege and that the broader group of other nationalist names also has a significant, albeit smaller effect on volunteering. Finally, in column (6) we ask whether the effects of being Ante and of having another nationalist name differs for soldiers coming from settlements that are under enemy siege. The interaction-coefficient estimates suggest that being named Ante predicts volunteering particularly strongly in areas that were most exposed to the war for independence. It may be that the nationalist implications of being raised as an Ante are particularly strongly activated under direct threat of war. In settlements under enemy siege, Antes are over 12 percentage points more likely to volunteer than other Croats. This is a large effect considering that the overall volunteering rate was about 12 percent.

4.2 KIA Risks

In this section, we ask whether having a nationalist name predicts being killed in action (KIA) during the WoI for soldiers involved in combat situations. We face a major obstacle
in the KIA analysis: the lack of soldier rank information. In any war, higher-ranked soldiers are less likely to die. The rank issue may be particularly important for volunteers who joined the army first and who may be particularly skilled soldiers. At a point in time, volunteers are thus more likely to serve in higher ranks than draftees. Long-serving draftees are also likely to serve in higher ranks. We minimize these issues by focusing on draftees and their KIA risk during 1991. Draftees during the first six months of the war are the group least likely to serve in higher ranks, and it is also the group facing by far the highest death rates (see Figure 2). For the purpose of the KIA analysis, we thus first omit soldiers who were never in combat. This excludes the Civil Defense unit of the Croatian army, and under 3% of the rest of the army. Next, we omit all volunteers and also those draftees entering service after December 1991. We only consider KIA deaths occurring during 1991. As a result, we are left with 72,586 draftees with Croatian first names, a group of which 1.9% is KIA during 1991. The results are presented in Table 2, which is structured similarly to Table 1. The only difference vis-à-vis the specifications used in Table 1 is that we always condition on a set of 6 fixed effects corresponding to the month of army entry (during 1991) in order to minimize the effect of rank differences, to the extent these are correlated with the length of service, and also, more fundamentally, in order to control for the length of KIA risk exposure.

The basic sets of estimates in column (1) and (2) are fully consistent with the volunteering effects estimated in the previous section. Antes and, to a lesser extent also those with other nationalist names, are more likely to be killed in action during the first six months of the war, when the war was at its deadliest. Compared to the average KIA death rate for early draftees (0.019), the Ante coefficient in column (2) increases KIA risks by about a half. The effect of being from a ‘siege settlement’ is somewhat stronger than the Ante effect and the

\[17\]

Note that our focus on draftees and the results of the volunteering analysis imply that the Antes drafted in 1991 are likely to be less nationalistic than the average Antes in the population. Hence, the results presented here provide a lower-bound on the effect of being Ante on the chances of being killed in action. As was the case with volunteering, the Ante coefficients are all large and statistically significant when estimated on sub-samples of soldiers’ places of birth based on size and share of agricultural employment (Table 5).
Table 2: Predicting Being Killed in Action

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ante</td>
<td>0.0063</td>
<td>0.0103</td>
<td>0.0107</td>
<td>0.0048</td>
<td>0.0103</td>
</tr>
<tr>
<td></td>
<td>(0.0010)</td>
<td>(0.0008)</td>
<td>(0.0012)</td>
<td>(0.0012)</td>
<td>(0.0009)</td>
</tr>
<tr>
<td>Other nationalist name</td>
<td>0.0035</td>
<td>0.0036</td>
<td>0.0033</td>
<td>0.0041</td>
<td>0.0027</td>
</tr>
<tr>
<td></td>
<td>(0.0018)</td>
<td>(0.0017)</td>
<td>(0.0014)</td>
<td>(0.0018)</td>
<td>(0.0014)</td>
</tr>
<tr>
<td>Top-10 name</td>
<td>0.0018</td>
<td>0.0018</td>
<td>0.0019</td>
<td>0.0026</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.0015)</td>
<td>(0.0014)</td>
<td>(0.0015)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Siege settlement</td>
<td>0.0188</td>
<td>0.0206</td>
<td>0.0157</td>
<td>0.0181</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.0042)</td>
<td>(0.0038)</td>
<td>(0.0082)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ante * Siege settlement</td>
<td>-0.0012</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.0059)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other nationalist name * Siege s.</td>
<td>0.0184</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.0089)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Top-10 name * Siege s.</td>
<td>-0.0152</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.0077)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

District fixed effects | Yes       | Yes       | Yes       | Yes       | Yes       |
Serbian/Muslim fixed effects | Yes       |           |           |           |           |
Only all-Croat settlements | Yes       |           |           |           |           |
N                         | 72,586    | 72,586    | 96,281    | 48,462    | 72,586    |

Notes: Each column corresponds to an OLS regression explaining the binary indicator of being KIA during 1991. The sample includes only soldiers drafted during 1991. Bolded coefficients are statistically significant at the 5% level based on clustering at the name level. All specifications control for age-in-years fixed effects, month-of-service-entry fixed effects, an indicator for top-10 non-nationalist names in births occurring prior to 1945, and for the following place-of-birth controls: settlement size, average age, share of employment in agriculture, and share living abroad, all from the 1991 census. The ‘Other nationalist name’ indicator corresponds to nationalist names other than Ante.

KIA effect of top-10 popular names is similar in magnitude to that of the ‘Nationalist name’ indicator, although it is not precisely estimated in column (2).

We have additionally estimated the specification from column (2) using only top-10 Croatian names, and the Ante coefficient estimated against this narrower benchmark group was again statistically significant (at the 1% level) and similarly large (at 0.0073). When compared to all other specific top-10-name coefficients, the Ante coefficient is statistically sig-
significantly larger than all but one (Mario). Hence, combining the volunteering and KIA evidence, Ante is the only name that consistently predicts behavior in the war compared to the ‘placebo effects’ of other popular names. As was the case with the volunteering estimates, the KIA effects are not sensitive to including non-Croatian-name soldiers (in column (3)) and to studying only soldiers from almost-all-Croatian settlements (in column (4)).\(^\text{18}\)

The Ante coefficient is smaller in column (4), but it remains highly statistically significant and one cannot reject the hypothesis that it is equal to the coefficient in column (1). Finally, in column (6), we ask whether nationalist names predict KIA risks differently for soldiers who were born in ‘siege settlements’. The effect of being named Ante does not differ between siege and non-siege settlements. Recall that Antes from ‘siege settlements’ were particularly likely to volunteer and so these highly patriotic Antes are under-represented in the draftee sample used in the KIA analysis. On the other hand, those with other nationalist names, for whom being from ‘siege settlements’ did not increase chances of volunteering, are more likely to be KIA when they come from these locations most affected by the war. We also obtain a puzzling negative siege interaction coefficient for the top-10 Croatian names.

Overall, the pattern of volunteering and KIA estimates is strongly consistent with the hypothesis that nationalist names and Ante in particular provide a significant signal about one’s nationalistic (patriotic) values as manifested by volunteering in a war of national independence and dying in the war, which suggests higher risk-taking in combat. Name choices made by parents presumably correspond to their political values. Hence, the evidence on volunteering and KIA outcomes presented in Tables 2 and 1 can be interpreted as evidence on transmission of nationalistic values through the generations. Nationalistic values linked to WWII history and revealed in name choices made by parents of the soldiers of the WoI matter in the 1991-1995 war.

\(^{18}\)We also obtain highly similar effects using the Probit model.
5 The Use of Nationalist Names and War Experiences

A growing literature (discussed in the Introduction) suggests that wars have dramatic and long-lasting consequences for political identity. In this section, we employ the information about nationalism conveyed by first names to explore nationalism patterns in Croatia following WWII and the WoI. Our proxy allows us to relate the evolution of nationalism to traumatic war events in absence of direct historical measures of nationalism.\textsuperscript{19} We ask whether the memory of the atrocities perpetrated in Ustaše-operated concentration camps during WWII has subsequently attenuated nationalistic tendencies (Macdonald, 2002).\textsuperscript{20} Next, we ask whether the 1991-1995 siege (during which civilians suffered greatly, see, e.g., Naimark, 2001) and the extent of combat operations (proxied by KIA regional concentration) strengthened regional nationalist attitudes during the WoI.

The analysis is based on the birth certificate data from 1930-2000 introduced in Section 3. We match the birth-location strings to three types of locations: (a) 21 ‘high-KIA locations’ (proxying for exposure to combat operations), (b) 177 ‘siege settlements’ during the WoI, and (c) 10 WWII ‘concentration-camp locations’.\textsuperscript{21} In the veteran data, KIA deaths during the 1991-1995 war occur in 216 distinct settlements; from these we denote as high-KIA locations those 21 (one tenth) with the highest share of all KIA deaths. This list includes notorious battlefront towns (e.g., Vukovar, Osijek) as well as major cities directly affected by combat operations (e.g., Dubrovnik, Zadar). Each of these three sets of locations covers a sizeable portion of the Croatian birth population. Furthermore, Appendix Figures 8, 9,

\textsuperscript{19}This view of the past comes with the cost of making the strong assumption of a constant nationalistic content of a given name over time.

\textsuperscript{20}In the Jasenovac concentration camp alone, at least 80 thousand perished during WWII, primarily Serbs, but also Jews, Roma, and anti-fascist Croats. While estimates differ and are not available for all camps, victim counts range well over 10 thousand for the Jadovno (Gospić) or the Slana (Pag) camp as well.

\textsuperscript{21}See section 2 for definition of the ‘siege settlements’. The major Ustaše-operated concentration-camp locations in Croatia (Jasenovac, Stara Gradiška, Jadovno near Gospić, Slana on Pag, Metajna, Sisak, Koprivnica, Jastrebarsko, Osijek, Đakovo) are taken from Kraus (1996, p. 90).
and 10 show that the three sets of locations are geographically diverse. Hence, it is plausible that differences in the evolution of the use of nationalist names across these locations are not driven by idiosyncratic location-specific factors.

Figure 4: Shares of Ante and other nationalist names on cohort in concentration-camp locations

Figure 4 shows that in areas where Ustaše-operated concentration camps were located during WWII, Ante never regains its WWII popularity, not even during the WoI. In contrast, in Figure 5 we see a return to the locality-specific WWII-level popularity of Ante in places where a high share of KIA deaths occurred during the 1991-1995 war. Here, the large spike in Ante popularity during the WoI may correspond to exposure to combat operations. In both sets of locations, the use of other nationalist names evolves similarly and is not far from the national pattern. We explore these patterns further within the analysis of intergenerational transmission of values in the next section. Finally, Figure 6 shows the evolution of the popularity of nationalist names in locations that were under Serbian siege or occupation during 1991-1995; hence, it is natural that the share of Croatian nationalist names there
is low during the war. After the war, however, the shares of nationalist names increases dramatically. The share of Antes surpasses WWII levels. This pattern may correspond in part to declining shares of the Serbian population not captured by our Serbian- and Muslim-name indicator, which limits the use of the siege locations for the analysis of intergenerational transmissions of nationalism. Yet, the spike in the prevalence of nationalist names after the WoI in these locations is suggestive of the nationalist content of these names.

The descriptive analysis presented in this section is consistent with nationalist sentiments (as reflected in the use of Ante for newborns) reacting strongly to war exposure during 1991-1995 and being affected by long-lived memories of WWII atrocities, but it cannot provide strong evidence on these issues since we cannot control for location-specific unobservables. There are two potential issues with our interpretation of Figure 4 as suggesting that memories of WWII atrocities curb nationalism: First, concentration-camp location choices may have

---

22 Also, both shares are statistically significantly above the Croatia-wide shares of the late 1990s.
been skewed towards Ustaše strongholds. If so, however, one would expect the rise of the popularity of the name Ante since the 1970s to be stronger there, not weaker. Second, it is plausible that there is stigma attached to the name Ante in the concentration camp locations thanks to the WWII atrocities, even if nationalism is in fact not affected by these experiences. In the presence of such stigma, only those with very high levels of nationalism would choose the name Ante for their sons, implying that the name Ante would have a stronger predictive power for our volunteering and KIA outcomes in the concentration-camp locations. In fact, the Ante coefficients corresponding to the soldiers born in concentration camp locations are smaller than the coefficients reported in columns (1) of Tables 1 and 2. Hence, we find it plausible that living near a concentration camp site has a direct curbing effect on nationalistic sentiments of parents and that those sons named Ante near concentration camps are mainly named Ante for other (family) reasons.\textsuperscript{23}

\textsuperscript{23}Ultimately, the question of long-term effects of atrocities can be settled only with a location-specific research design along the lines of Charnysh and Finkel (2017).
6 Intergenerational Transmission of Nationalism

There is much work in economics, evolutionary anthropology, sociology, political science, and social psychology studying how preferences, beliefs, and norms are transmitted through generations and asking about the role of social interactions in such transmission (e.g., Epstein, 2007; Bisin and Verdier, 2010). The literature on cultural (as opposed to evolutionary) transmission has studied various elements of preferences including the discount factor, the importance of education, corruption tendencies, and the (strongly persistent) relevance of ethnic and religious values. We extend this research by analyzing the intergenerational transmission of nationalist values, which in our context predict the provision of the most costly public-good contribution a group can ask for—one’s life.

The results provided in Section 4 suggest that the experience of the 1991-1995 war, when the use of nationalist names was peaking in Croatia, offers an important case to study the intergenerational transmission of nationalism. We therefore focus our analysis on nationalist-name transmission during the independence war, i.e., for boys born during 1991 to 1995. This is the period during which we established the nationalist signal (information content) of nationalist names for adult male cohorts of potential fathers. To study how nationalism spreads through intergenerational transmission, we again rely on the birth certificate data and study first name choices for sons depending on whether their fathers have a nationalist name. Similar to the analysis in Section 4, we condition on several municipality characteristics.

Our analysis has two purposes. First, we explore the importance of location-specific war experiences highlighted in the descriptive analysis of Section 5 for the intergenerational transmission of nationalism. Specifically, condition on binary indicators for the concentration-camp and high-KIA locations. Second, we inquire about the regional dynamics of nationalism in the society by asking whether nationalist fathers are less likely to transmit a nationalist

\[\text{The average share of Antes on boys born during the pre-war period is 1.4\% and the average share is lower, at 0.5\%, in the concentration camp locations and similar to the national average, at 1.2\%, in the high-KIA locations. There is little difference across the groups of locations in terms of the pre-war shares of all nationalist names.}\]
name (plausibly invest less in inculcating nationalist values) when there is a strong chance that such values will be passed on to their sons by a local society where they are widespread. We thus ask whether the Ante-Ante (nationalist-nationalist) transmission is weaker in locations where the prevalence of nationalist names is stronger just before the WoI.\textsuperscript{25} (The pre-war shares are measured in municipalities with births in the five-year period prior to the 1991-1995 war.) An alternative, simpler, explanation for nationalist-name geographic patterns is that name choices of all parents (nationalist or not) co-move with regional trends of name popularity driven by cultural or political factors.

Table 3: Predicting Nationalist Names for Newborn Boys during 1991-1995

<table>
<thead>
<tr>
<th>Child name</th>
<th>Ante (1)</th>
<th>Ante (2)</th>
<th>Nationalist (3)</th>
<th>Nationalist (4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concentration camp locations</td>
<td>-0.049</td>
<td>0.001</td>
<td>0.001</td>
<td>0.006</td>
</tr>
<tr>
<td>(0.016)</td>
<td>(0.001)</td>
<td>(0.011)</td>
<td>(0.009)</td>
<td></td>
</tr>
<tr>
<td>High-KIA locations</td>
<td>0.004</td>
<td>0.001</td>
<td>-0.001</td>
<td>-0.008</td>
</tr>
<tr>
<td>(0.014)</td>
<td>(0.002)</td>
<td>(0.010)</td>
<td>(0.009)</td>
<td></td>
</tr>
<tr>
<td>Pre-war share of Antes</td>
<td>-0.395</td>
<td>1.092</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(0.150)</td>
<td>(0.019)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre-war share of all nationalist names</td>
<td></td>
<td>0.772</td>
<td>0.959</td>
<td></td>
</tr>
<tr>
<td>(0.075)</td>
<td>(0.067)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Father named Ante</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Father with any nationalist name</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>2,353</td>
<td>102,718</td>
<td>28,680</td>
<td>79,288</td>
</tr>
</tbody>
</table>

Notes: Each column corresponds to an OLS regression explaining the binary indicator of a boy born during 1991-1995 being named Ante or any ‘Nationalist name’ including Ante. Siege locations are excluded, as are birth certificates with Muslim or Serbian first names. Pre-war shares of Ante or all nationalist names correspond to the five year period preceding the 1991-1995 war and are calculated at the municipality level. Bolded coefficients are statistically significant at the 5% level based on clustering at the municipality level. All specifications control for municipality size, average age, and share of employment in agriculture.

\textsuperscript{25}We are not primarily interested in comparing the Ante-Ante rate to other same-name transmission rates, which could be driven by cultural factors; rather, we study geographic differences in the nationalist-nationalist and non-nationalist-nationalist transmission rates.
The first two columns of Table 3 show regression coefficients from specifications explaining an indicator for a newborn son being given the name Ante; the remaining columns correspond to regressions explaining the choice of any nationalist name (including Ante). These regressions are estimated separately for fathers with nationalist names (including Ante) and those with other Croatian names. The estimates in column (1) imply that the use of nationalist names is lower by Ante fathers during the 1991-1995 war in the concentration-camp locations relative to the rest of Croatia. We also find that fathers named Ante are less likely to transmit their name to their sons during a war of national independence when the share of Antes is generally high in their municipality. Based on the name whose use is most sensitive to the wars our analysis covers, we thus find evidence consistent with nationalist fathers being less likely to transmit nationalist values when they reside in an area (a) affected by long-lived memory of WWII atrocities related to the history of nationalism, and (b) where nationalism is prevalent in the society at large. This evidence is consistent with nationalist fathers purposefully reflecting the transmission trade-off between family and society channels suggested by the Bisin and Verdier (2001) model. It may be that Ante fathers frequently choose the name Ante for their sons born outside of the 1991-1995 period.

For the majority of fathers who are less nationalist as implied by our name proxy, we find (in column (2)) that they use the name Ante in tandem with the overall popularity of the name in their region and that they do not behave differently depending on the war experiences of their region. The results in column (3) and (4), which study the broad group of nationalist names (including Ante), are consistent with most of these fathers not recognizing the family vs. society transmission trade-off and following the general area-specific name-popularity

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26 We include Ante in the ‘Nationalist name’ indicator to lower the number of transition types.

27 See Iwanowsky and Madestam (2017) for a similar finding based on the Khmer Rouge political violence.

28 With information on first names of fathers and sons alone we cannot link birth certificates by father identity and so we do not know whether Ante fathers are more likely to use the name Ante for their first-born sons or not. The share of boys born to fathers named Ante is similar during the pre-war five-year period and the 1991-1995 war period.
trends when choosing their sons’ names. The three positive coefficients corresponding to pre-war shares of nationalist names are similar in magnitude; under our interpretation of nationalist name choices, they imply that during the WoI, i.e. during a spike in nationalism, the regional structure of pre-WoI nationalism was largely preserved.

Finally, we complement the evidence on the effects of regional war exposure on the intergenerational transmission of nationalism with an analysis relying on the variation in war exposure across individual soldiers serving in the WoI. Specifically, we ask whether veterans of the 1991-1995 war who experienced extreme carnage in their military units during the war are more likely to give their sons nationalist names. This sheds light on the effect of close exposure to violence of war on nationalism. For a sub-set of the veterans who were seriously injured or killed in the war, we observe the names of their children. More specifically, we observe the names and birth dates of children of the 23,354 veterans who collected veteran benefits linked to their injury during the war or who died in the war and whose families claimed the benefits. This sub-sample of veterans, which is selected on having been at least partially disabled during the war, also allows us to ask whether veteran father-son name transitions align qualitatively with our main findings.

The answer is that they do. First, we ask about the effects of soldiers’ exposure to carnage measured using the maximum monthly share of their unit that was killed in the war. For fathers who did not die during the war and who had sons born after their war service, the higher the exposure to carnage in their unit, the lower the probability of transmitting

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29 These results are robust to including names that are not on the (Croatian) Catholic calendar. We also interacted the two location types with the pre-war municipality shares of nationalist names, but none of the interactions reached conventional levels of statistical significance in any of the specifications.

30 An important potential issue with our intergenerational analysis is that we do not control for socio-economic characteristics of families. However, the estimated intergenerational transmission coefficients are not materially affected by controlling for municipality characteristics or by conditioning on a set of 21 district fixed effects, suggesting that the results are not primarily reflecting urban-rural or war-exposure patterns.

31 See Kovač (2017) for more details on this data.
both Ante and the other nationalist names to their sons. For volunteers, a one standard deviation increase of the unit death rate measure translates to a half a percentage point reduction in the probability of naming one’s son Ante after the war. These findings are consistent with the absence of effects of high-KIA regional exposure in Table 3. Next, we find that, conditional on standard place-of-birth controls, volunteers named Ante who have at least one son born before the war are 4.5 percentage points (statistically significantly) more likely to have named (one of) their son(s) born before the war Ante, but there is no such relationship present for the draftees. This is consistent with volunteer (but not draftee) Ante fathers considering their name as an expression (symbol) of their political values. We obtain similar results for the transmission of any nationalist name. These results are tentative due to the selected nature of the sample. Future research could employ our approach for identifying political values and the intergenerational transmission thereof for random samples of veterans or civilians differentially exposed to violent conflicts.

7 Voting Behavior

How strongly do the nationalist (patriotic) values we proxy using name choices overlap with right-wing political values? To answer this question, in this section we examine the association of the nationalist signal in names with right-wing voting patterns in the 2015 Croatian parliamentary elections. We focus on the 2015 elections for two reasons. First, this is a recent regular parliamentary contest in Croatia, one that occurred twenty years after the WoI. A growing literature (e.g., Fontana, et al., 2016) suggests that wars have long-lived effects on political values. These results are also consistent with those Iwanowsky and Madestam (2017) uncover in their study of the effects of Khmer Rouge political violence on political values of survivors. As Yugoslavia did not run free multi-party elections, we are not able to study the effects of WWII events on post-WWII voting behavior in Croatia.

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32 These results are presented in the Appendix Table 6. The regressions, which are are again based on the subset of veterans with Croatian first names (as in Section 4), control for a step function in fathers’ years of age and for the standard set of characteristics of fathers’ places of birth.

33 These effects are also consistent with those Iwanowsky and Madestam (2017) uncover in their study of the effects of Khmer Rouge political violence on political values of survivors.

34 As Yugoslavia did not run free multi-party elections, we are not able to study the effects of WWII events on post-WWII voting behavior in Croatia.
effects on political identity. Within this line of work, Glaurdić and Vuković (2016) study post-1995 voting patterns in Croatia and uncover a stable electoral advantage of the party that led the country during the WoI—the Croatian Democratic Union (CDU)—in areas more heavily affected by the war. We ask a related question, namely, whether voting shares of right-wing parties twenty years after the war correlate across municipalities with shares of nationalist names among newborns. In short, are regional preferences expressed in name choices correlated (conditional on municipality controls) with right-wing voting behavior?

Second, the 2015 elections were the first in Croatia that made it possible for voters to cast preferential votes in support of individual candidates as opposed to voting only on the entire slate of candidates of a given party. This allows us to ask two additional questions: Are nationalist names over-represented among candidates on the slates of right-wing parties? And do nationalist names receive a disproportionately high share of preferential votes (within slates) when they appear on right-wing slates? If Antes are not only more patriotic during wars, but also more right-wing oriented during peacetime, one would expect them to be over-represented on the slates of right-wing parties. Similarly, if right-leaning voters expect (based on the name signal) or know (based on direct knowledge of candidates) Antes to be strong representatives of right-wing values, they will allocate them with a higher share of preferential votes on the slates of right-wing parties.

The 2015 elections were won by the centre-right CDU and its coalition. We define a ‘Right-wing party’ indicator to correspond to the six parties that were to the right of the CDU; this set, which includes far-right parties, obtained 4% of the total vote in 2015.\textsuperscript{35} We observe party-specific vote shares across all 556 Croatian cities and municipalities. In the first part of our analysis, we merge this information with place-of-birth-specific shares

\textsuperscript{35}In the absence of an authoritative study on the right-wing spectrum of Croatian politics, we rely on the Wikipedia entry for the 2015 Croatian elections, which classifies the following parties as right-wing or far-right: the Democratic Union of National Renewal, the Croatian Conservative Party, the Family Party, the Croatian Democratic Alliance of Slavonia and Baranja, In the Name of the Family – Project Homeland, Croatian Dawn – Party of the People.
of Antes and of other nationalist names (defined in Section 3). Not all municipalities have births. The resulting sample, which combines information on the nationalist-name shares among newborn boys with the 2015 vote share of right-wing parties covers 401 cities and municipalities. When regressing the location-specific vote share of the right-wing parties on the share of Antes among newborns, we obtain a coefficient of 0.09, which is significant at the 5% level (based on robust standard errors). The coefficient estimate corresponding to other nationalist names is a precisely estimated zero. The regression controls for municipality share of agricultural employment and average years of education, both from 2000, and for an indicator of a given municipality having been heavily affected by the WoI. Increasing the share of Antes among newborns by five percentage points, which corresponds to a one standard deviation increase, is thus associated with the municipality vote share of right-wing parties being about a half of a percentage point higher (relative to the mean of 4%).

Next, we turn to the analysis of candidate names and of preferential votes. Parties can nominate slates of candidates for each of the ten main Croatian electoral districts (no candidate can appear on multiple slates). In the 2015 parliamentary elections, these slates included 2,170 distinct candidates, but our analysis is based only on the 1,216 male candidates, who correspond to 155 district-party-specific slates. Our first finding is that, compared to slates of other parties, slates of right-wing parties exhibit a 50% higher share of both Ante candidates and of candidates with other nationalist names.

To study preferential voting behavior, we focus on the share of preferential votes received by a given candidate on all preferential votes received by his (district-party-specific) slate.

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36 We report results based on the share of nationalist names among boys born during 1970-2000, which allows us to maximize municipality coverage, but we obtain nearly identical estimates when relying on the corresponding shares from 1995-2000 from municipalities with births in that period.

37 Unlike the siege indicator used in our main analysis, which is based on settlements defined as of 1991, this indicator, which is taken from Glaurdić and Vuković (2016), is coded at the level of municipalities defined as of 2000. See Section 2 for definitions of Croatian geographic units.

38 This difference is statistically significant for other (non-Ante) nationalist names.
Table 4: Predicting Candidates’ Shares of Preferential Votes Received by Their Slate

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
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</thead>
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<tr>
<td>Ante</td>
<td>0.056</td>
<td>0.032</td>
<td>0.071</td>
<td>0.042</td>
<td>-0.005</td>
<td>-0.006</td>
</tr>
<tr>
<td></td>
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<td>(0.027)</td>
<td>(0.014)</td>
<td>(0.027)</td>
<td>(0.005)</td>
<td>(0.005)</td>
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<tr>
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<td>0.032</td>
<td>0.030</td>
<td>0.022</td>
<td>0.039</td>
<td>0.043</td>
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<tr>
<td></td>
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<td>(0.019)</td>
<td>(0.019)</td>
<td>(0.016)</td>
<td>(0.033)</td>
<td>(0.039)</td>
</tr>
<tr>
<td>Ante * Right-Wing Party</td>
<td>0.067</td>
<td></td>
<td>0.088</td>
<td>0.002</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.050)</td>
<td></td>
<td>(0.042)</td>
<td>(0.007)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Nat. Name * Right-Wing Party</td>
<td>0.005</td>
<td>0.021</td>
<td>-0.012</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.023)</td>
<td></td>
<td>(0.040)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Electoral District Affected by War: 
- No: Yes, No
N: 1,216, 1,216, 678, 678, 538, 538

Notes: Each column corresponds to an OLS regression explaining the candidates’ share on the preferential votes received by his slate. Bolded coefficients are statistically significant at the 5% level based on clustering at the electoral district level. The ‘Other Nationalist Name’ indicator does not include Ante.

The analysis thus implicitly conditions on all party-district-specific factors determining voting preferences corresponding to a given slate as well as on the average propensity to use preferential votes within slates. Regressing the candidates’ preferential-vote share on our two nationalist name indicators results in two positive coefficients shown in column (1) of Table 4. Both coefficient estimates are sizeable given that the 25/75 percentile range of candidates’ shares on preferential votes received by their slate is 0.02/0.08. When we interact the two name indicators with the right-wing dummy, the Ante interaction is large and together with the Ante coefficient it is jointly statistically significant at the 5% level. The other interaction coefficient is close to zero. In columns (3) and (4), we re-estimate specifications from columns (1) and (2) for the six electoral districts adjacent to Croatia’s eastern border, i.e., for the electoral districts directly affected by the WoI. The remaining columns show coefficients based on the remaining districts. Candidates named Ante receive a sizably higher share of preferential votes cast for right-wing slates in electoral districts affected by the WoI.

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39 These results are not sensitive to conditioning on electoral-district fixed effects, party fixed effects, or the right-wing-party indicator, consistent with our focus on within-slate differences.
Our analysis of the political content of nationalist names in peacetime supports the notion of long-lived effects of wars on political identity. Name choices predict both war behavior and right-wing voting; they may also serve as an easily observed signal of one’s values.

8 Conclusions

We demonstrate that name choices corresponding to war leaders can predict offspring’s adult-life behavior in a life-and-death situation—in a war for national independence. The effect of sharing one’s first name with the leader of the WWII Croatian state on volunteering for war service during the 1991-1995 war is comparable to that generated by one’s birth place being under enemy siege or occupation. Having such a name also increases the risks of being killed in action by about 50% compared to the average risk level. While the literature on nationalism highlights the self-reinforcing relationship between nationalism and conflict, we document the positive welfare effect that nationalism can have within nations engaged in war towards the provision of the most costly contribution a group can ask for—one’s life. Our novel evidence on the signal value that names chosen by parents (and, hence, presumably values inculcated by parents) have for offspring’s behavior in a deadly conflict supports the notion that political identity matters in high-stakes decisions and is thus relevant for the literature on political and ethnic identity (Bursztyn et al., 2014; Rico and Jennings, 2016). Since first names can carry a signal about nationalism, they can be used to study national and ethnic conflicts (Rivera, 2008; Masella, 2013; Novta, 2016; Chiang, et al., 2019).

Our measurement strategy also allows us to provide novel evidence on the intergenerational transmission of values that are in principle difficult to elicit in surveys. During the War of Independence, most fathers’ name choices appear to preserve the pre-war regional structure of nationalism irrespective of the regional exposure to the war. In contrast, fathers who have strong nationalist views according to our measure act in a fashion consistent with the nationalism-transmission trade-off between within-family and society-wide channels suggested by Bisin and Verdier (2001). This supports the notion of cultural purposeful
transmission of political values. Our estimates also suggest that memories of WWII atrocities and possibly direct experiences of War of Independence carnage curb the intergenerational transmission of nationalism. This evidence is relevant for the research on parochial altruism, defined as increased altruism towards members of one’s group in response to inter-group conflicts (Choi and Bowles, 2007). The literature considers the in-group- and out-group-behavioral response to personal war experiences, but it has yet to consider the transmission of in-group pro-social or out-group potentially hostile preferences across generations. The elevation of parochial altruism induced by direct war experiences (Voors et al., 2012; Bauer et al., 2016) or biases towards co-ethnics driven by conflicts (Shayo and Zussman, 2017) could be made persistent through intergenerational transmission of values. Our strategy can be employed to test intergenerational versions of questions posed by the parochial altruism literature. For example, are name choices corresponding to war leaders associated with stronger contributions to nation building after the conflict or to persistent biases that sow the seeds of future conflicts? More generally, our evidence is related to the literature studying the choices made by parents on behalf of their children (Akerlof and Kranton, 2000, Algan et al., 2013).

We also find that name choices corresponding to previous war leaders predict not only patriotic behavior in a war for national independence, but also voting behavior in peacetime. Our evidence on the right-wing-voting content of nationalist names provides support for the growing literature (e.g., Fontana, et al., 2016) arguing that the effects of wars on political identity are long-lived and depend on the extent of direct war experience. It also relates our main set of findings to the recent evidence on intergenerational transmission of right-wing attitudes (Avdeenko and Siedler, 2017; Ochsner and Roesel, 2016).

Finally, we provide new evidence on the Croatian War of Independence. In the Croatian case names carried an informative signal, accumulated through history, geography, and ethnic identity, about their owners’ political values. This allows us to use name choices as a group-level signal of political preferences. The use of names of Croatian WWII leaders, which was high during WWII but ebbed later, rebounds starting in the 1970s and peaks during the 1991-1995 War of Independence. In WWII concentration-camp locations, the popularity of
these names never regains its WWII popularity, not even during the War of Independence. In contrast, the use of nationalist names reaches local WWII levels immediately after Croatian control is re-established in locations that were under extended Serbian siege or occupation during the independence war and in areas with high exposure to combat operations during the war. One view of the Yugoslav wars is that after years of peaceful coexistence, violence erupted unexpectedly (e.g., Bardhan, 2005, p. 169). Our evidence on the nationalistic content of the Ustaše-linked name Ante together with the continuous rise in the popularity of nationalist names during the 1970s and 1980s is perhaps better aligned with the alternative notion that internal wars stem from accumulation of protracted sentiments and conflicts (Fearon and Laitin, 2003), and that the strength of nationalism in Croatia was increasing for over a decade before the war erupted.

Our measurement approach is applicable to periods of heightened nationalist tensions and to internal or external conflicts where leader’s names are notoriously associated with their actions and political beliefs. Similar to our study, one can establish the political-identity content of first names and study the distribution of political values in historical settings by asking whether volunteering for major wars is predicted by first names corresponding to current or past leaders such as kings or emperors. One can use names to track the evolution of political values during post-conflict periods as well. Our approach is widely applicable, feasible in many historical settings thanks to the existence of birth certificate records in most countries, it offers an important way around survey data limitations, and it lends itself naturally to the study of intergenerational transmission of political values, while the majority of the existing literature focuses on cultural and evolutionary transmission routes.

40For instance, if one finds that the use of names corresponding to leaders of Nazi Germany is over-represented among supporters of right-wing parties in post-WWII Germany, one could use accessible name statistics to map the evolution of such values over populations not covered by survey data directly eliciting such values. One could explore the behavioral content and the prevalence of first-name choices corresponding to prominent generals of the US civil war or to differentiate Ukrainian and Russian versions of several first names in Ukraine during its conflict with Russia.
Conflict of Interest: The authors declare that they have no conflict of interest.

Bibliography


9 Appendix

9.1 Name Classification

Ethnic Names There are 374 distinct first male names on the Catholic (Croatian) calendar and 275 distinct first male names on the Orthodox (Serbian) name calendar. The same Christian saints correspond to different versions of the same name on the two calendars, as in Ivan (Croat version) v. Jovan (Serbian version) or Stjepan v. Stefan/Stepan. 35 names appear on both calendars and we do not code these as distinctly national. With one exception (Marko), all of the top-10 (most frequent) Croatian male names according to the 2001 census (a set which includes Ante) appear on the Catholic calendar.

81% of Croatian-army veterans have names that appear on the Catholic and/or Orthodox calendars. 33,259 of these veterans (7% of all veterans) have names that appear on both calendars and thus cannot be classified as having either Croatian or Serbian nationality. In sum, 74% (354,773) of Croatian-army veterans have a name that appears only on the Catholic name calendar and only 0.4% have Orthodox calendar (Serbian) first names. For completeness, we have also inspected all of the distinct male first names appearing in the veterans register and identified a subset of 885 names as Muslim. (The most frequent Muslim names are Samir, Mirsad, Senad, Safet, Muhamed, Ervin, Ismet, Ibrahim, Omer, and Amir.) Under 2% of veterans have Muslim names. The remaining veterans, i.e., those we do not classify as Croat, Serb, or Muslim, typically have non-Yugoslav names (primarily Italian and English) or have names that appear on both calendars.

Nationalist Names The ‘Other nationalist name’ indicator corresponds to the first names of the 22 politicians and generals who received the WWII Knighthood of the Independent State of Croatia: Salko Alikadić, Eduard Bunić, Jure Francetić, Franjo Simić, Ladislav Aleman, Vilko Begić, Rafael Boban, Matija Čanić, Fedor Dragojlov, Milan Desović, Duro Gruić, Artur Gustović, Slavko Kvaternik, Vladimir Laxa, Vjekoslav Luburić, Franjo Lukač, Josip Metzger, Ivan Perčević, Krunoslav Perčić, Dragutin Rubčić, Adolf Sabljak, and Slavko Štancer. Further, we include in the indicator a set of 4 additional names of the Ustaše leaders who were chiefly responsible for the Holocaust in Croatia: The “Jewish question” ideologists Andrija Artuković and Mile Budak, and the following (non-knighted) notorious commanders of concentration camps: Miroslav Filipović and Dinko Šakić.

All of the nationalist names appear on the Catholic calendar; Ivan and Josip are also in the top-10 list of Croatian names based on the 2001 census. Josip Metzger, from the knighted list, was a general and chief organizer of a concentration camp. Ivan Perčević was one of the leaders of the movement; when Ante Pavelić visited Adolf Hitler, Perčević was among the small party of Ustaše leaders to accompany him. Both were executed after WWII. However,
both Ivan and Josip have also strong anti-fascist connotations: The leader of the Partisan resistance movement and of post-WWII Yugoslavia was Josip Broz Tito. There are also well-known Partisan leaders called Ivan (e.g., Ivan Rukavina). It is difficult to define a separate Partisan-name indicator since a large fraction of Partisan leaders were Serbs. Instead, we provide direct comparisons between the effects of Ante and both Josip and Ivan in Section 4. In the Appendix Figure 7, we also contrast the evolution of popularity of all male top-10 names according to the 2001 census. Only the 3 top-10 names we refer to as nationalist (Ante, Ivan, and Josip) peak both during WWII and during the 1991-1995 war.

Name-Type Comparisons In Section 4, we compare the 1991-1995 war behavior of men with nationalist names to that of men with Croatian (Catholic-calendar) names. The analysis, which covers a relatively short time period, is not sensitive to including all names and controlling for Muslim- and Serbian-name indicators.

In Section 5, we track name patterns for newborns across seven decades, which raises two issues. First, in ‘siege settlements’, most of which were under Serbian rule for much of the 1991-1995 war, the share of Serbian and Muslim names given to newborns is twice higher during the five years preceding the war and four times higher during the first five years after the war when compared to the share during the five years of the war. This clearly partly corresponds to the changing ethnic composition of these locations. Hence, for the purpose of comparing Croatian nationalist-name popularity across locations, we omit from the analysis in Section 5 all newborns with Serbian and Muslim names. Second, across Croatia and also within all three types of locations we consider in Section 5, the share of (non-Serbian non-Muslim) names that correspond to the Catholic (Croatian) calendar is declining after 1970. This is related to the increasing popularity of international (English, Italian) names that do not appear on the traditional Catholic calendar. We inspected this trend across the sets of locations and found it to be highly similar both in size and the time pattern. Since our primary goal is to compare time trends across locations differently affected by war experiences, and since choosing a name for a newborn boy outside of the Croatian calendar corresponds to not using a nationalist name, the analysis presented in Section 5 is based on using all name types (other than Serbian and Muslim) to calculate the shares of nationalist names on each cohort and birthplace type. After excluding the set of newborns with Muslim and Serbian first names, the main features of Figure 3, which plots the Croatia-wide evolution of the share of nationalist names, are not materially affected.

Finally, in Section 6 we analyze the name choices for boys born during 1991-1995. The fathers of these boys can be expected to have been born before the rapid decline in the use of Catholic names in Croatia; hence, in Section 6 we constrain the set of fathers’ names (but not sons’ names) to those that appear on the Catholic calendar (mirroring the approach used in Section 4, where we studied men who were adults in 1991).
# 9.2 Appendix Tables and Figures

## Table 5: Predicting Volunteering and KIA Across Subsets of Places of Birth

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<td>Ante</td>
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<td>0.0685</td>
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<td>(0.0016)</td>
<td>(0.0016)</td>
<td>(0.0026)</td>
<td>(0.0028)</td>
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</table>

| Place-of-birth size tercile | Low | Middle | High | – | – | – |
| Agricultural employment tercile | – | – | – | Low | Middle | High |

Notes: The estimates correspond to specifications from column (1) of Table 1 (upper panel) and Table 2 (lower panel) estimated across terciles of either size (population) or agricultural share of employment of soldiers’ places of birth. Bolded coefficients are statistically significant at the 5% level based on clustering at the name level. All specifications condition on the following place-of-birth controls: settlement size, average age, share of employment in agriculture, and share living abroad as of 1991. The ‘Other nationalist name’ indicator corresponds to nationalist names other than Ante.
Table 6: Predicting Child Name Choices by Injured Veterans of the War of Independence

<table>
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<td>Unit Death Rate</td>
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<td>-0.0370</td>
<td>-0.097</td>
<td>-0.185</td>
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<td>(0.019)</td>
<td>(0.012)</td>
<td>(0.065)</td>
<td>(0.0532)</td>
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<td>Father Named Ante</td>
<td>0.008</td>
<td>0.011</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>(0.013)</td>
<td>(0.015)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Father Has Other</td>
<td></td>
<td></td>
<td>0.011</td>
<td>0.021</td>
</tr>
<tr>
<td>Nat. Name</td>
<td></td>
<td></td>
<td>(0.011)</td>
<td>(0.015)</td>
</tr>
<tr>
<td>Volunteers</td>
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<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Draftees</td>
<td></td>
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</tr>
<tr>
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<td>9,499</td>
<td>4,346</td>
<td>9,499</td>
<td>4,346</td>
</tr>
</tbody>
</table>

Notes: The estimates correspond to OLS regressions explaining the probability of a son of an injured (but not killed) veteran of the War of Independence born after his father’s war service being names Ante or any other nationalist name. All specifications control for a step function in fathers’ age in years and for the following fathers’ place-of-birth controls: settlement size, average age, share of employment in agriculture, and share living abroad as of 1991. Bolded coefficients are statistically significant at the 5% level based on clustering at the name level. The ‘Other nationalist name’ indicator corresponds to nationalist names other than Ante.
Figure 7: Cohort Shares of Top-10 Croatian Names

Note: Vertical lines denote start and end of WWII in Croatia and of the War of Independence.
Figure 8: WWII Concentration Camp Areas
Figure 9: High KIA Areas
Figure 10: Siege Areas