BOWLING FOR FASCISM: SOCIAL CAPITAL AND THE RISE OF THE NAZI PARTY IN WEIMAR GERMANY, 1919-33[*]

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This version: August 2013

Abstract: Social capital typically leads to positive political and economic outcomes. A growing literature also emphasizes the potentially "dark side" of social capital. This paper examines the role of social capital in the downfall of democracy in interwar Germany. We analyze Nazi Party entry in a cross-section of cities. Dense networks of civic associations such as bowling clubs, choirs, and animal breeders facilitated the Nazi Party's rise. Towns with one standard deviation higher association density saw at least one-third faster entry. All types of associations – veteran associations and non-military clubs, "bridging" and "bonding" associations – positively predict NS Party entry. These results suggest that social capital aided the rise of the Nazi movement that ultimately destroyed Germany's first democracy. We also show that the effects of social capital depended on the institutional context – in Prussia, where democratic institutions were stronger, the link between party entry and association density was markedly weaker.

Keywords: social capital, democracy, institutions, associations, Nazi Party

JEL Classification: N44, P16, Z10

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[*] We thank Laia Balcells, Sheri Berman, Johannes Buggle, Davide Cantoni, Nick Crafts, Joan Esteban, Ray Fisman, Akos Lada, Stelios Michalopoulos, Giacomo Ponzetto, Yannay Spitzer, Enrico Spolaore, Ann Swidler, Debraj Ray, Peter Temin, Romain Wacziarg, and David Yanagizawa-Drott for helpful comments. Seminar audiences at CREI and the Barcelona GSE Summer Forum offered useful criticisms. We are grateful to Hans-Christian Boy, Muriel Gonzalez, and Michaël Aklin for outstanding research assistance. Voigtländer acknowledges financial support from the Hellman Foundation. Voth thanks the European Research Council for generous funding.

1 Introduction

Social capital – a dense network of civic associations – goes hand in hand with a host of benign outcomes.[1] Alexis de Tocqueville saw it as a basis of vigorous democracy; similarly, Putnam finds that it creates more trust, social cohesion, and political participation. Social capital also predicts positive development outcomes.[2] Where it is plentiful, GDP per capita is higher, and financial markets are more developed (Knack and Keefer 1997; Dasgupta and Serageldin 2000; Grootaert and Bastelaer 2002). Guiso, Sapienza, and Zingales (2008) point to the deep historical roots of civil society; citizens in Italian cities that were self-governing in the Middle Ages are today richer, participate more in elections, and engage more in pro-social behavior such as blood donations.[3]

At the same time, there are good theoretical reasons why social capital could have negative effects.[4] In their survey, Durlauf and Fafchamps (2004) concluded that "the creation of clubs may … reinforce polarization in society between the 'in' group and the 'out' group". Putnam (2000) distinguishes between bridging and bonding social capital, and accepts that only the former is unambiguously positive. More generally, co-operation of in-group members has been shown to facilitate criminal activities (Field 2003). Recently, the role of social capital in entrenching ruling elites in the developing world has received attention (Acemoglu, Reed, and Robinson 2013; Anderson, Francois, and Kotwal 2011).

What is missing in the emerging literature on the "dark side" of social capital is clear-cut evidence that a functioning democracy itself can be undermined as a result of having a rich network of clubs and associations. This paper demonstrates that the rise of the Nazi Party in interwar Germany was more rapid where a dense network of civic associations facilitated the spread of its message. Germany before and after World War I

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[1] Durlauf and Fafchamps (2004) conclude that "[t]he study of social capital is that of network-based processes that generate beneficial outcomes through norms and trust". Glaeser et al. (2002) analyze the formation of social capital in the first place. Guiso, Sapienza, and Zingales (2010) define civic capital as the set of values and beliefs that aid co-operation.

[2] Putnam and Goss (2002) conclude that "communities endowed with a diverse stock of social networks and civic associations are in a stronger position to confront poverty and vulnerability, resolve disputes, and take advantage of new opportunities."

[3] Costa and Kahn (2007) find that social connections are a significant predictor of survival in prisoner of war camps; social capital is also essential for the efficiency of military units (Creveld 1982; Costa and Kahn 2008).

[4] Putnam's (1995) *Bowling Alone* contains a chapter on the "dark side of social capital" that acknowledges some of these ambiguities.

was home to a vigorous civil society – clubs for singing, bowling, shooting, hiking, and animal-breeding were everywhere, absorbing a significant share of citizens' spare time (Nipperdey 1976). Our work follows on from an earlier argument by Berman (1997), who pointed to the failure of the Weimar Republic as a challenge to the literature on social capital. Using new, hand-collected data from interwar city directories from municipal archives and city libraries, we examine the speed of Nazi mobilization as a function of the density of civic associations. In a cross-section of German towns and cities, association density is strongly and positively correlated with entry into the NSDAP.

Rates of entry into the Nazi Party matter because the organizational strengthening of the party during the 1920s long preceded its spectacular electoral successes. A large membership basis was arguably one of the crucial ingredients in the party's rise in the polls. The party's tightly-controlled organization – composed of thousands of local "cells" in the majority of German cities – underpinned success in national elections (Brustein 1998). In 1928, for example, the party received only 2.6% of the national vote; at the same time, it already had 100,000 party members in some 1,400 local chapters (Anheier 2003).[5] In turn, the NSDAP's growing popular and electoral support ultimately led to the fall of Germany's first democracy. By undermining the Weimar Republic and facilitating the creation of a powerful extremist movement, dense social networks in interwar Germany ultimately contributed to the rise of a singularly murderous regime.

We argue that associations facilitated recruitment into anti-system parties by helping to spread pro-Nazi messages. This is in line with substantial historical evidence on the rise of the Nazi movement and the role played by pre-existing local networks in attracting new members.[6] Party entry is the main focus of our empirical analysis. Figure 1 summarizes the basic pattern in the data: in towns and cities with a denser network of clubs and associations, many more Germans entered the Nazi Party (as a percentage of the population). We group locations into terciles based on association density, and then calculate NS entry rates. The higher association density, the more rapidly citizens joined the ranks of the Nazi Party. For cities in the highest tercile of association density, the

[5] By 1930, the aggregate relationship between membership figures and voting results changed dramatically – the party grew to 129,000 members, while it surged at the polls to 18.3% of the vote.

[6] We summarize this literature in more detail below.

average entry rate per 1,000 for the period as a whole was 0.74; in the lowest, it was only 0.44/1,000 – 40 percent lower.

The basic pattern is confirmed in cross-sectional regressions where we control for a range of socio-economic characteristics. We also show that these results are robust to a wide range of alternative specifications and group definitions. Some associations were explicitly anti-democratic and militaristic, such as the numerous veteran associations. Could the spread of the Nazi Party and the density of associations simply measure the same underlying preferences, namely a wide-spread authoritarian culture? We examine this question by first excluding all associations with a political angle, such as the front soldier clubs. Even when using only the density of the remaining associations (overwhelmingly, bowling, singing, hiking, and animal breeding clubs), we obtain the same result – the Nazi Party spread more rapidly in the fabric of German society where citizens had more points of social contact outside the workplace.

To shed more light on the observed effects, we use an IV-strategy based on deeper historical roots of local group formation. We use two instruments to predict civic association density in the 1920s. First, mid-19th century participation in gymnast (*Turner*) associations. These were amongst the earliest civic associations with a sizeable following in all of Germany. In addition, we use the number of singers from each city that participated in the 1861 Singer Festival (*Sängerfest*) in Nuremberg. Using only the variation reflecting these two historical measures, we show that areas with a greater density of associations were more prone to fall for the lure of the Nazi movement.

While our results suggest a causal link, they are not necessarily conclusive. For example, unobserved local characteristics may be associated with both the formation of associations in the mid-19th century and the rise of the Nazi Party in Weimar Germany. To assess the extent to which unobservables may drive our results, we follow Altonji, Elder, and Taber (2005) in calculating how strong selection on unobservables would have to be in order to explain the full observed relationship between association density and Nazi Party entry. We find that the impact of unobserved factors would have to be at least 2.5 times stronger, as compared to observed factors, in order to explain away the relationship between associations and Nazi Party entry. This makes it much less likely that unobservable factors drive our results.

Under which conditions can extremist parties exploit social networks? We document an important interaction with institutions, exploiting regional variation within

our sample. The state of Prussia had strong and inclusive institutions, representing a bulwark of democracy within Weimar Germany (Orlow 1986). We show that in Prussian territory, the relationship between association density and Nazi Party entry is substantially weaker than in the rest of Weimar Germany. This is true for party entries before 1930. Thereafter, growing pressure from the central authorities undermined Prussia's administrative independence. They eventually replaced Prussia's elected government in a coup d'état. During these later years with a weakened Prussian state, at the height of the Depression, association density and party entry are strongly associated in Prussia as well. Our results therefore suggest that strong, inclusive institutions can keep the "dark side" of social capital in check, while a weak state may allow its enemies to abuse the freedom of association.

Our paper contributes to the growing literature on the negative effects of social capital. Field (2003) summarizes empirical evidence that pre-existing social networks can facilitate crime and the rise of gangs.[7] For the case of Sierra Leone, Acemoglu et al. (2013) show that social capital is negatively correlated with governance outcomes – it helps local leaders to become entrenched. Faced with less competition, they deliver fewer public goods. Also, extremist groups – like the Ku Klux Klan – thrive on civic society values, but promote hate (Chambers and Kopstein 2001; Gutmann 1998).

We also connect with work on social dynamics and network effects in politics. Zuckerman (2005) highlights how group interactions amongst citizens can help to spread new political ideas – what he calls the "social logic of politics". Acemoglu and Jackson (2011) show how influential individuals can shape beliefs through network effects. In related work, Lohmann (1993) instead emphasizes information revelation through political activism, which provides insight into the advantages and disadvantages of participation in a new movement. Madestam et al. (2013) examine these competing theories empirically, by analyzing the rise of the Tea Party movement in the US. They find evidence for a "social multiplier", with many more people supporting a new, radical movement if they see others publicly supporting it in large numbers – evidence they interpret as favoring the network view.

[7] Note that there are counter-examples, which we cannot survey in full here. For example, Saegert and Winkel (2004) find that social capital at the building level in an inner-city sample was negatively associated with participation in crime.

Our work follows on from earlier historical research on interwar politics in Germany, Italy, and Romania, and the role of social capital in the fall of democracy in these countries. Riley (2010; 2005) analyzes the role of civic associations and the rise of fascism in Italy, Romania, and Spain. In Italy, the North – with its denser networks of clubs and societies – saw more fascist cells being founded. In Spain, there was a general paucity of social capital, but there is no clear-cut relationship with support for the Franco regime. Riley argues that in countries without strong hegemonic organizations – i.e., well-established parties – social capital can undermine the development of democracy. In a similar spirit, Wellhofer (2003) examines the rise of fascism in Italy, focusing on election results. In contrast to Riley, he finds that civic society offered some protection from the rise of fascism, but only in certain elections.[8]

Finally, we contribute to the historical literature on the rise of the Nazi Party. The last six decades have seen a massive production of research seeking to explain the party's success at the polls and as a mass movement. Initial theorizing focused on "isolated members of the masses", marginal loners who – in the Nazi Party – finally found a group in which they felt they belonged (Shirer 1960).[9] An alternative literature interpreted the rise of the Nazi Party as a form of class conflict (Winkler 1987). Our paper is closely related to the research emphasizing group membership, which gained wider currency from the 1970s onwards (Linz 1976). This strand of the literature assigns crucial importance to the "conquest of the bourgeois infrastructure" (Mommsen 1978), i.e., the infiltration of existing high-level national and regional lobbying groups (*Verbände*) representing farmers and other special interests. Berman (1997) pointed out that Weimar Germany as a whole had an exceptionally high number of civic associations, but that these did little to support the struggling democracy. She argued that social capital may backfire if "frustration with the failures of the national government and political parties" runs high, and concluded that "… had German civil society been weaker, the Nazis would never have been able to capture so many citizens for their cause ..." (Berman 1997). At the same time, she offers no quantitative evidence that the NSDAP spread faster where there were more associations – it is possible that Weimar would have

[8] Neither paper exploits cross-sectional variation in association membership quantitatively to predict entry rates into the fascist party.

[9] Abel (1938) analyzed autobiographical notes of NS members submitted for an essay competition "Why I became a Nazi". He saw a preponderance of rural workers, workers in transport and domestic industry, and middle class members joining for what they describe as ideological motives.

collapsed even faster had it not been for rich civic life at the local level. Koshar (1987), in a detailed study of Marburg, demonstrated that NS members were typically active in numerous local groups. Anheier (2003) showed how well-connected individuals acted as political entrepreneurs. Using their social connections and professional standing, they attracted new members for the party, leading to the founding of new local chapters.[10]

Relative to the existing literature, we make several contributions. To the best of our knowledge, we are the first to analyze quantitatively social capital's contribution to the eventual fall of democracy, using detailed city-level data on the density of associational life and entry rates into a radical party.[11] Second, we show that the positive association between social capital and the rate of joining an extreme party is not confined to anti-democratic and militaristic associations – it is not a simple reflection of pre-existing differences in ideological outlook. Our results are equally strong for bowling, singing, and animal breeding clubs etc. This implies that even "bridging" social capital can have negative effects.[12] Third, we show that scale effects are unlikely to be important – association density affects both early and late party entries with a similar magnitude. Finally, we point to an important interaction with institutions: in the state of Prussia – that featured stronger and more inclusive institutions as compared to the rest of Weimar Germany – the link between social capital and Nazi Party entry is markedly weakened.

The paper proceeds as follows. Section 2 discusses the historical context and our data. Section 3 presents our data, and Section 4 the main empirical results. Section 5 shows that our results are robust to a wide range of alternative specifications. Section 6 concludes.

2 Historical Context and Data

In this section, we summarize briefly the literature on the social origins of Nazi Party members, as well as research on the role of associations in Germany after 1800. We also describe how our sample of towns with information on association density was selected and how the data was constructed.

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[10] The vast literature on voting results for the Nazi Party cannot be surveyed here. Important contributions include (Childers 1983; Hamilton 1982; Falter 1991; King et al. 2008).

[11] A few other scholars have demonstrated that social capital can be related to negative outcomes, mostly due to the exclusionary character of many social networks, and with consequences at the local level. See Field (2003, chapter 3) for a review of this literature.

[12] Our finding echoes the result in Acemoglu et al. (2013), who also find that bridging capital can be detrimental.

2.1 The Origins of the Nazi Party

The Nazi Party deliberately aimed to compete with leftwing parties for the mass support, replacing the Communist-inspired ideology of the latter with nationalist and racist ideals (Shirer 1960). From the party's early days, Hitler and his associates emphasized organization-building – in their view, the rise to power would be inevitable if the Nazi Party could successfully turn itself into a mass movement. Initial growth was slow, but eventually, membership figures reached very high levels. From a handful of supporters in 1919, the party grew to 850,000 members in January 1933 – on par with the Social Democratic Party (SPD).[13]

Local chapters (*Ortsgruppen*) provided the organizational foundation for the Nazi Party's rise in any one location. Under the leadership of a local party leader, the local chapters were in charge of coordinating member activities, recruiting new members, collecting dues, and organizing social, cultural, and political activities. In towns without a local NS chapter, individual members could also join. These "single members" would eventually form the nucleus of newly founded local chapters. Between the national leadership and the local chapters, the so-called *Gaue* acted as an intermediate administrative level. Germany was divided into 33 (later, 43) *Gaue*, which had roughly the size of federal states but did not coincide with them.

Who joined the Nazi Party and for what reasons has been the subject of a major research effort. Initial theories emphasized the party's appeal for marginalized groups such as unemployed workers, and unrooted individuals; Marxist interpretations emphasized the idea that the petty bourgeoisie – threatened by a possible slide into the proletariat – gave overwhelming support to the Nazis (Heiden 1935; Stephan 1931). Quantitative studies were conspicuous by their absence. It was only from the 1970s onwards, when parts of the NS membership master file were computerized, that these predictions could be confronted with data. The central membership registry of the NSDAP survived the war, but only by accident – it was captured by advancing US troops in a paper mill, awaiting destruction. The NS membership master file – consisting of millions of individual member cards – was initially held by the American-controlled Berlin Document Center, and was then transferred to the German Federal Archives.

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[13] Childers (1983). The NS membership figure was also nearly three times higher than Communist membership in 1932.

Studies of NS members show that they were indeed overwhelmingly recruited from middle classes (*Mittelstand).*[14] In the early years, the party recruited a disproportionate share of members from the upper ranks of the *Mittelstand*. University students were amongst the first groups to sign up to the Nazi program in large numbers. This contradicts the hypothesis of the petty bourgeoisie being the first to be drawn to the party. They did however join in increasing numbers in later years (Kater 1983). Blue collar workers were substantially underrepresented relative to the population. In the party's early years (1919-23), only 22.8% were laborers. This compares with a proportion of 53% in the Reich as a whole (Madden and Mühlberger 2007). As the depression wore on, this number increased. By January 1933, the workers' proportion in the party had reached 31.5% (Mühlberger 2003). The over-representation of white collar workers was actually not specific to the NSDAP; even in the Social Democratic Party (SPD) and the Communists (KPD), the educated middle classes constituted a much higher proportion than in the population at large. In terms of the class composition of its members, the Nazi Party was similar to other *Volksparteien* (people's parties) such as the SPD.

2.2 Associations in Germany after 1815

The right to free assembly, and to form associations, was hotly contested after the Restoration of the old political order in 1815. Until 1848, the German territories repressed most forms of bourgeois sociability. Both associations and larger gatherings needed approval by the authorities, which were routinely denied. The gymnast associations – spreading in number and influence during the Napoleonic Wars – were outlawed from 1820 until 1848. Singers' associations never suffered a blanket ban, but were closely watched. The third kind of associations that grew after 1815 were student fraternities (*Burschenschaften*). Their members had volunteered in large numbers in the fight against Napoleon. After 1815, they agitated in favor of German unification. Following a political murder, most of the student fraternities were suppressed.[15] Before 1848, Germany's early associations were both liberal and nationalist in character; they mostly favored the formation of a unified fatherland and an end to the rule by princes

[14] This includes artisans, white collar workers, small business owners, professionals in the arts, farmers, managers, and senior officials, as well as military officers.

[15] The movement split into a political and a non-political branch, and never recovered its wider political significance (Wentzcke 1965).

over often tiny territories, as well as parliamentary representation, a charter of rights, and freedom of assembly, speech, and religion.[16]

Both the singing and the gymnast associations contributed to the 1848 revolution, but their exact influence is hard to gauge (Obermann 1963). After the failed revolution, which was closely followed by an end to many of the earlier prohibitions, associations spread throughout the country. At the same time, many of them became increasingly apolitical, focusing on folklore and local traditions (Düding 1984). In addition to the original associations, new ones bringing together budgie breeders, rabbit owners, stamp collectors, and supporters of a plethora of worthy causes mushroomed. Student associations on the other hand became increasingly nationalistic and militarist, and several of them adopted xenophobic and anti-Semitic ideas in the late 19th century (Haupt 1925).

By the interwar period, most associations saw themselves as apolitical – not supporting any particular party or world-view. In the Catholic Rhineland, all ranks of societies often joined Carnival associations, tasked with organizing revelries during the "silly season". While many organizations were explicitly Catholic or Protestant, almost every town and city also had a large number of non-denominational associations (Reichardt 2004). Associations reflected the views and biases of German civic society in general; where politics were not deliberately kept out of the club, there was a society for every political grouping. Workers gathered in workmen's singing associations; Communists reminisced about their frontline experiences together; fervent nationalists had their own societies to discuss the fate of Germany's colonies; and enlightened Germans organized a society for reducing anti-Semitism (Zeiss-Horbach 2008; Koshar 1986).

2.3 Associations and Party Entry

We argue that towns and cities with denser social networks saw more Nazi Party entries. This hypothesis reflects a close reading of the historical record. For example, Koshar (1986) uses the example of Emil Wissner, a salesman in Marburg. He was a member of a white-collar employee association (from 1921), and active in two gymnastics clubs (from

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[16] *Vereinsnationalismus* (nationalism of the associations) was neither xenophobic nor militaristic; it mainly emphasized the need to unify all Germans in a nation state similar to France and England, where all could interact as equals (Dunn 1979). The liberal nationalism of early 19th century Germany is therefore fundamentally different in nature to the nationalism fostered by the actual unification of the Reich under Bismarck in 1871 (Eley 1980).

1904). He joined the party in 1929, and actively used his position to proselytize for the party, and to win new members.

Koshar's work shows that new entrants in the Nazi Party in Marburg had on average more association and club memberships than non-joiners – even when we only count non-political associations. Similarly, Anheier (2003) analyzes single members – entrepreneurial NS Party members who did not join through a local chapter, and often established a bridgehead for the movement. They succeeded on a vastly greater scale in founding new party chapters where they had numerous pre-existing affiliations. Single members with four or more civic society connections were 18 times more likely to successfully establishing a local branch of the Nazi Party than those with no connections at all – and still three times more than party members with only one association membership (Anheier 2003). While many of these association memberships were in nationalist organizations that shared an ideological base with the Nazi Party, the groups involved clearly went beyond this:

> "…the movement may have 'fed' on preexisting membership structures and clusters which the single members helped channel into the reestablished Nazi Party. Ties with other 'bourgeois' associations of Germany's civil society may well have enhanced this process by extending the reach of single members for recruitment purposes."

Abel's (1938) analysis of NS member autobiographies reflects that the recruitment efforts of single members succeeded often in a context of pre-existing affiliations. A bank clerk was a member of the youth movement that emphasized outdoor activities, music, and hiking (*Wandervogel*),[17] and called it his "personal preparatory school for National Socialism."[18] After drifting into an anti-Semitic association, he eventually joined the NSDAP. A soldier recounts how after the war, he joined a variety of associations, including the *Jungdo*[19], an "association of nationally minded soldiers", and the *Stahlhelm*.[20] Eventually, he joined the Nazi Party. Personal interaction with Party members often worked wonders in convincing skeptics. One member recounts how he

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[17] The *Wandervogel* (German for migratory bird) had a strong romanticist and anti-authoritarian bend. While nationalistic in some aspects, it is seen by some as a precursor of the hippie movement. It was outlawed after 1933 (Stachura 1981).

[18] Abel (1938).

[19] A national-liberal youth group, it was anti-monarchist and favored reconciliation with France. The association was also anti-Semitic and elitist (Wolf 1972).

[20] Literally, "steel helmet" – a veterans association with mostly nationalist aims (but not affiliated or allied with the Nazi Party until the very end of the Weimar Republic).

> "…became acquainted with a colleague of my own age with whom I had frequent conversations. He was a calm, quiet person whom I esteemed very highly. When I found that he was one of the local leaders of the National Socialist party, my opinion of it as a group of criminals changed completely…"

While not every party member was recruited via clubs and associations, it is clear that the Nazi Party consciously used pre-existing social networks to spread its influence and gain new members. In those cases where the strategy succeeded, the importance of personal connections and trust is readily apparent. Next, we collect systematic data to test if the micro-evidence is actually borne out in the cross-section – that more social capital in Weimar Germany spelled a faster rise of the Nazi Party.

3 Data

We hand-collected data on association density from a total of 111 German towns and cities on the territory of modern-day Germany.[21] The sources for information on associations are town and city directories listing "useful contacts", from local banks and service providers such as dentists to local clubs and associations. The main constraint is data survival. Printed and distributed in a small area, city directories typically only survived in the local city library or archive. We wrote to all towns and cities with a listed archive or public library.[22] If more than one directory survived for the 1920s, we used the average number of clubs across the available years. Our data contains information on 8,661 associations in total. Of these, 49 percent were sports clubs, choirs, animal breeding associations, or gymnastics clubs. Military associations accounted for another 14.3 percent of the total. All associations and their frequencies are listed in Table A.10.

How representative is the data of the population in interwar Germany as a whole? Figure 2 gives a sense of the geographical distribution of our sample. Data come from all parts of Germany – cities as far North as Kiel and as far South as Konstanz are included; the sample also covers the entire country from East to West. The figure also shows that

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[21] Towns and cities in the formerly German areas of Eastern Europe rarely preserved marginal library holdings such as city directories – and war damage in many of the relevant cities (Königsberg, Breslau) was massive. We therefore decided to focus on the territory of modern-day Germany.

[22] We used central directories of city and county archives; the two main directories used are http://home.bawue.de/~hanacek/info/darchive.htm#AA and http://archivschule.de/DE/service/archive-im-internet/archive-in-deutschland/kommunalarchive/kommunalarchive.html. From this list, our dataset comprises all locations with surviving directories listing associations in the 1920s. For many towns and cities, however, this information was lost, destroyed during the war, or it did not exist in the first place. Table A.9 in the appendix lists all towns and cities in our sample.

there is no clear geographical pattern to the location of towns and cities with high vs. low association density (indicated by the full and hollow dots, respectively).

To examine data representativeness, we use the standard socio-economic controls for Germany as derived from the nationwide censuses of 1925 and 1933. These give the proportions of various occupations, religious affiliation, and (for 1933) unemployment rates. In addition, we draw on the extensive coding of Weimar voting results by King et al. (2008). Table 1 compares the national averages with data from towns and cities with surviving directories. By construction, our sample is more urban than the national average. Average population size in our sample is 92,900; in the country as a whole, it was 13,000. The employment structure is broadly in line with the aggregate: In the Reich as a whole, 46% of employees worked in blue collar jobs; in our sample of cities and towns, 52% did so. Unemployment reached 18.6% in Germany as a whole in 1933. In our sample, it is higher by 9 percentage points – driven by a more urban environment, with more volatile employment. This difference is much smaller when comparing our sample to the average German city, which had an unemployment rate of 25% in 1933.

In terms of political preferences, our sample is broadly representative. NS votes in March 33 were 39% of the total; in the Reich as a whole, the number is 44%. In line with the slight overrepresentation of workers in our sample, there is also a higher share of KPD and SPD voters than on the national scale. These differences in election outcomes become minuscule when comparing our sample to the urban averages. The religious composition of our sample suggests an overrepresentation of Catholics. They constituted 32% of the Reich's population, but their average in our sample is 39.7%. This suggests that we over-sampled Southern areas of Germany, where destruction from bombing raids – carried out principally by aircraft stationed in England – was less. Lower bomb-damage probably facilitated the survival of city archives and library collections.[23]

To calculate rates of entry per location, we use the computerized sample of NS members compiled by the universities of Berlin and Minnesota (Schneider-Haase 1991). The universe of membership cards is 11.6 million strong.[24] The sample contains information on 42,018 membership cards drawn in 1989, and comprising only pre-1933 party entries. We matched the name of the location for which we have directory data

[23] However, this does not affect our findings. Below, we show that our results hold equally in Catholic and Protestant areas.

[24] Every member had two cards – one for the central register originally ordered by name, the other initially ordered by geographical area (but later organized alphabetically, too, by the US authorities).

against the *Ortsgruppe* in the Berlin-Minneapolis database. This identifies 6,553 members who joined before 1933, or 15.5% of all digitized cards, which closely resembles the population share of our sample: 14.8%.[25]

Rates of Nazi Party entry in our sample vary over time. They were stable or declining between 1925 and 1927, before rebounding sharply and rising after 1928. After January 1933 – when the Nazi Party won the national election – entry rates into the party jumped. Because the party feared it would be overwhelmed by the influx of opportunistic members, it imposed a stop on new entrants from April 1933. Throughout, the cross-sectional dispersion is high, with many towns and cities having almost no entry into the Nazi Party, and others showing fairly high rates of entry (see for example Figure A.3 in the appendix).

One issue with the data arises because the Berlin-Minneapolis sampling methodology changed in 1930: In order to provide sufficient observations for earlier years with low entry rates, these were oversampled. Since this affects each location to the same extent, it does not change cross-sectional dispersion within any given year. In fact, it allows for exploiting meaningful variation of early party entries. Consequently, we use the original Berlin-Minneapolis sample throughout the empirical analysis. To allow for comparability of coefficients for early and late party entry, we interpret magnitudes in terms of standard deviations (beta coefficients). Finally, to calculate *aggregate* entry rates (such as in Figure 1, or when interpreting absolute coefficient sizes), we use a correction based on Kater (1980), who drew a smaller but intertemporally consistent sample. We explain this in Appendix C, where we also show that our regression results hold when correcting for oversampling, or when standardizing entry rates in each year before computing location-specific averages.

One important concern is balancedness. How similar or different are the towns and cities that had above/below average densities of associations? In Table 2, we examine this question. We use voting results for the last pre-World War I election as an indicator of ideological outlook, and also add interwar data on the religious composition of the population, as well as socio-economic characteristics.[26] Overall, there are few significant

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[25] The 111 towns in our sample had altogether 9,264,343 inhabitants in 1925, as compared to a total population of Germany of 62,411,000.

[26] We thank Maja Adena, Ruben Enikolopov, Maria Petrova, Veronica Santarosa, and Katia Zhuravskaya for kindly sharing their digitization of socioeconomic variables from the 1933 Statistik des Deutschen Reichs.

differences. Votes for nationalistic parties in 1912 show a mixed pattern: The NLP (National Liberal Party) is underrepresented in areas with many associations, whereas the DKP (German Conservative Party) is overrepresented. Later, in Weimar Germany, areas with more associations had slightly fewer blue-collar workers in 1925. The share of Jews was relatively similar, while there was a lower share of Catholics in towns and cities with more associations. The difference amounts to more than 8 percentage points, but it is not statistically significant. Since blue-collar workers and Catholics (as compared with Protestants) were less inclined to join the Nazi Party (Childers 1983), this difference may stack the odds in favor of finding a link between social capital and NS entry. We therefore include both variables in our set of baseline controls. Next, the difference in city size is substantial; cities with high association density had only half the population as compared to their counterparts with many associations.[27] We therefore add city population to our baseline controls.[28] At the height of the Great Depression, unemployment rates were lower, and there were fewer people depending on social welfare, in locations with more civic associations. Thus, if party entry was partly a form of protest against economic conditions, this will actually introduce a *downward* bias in our main analysis. The same results from the lower density of WWI participants – who were more inclined to join the Nazi Party. Finally, there are minuscule differences in income (proxied by tax payments) and social insurance pensioners. Overall, there is little reason to believe that socio-economic or ideological characteristics pre-disposed cities with numerous societies and clubs towards favoring the Nazi Party.

Finally, we only use cities with more than 5,000 inhabitants (in 1925) for our main analysis. This has two reasons. First, in small towns people typically know and interact with each other independent of clubs or associations. Second small towns have a high signal-to-noise ratio, because it becomes increasingly difficult to find NS members in any one locale in the digitized subset of membership records. In Appendix D we show that our results are robust to using all cities in the sample.

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[27] This difference is probably also driven by the fact that we observe the number of associations in each city, but not the overall members.

[28] In addition, we carefully check that different city sizes do not drive our results, by comparing similar-sized cities with high and low association density in the robustness section below.

4 Empirical Findings

In this section, we present our main results. We show that towns and cities with a greater density of civic associations saw more NSDAP member entries. These results hold controlling for a host of socio-economic variables. The link between association density and Nazi Party entry is strong during both the party's early, radical phase and after its turn towards legality in 1928. Also, both military associations and singers/animal-breeding clubs have the same predictive power. An IV-strategy based on 19th century association densities suggests that the link we document may well be causal. In combination, we find powerful evidence that a dense fabric of civic associations went hand-in-hand with a more rapid rise of Nazi Party membership.

4.1 Two cities: Kleve and Coburg

We first illustrate the basic idea by comparing two towns – Kleve and Coburg. Both had a similar number of inhabitants in 1925: 20,241 in Kleve, and 24,701 in Coburg. Coburg had a vigorous civic society. The directory for 1924 lists five animal breeding clubs, including two canary breeders associations and a club for poultry- and rabbit-breeding. There were also 10 bowling clubs ("Happy Brothers" and "Riot" were some of the names chosen), 9 choirs or music associations, a club for speakers of Northern German dialect (Coburg is in modern-day Bavaria), and one for the preservation of the local Bismarck memorial. In addition, there were 10 military associations (for former members of the 5th infantry regiment, for veterans of the Army, and for officers). The total number of associations came to 74 – 2.99 per 1,000 inhabitants of Coburg.

In Kleve, there were only two associations for animal breeding (horses and poultry), and one choir; there were no clubs for former members of the German armed forces. The overall density of associations per 1,000 inhabitants was 0.89 – less than one third of the value in Coburg (18 clubs in total). As our hypothesis predicts, there were numerous entries into the NSDAP in Coburg – 52 citizens in our sample joined the Nazi party, 8 of them in 1925 already. In Kleve, there were only 9 entries – a rate of entry approximately 80% lower than in Coburg.

4.2 Baseline Results

In the following, we examine the link between association density and Nazi Party entry systematically by estimating models of the type:

$$NSENTRY_i = \alpha + \beta ASSOC_i + \boldsymbol{\gamma X}_i + \varepsilon_i \quad (1)$$

where $NSENTRY_i$ represents different measures of entry into the Nazi Party in location i (averaged over the period 1925-33), α is a constant, $ASSOC_i$ are measures of the density of clubs and associations, and $\boldsymbol{X}_i$ is a vector of controls.

In Table 3, we present the baseline results (reporting beta coefficients). Overall, association density strongly and significantly predicts higher entry rates into the NSDAP. The effect is large – the per capita entry rate increases by approximately 0.4 standard deviations (or by 0.025/1000) for every standard deviation increase in association density (1.6/1000).[29] With average entry rates of 0.077 per year in the Berlin-Minneapolis sample, a standard deviation higher association density thus went hand-in-hand with one-third faster Nazi Party entry. We obtain very similar results for non-military clubs, which consist largely of animal breeders, bowling clubs, singing associations, Carnival clubs, and firefighting associations (col 2).[30] Military organizations (col 3) are also significant predictors of NS entry. In columns 4-6, we additionally control for our baseline set of socio-economic characteristics (see the discussion in Section 3). Controlling for factors other than association membership should help to shed light on the extent to which social capital itself facilitated the rise of the Nazi Party. All coefficients remain significant, and of the same order of magnitude. Overall, the results show a strong connection between Nazi Party membership and association density – one that is not driven by the religious make-up of the population, by the size of the urban center, or the socio-economic characteristics of a town.

To visualize the relationship between association density and Nazi Party entry, Figure 3 plots the conditional correlation based on our baseline specification in col. 4 in Table 3. While there are many idiosyncratic factors influencing entry rates, it is clear that in towns and cities with high association density, many more citizens joined the Nazi Party.[31]

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[29] In Appendix C, we use entry rates that are corrected for the change in sampling methodology in the Schneider-Haase (1991) membership sample. These yield equally strong estimates, with larger absolute effects: in the baseline specification (col. 4 in Table A.1, panel A), per capita entry rates increase by 0.077/1,000 for a one-standard deviation increase in association density, while the standardized beta coefficient is 0.375.

[30] Groups included under the "non-military" rubric include: gymnasts, choirs, animal breeders, music clubs, "home" (*Heimat*) clubs, and citizens associations.

[31] There are two observations in the "North-Eastern" corner of Figure 3 that have high leverage – Memmingen and Passau. If we drop these observations, we actually obtain a somewhat larger coefficient with a slightly lower t-statistic (Figure A.1 in the appendix).

Entry rates for the NSDAP were not constant over time, as discussed in section II. The party was banned until 1925; entry thereafter was slow, but accelerated after the start of the Great Depression. We next ask if both early (1925-28) and late (1929-33) Nazi Party entry can be explained by the density of civic networks. In the historical literature, "early" party members are often seen as more committed to the cause – they joined the party shortly after its ban had been lifted, and when its public program emphasized extreme policies including a potentially violent bid for power. After 1928, the party appealed more to middle class voters, favoring a strategy of winning office through peaceful, constitutional means (Childers 1983). Over time, the relative entry rates within locations are stable. As Figure 4 shows, places with a lot of entry in the early years of the party typically continued to attract many new members. While some towns and cities show major increases – like Uelzen or Göttingen – others saw a deterioration in *relative* performance (Passau, for example).

In Table 4, we use early entry rates as the dependent variable. Results are very similar to the ones obtained before (Table 3), and highly significant. Estimating with late entry also yields largely unchanged results (Table A.3 in the appendix).

4.3 Omitted Variable Bias

Could our regression results reflect reverse causality or omitted variable bias? Reverse causation is extremely unlikely – the Nazi Party did not sponsor a plethora of local clubs and associations. However, it could be argued that NS membership entry was frequent in locations where economic distress was high, and hence the opportunity cost of time was low. This would also translate into more time spent in clubs and associations.

To sidestep this issue, we investigate the deeper history of associations in each city. Association density reflects two factors – the particular incentive to join a club at any one point in time, and the underlying cumulative history of sociability, co-operation, and shared interests. To separate the deeper historical roots of association density from contemporary conditions, we use two instruments from the mid-19th century. Our first instrument is based on the early history of gymnast associations. Inspired by Friedrich Ludwig Jahn, Germans joined gymnast associations (*Turnvereine*) in increasing number in the 19th century. While gymnast associations sometimes had a political edge, they were by no means reactionary: German gymnasts were one of the most important groups contributing to the 1848 revolution. There is detailed information on *Turnverein* membership from the 1860s onwards, after the German Gymnastics Association

(*Deutsche Turnerschaft*) was founded. Our second instrument uses participation of town delegates in the 1861 Nuremberg Singers' Festival (*Sängerfest*). Some 283 singing associations participated; the number of singers is given as between 6,000 and 20,000 (Klenke 1998). We normalize both instruments by city population in 1863.[32]

The exclusion restriction is as follows: For gymnast density and singer festival participants to be valid instruments, we have to believe that towns with relatively higher values in the 1860s only had higher entry rates to the Nazi Party because association density in general was higher there. In other words, there is no direct effect of gymnast membership and singer festival participation on Nazi entry 60-70 years later, and both instruments must also be uncorrelated with other factors that drove NSDAP membership.

One possible threat to the exclusion restriction is that participation in the singer festival or in gymnast associations may potentially reflect aggressive nationalistic tendencies of the Nazi type. While both singing and gymnast associations were nationalistic in the early 19th century, they had largely become apolitical after 1850 (Düding 1983). This kind of nationalism was neither militarist nor aggressive: "Germany and other modernizing nations became real to people because many thousands traveled around these nations…meeting their fellow countrymen and singing together" (Applegate 2013). In many cases, the nationalism was fundamentally peaceful, as indicated by the motto of the 1861 Nuremberg singers festival; "in word and song the German banner goes forth/uniting in love both North and South" (Brockmann 2006). The liberal, folk-based nationalism of the 19th century is not to be confused with the political agitation and xenophobia that the Nazis and other right-wing parties represented in Weimar Germany. In sum, while our IV strategy has to be interpreted with caution, we are confident that the exclusion restriction is broadly plausible.

Table 5 presents our IV results. The first stage is highly significant for most specifications, as reflected by the p-values for the F-test of excluded instruments. For our main specification in column 4, the first stage has a p-value of 0.013. In addition, the

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[32] Some city boundaries changed over time, especially when surrounding towns and villages were incorporated. This creates large and in some cases, spurious reported population growth – in some cases the number of recorded inhabitants grew by more than a factor of 20 between 1863 and 1925. We therefore weigh our regressions by a proxy for the comparability of the 1863 population figure: The ratio of population in 1863 to 1925, relative to the average nationwide difference in city population over the same period. Results are very similar when not weighing, but the first stage is somewhat weaker. For example, for our main specification (column 4 in Table 5), the p-value for the first stage (underidentification test) becomes 0.04 instead of 0.01, and the second-stage beta coefficient is 1.168, with an Anderson-Rubin p-value of 0.001.

overidentification test does not reject instrument exogeneity in any of the specifications. While this result is subject to the usual concern of weak statistical power, it is reassuring with respect to the exclusion restriction of our instruments. In the second stage, we obtain large and statistically significant coefficients on association density. We report p-values based on the Anderson-Rubin test of statistical significance in square brackets.[33] These are robust to weak instruments (Andrews and Stock 2005). We also perform a reduced-form estimation (not reported in the table), regressing party entry rates on the first principal component of the two instruments.[34] Without controls, the beta coefficient is 0.37 with a t-statistic of 4.52, and when adding our baseline controls, 0.27 (4.21).

The IV coefficients are between two and four times larger than their OLS counterparts. Measurement error may be one reason for the difference: In the main analysis, we use association density per city, i.e., the number of associations per 1,000 inhabitants in the 1920s. The number of *members* – which would be a more precise measure – is not available. Both instrumental variables, on the other hand, rely on the number of members/participants. Thus, our instruments may capture both the intensive and extensive margin of association participation. It is plausible that this reduces noise in the estimation, yielding higher coefficients in the second stage. If taken at face value, the IV results imply that a one standard deviation increase in association density is associated with an approximately one standard deviation rise in Nazi Party entries.

We cannot entirely exclude the possibility that our instruments affect Nazi Party entry via channels other than association density. We allow for deviations from perfect instrument exogeneity, using the method in Conley, Hansen and Rossi (2012). In this way, we examine the consequences of a possible direct effect on party entry. Appendix E summarizes this analysis. It shows that, for our IV result to become insignificant, the direct effect of the instruments would have to be at least one-half of their overall reduced form effect on party entry. In other words, *Sängerfest* participation in 1861 and the density of gymnasts in the 1860s would have to be at least half as potent a pathway to NS membership as participation in clubs and associations in the 1920s – which seems improbable. The Conley et al. results strongly suggests that the IV estimates are robust even to substantial deviations from strict exogeneity.

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[33] We report the Chi-square test; the F-test based p-values are very similar – for example, for our main specification in column 4 of Table 5, the F-test yields a p-value of 0.0088.

[34] The principal component combines our two instruments into one variable. Following Bai and Ng (2010) and Winkelried and Smith (2011), linear combinations of valid instruments remain valid instruments.

One alternative to deal with omitted variable bias is to perform a bounding exercise in the spirit of Altonji, Elder, and Taber (2005). They use selection on observables in order to assess the potential bias from unobservables. We compute the ratio constructed by Altonji, Elder, and Taber (2005), and adopted to the continuous case by Bellows and Miguel (2009). This ratio compares how much the coefficient on the variables of interest (total association density, density of military and non-military associations) declines as control variables are added.

We run two sets of regressions. First, we estimate (1) without controls and denote the corresponding coefficient $\hat{\beta}^A$. Next, we estimate (1) with different sets of control variables, and denote the coefficient on $ASSOC_i$ by $\hat{\beta}^B$. Then, the Altonji et al. ratio is given by $\hat{\beta}^B/(\hat{\beta}^A - \hat{\beta}^B)$. Intuitively, the larger $\hat{\beta}^B$ the stronger is the effect that is left after controlling for observables – and the more would unoberservables have to explain in order to reduce the coefficient to zero. As for the denominator in the ratio, the smaller is the difference between $\hat{\beta}^A$ and $\hat{\beta}^B$, the less is the estimated coefficient influenced by observables, and the stronger would selection on unobservables have to be relative to selection on observables in order to completely explain away the effect. Importantly, this approach assumes that the variation in Nazi Party entries related to the observables has the same relationship with local association density as the part of the variation reflecting unobservables.

We use two sets of controls to estimate how much stronger the effect of omitted variables would have to be, relative to observables, to attribute the entire OLS estimates to selection effects. The first set consists of our three baseline controls, the second set adds a large number of political and socioeconomic variables. Table 6 presents the results. For our main measure, including all associations, the R^2 increases from 0.17 to 0.34 when adding the baseline controls, and to 0.50 when using the second set of controls. Thus, the observables that we include account for a substantial share of the overall variation, lending confidence to our use of the Altonji et al. method. In three cases, the implied ratios are negative. This occurs when the observable controls are on average negatively correlated with party entry, yielding stronger coefficient estimates than in the basic regression without controls. In these cases, the Altonji-Elder-Taber test suggests that our OLS estimates are likely to be downward-biased (provided that the unobservables are positively correlated with the observables). When there is positive correlation between party entry and observables, the ratios range from 2.5 to 9.3. This

implies that selection on unobservables would have to be substantially stronger than selection on observables for our main result to be overturned. For our baseline specification using all associations, the coefficient is the least affected by adding controls, suggesting that unobservables would have to be nine times stronger in their effect than observables in order to fully account for the observed effect.

4.4 Disaggregating Social Capital

Social capital comes in different types. For example, Putnam distinguishes between "bonding" and "bridging" social capital. The former cements pre-existing cleavages in a society, by making exclusive groups even more exclusive; the latter brings people from different walks of life together, facilitating interactions amongst equals. According to Putnam, bonding social capital may have adverse effects; bridging social capital should always have benign consequences.

To analyze this further, we classify the entire list of organizations in each town according to their type. Appendix B provides the full classification scheme. To fix ideas, we give two simple examples. In interwar Germany, a typical bridging club was a local choir – only enthusiasm for singing (and a good voice) were needed, and there were no monetary, social, or gender barriers to entry. A good example of a bonding association are the *Herrenclubs* – broadly similar to London gentlemen clubs, they were, as their name suggests, designed as socially exclusive associations for members of the old, land-owning elite and the new wealthy upper class.

Table 7 gives the results of regressing Nazi Party entry rates on the density of bridging and bonding associations.[35] Bonding associations are strongly associated with NS Party entry. Without controls, the effect appears weaker for bridging social capital. However, once controls are added (and the overall fit improves substantially), we find positive, significant, and quantitatively meaningful coefficients also on bridging capital, which are similar in magnitude to those for bonding capital. This suggests that *both* types of associations were important pathways for the spread of the Nazi Party.

4.5 The Importance of Institutional Context: The Case of Prussia

The Weimar Republic was a weak democracy, unable to defend itself against extremists, and torn by strife between republican parties that were often unwilling to shoulder

[35] The correlation coefficient of the two variables is 0.43 in our sample.

responsibility (Bracher 1978). In the state of Prussia, however, pro-democracy forces were stronger, and it was governed more competently. Prussia's government administered about half of German interwar territory. The so-called "Weimar Coalition" – composed of the Social Democrat Party (SPD), the Center party (Zentrum), and the German Democratic Party (DDP) – ruled in Prussia from 1919 to 1932.[36] For almost the entire time, the same Prime Minister, the social democrat Otto Braun, was in charge. It instituted several important constitutional reforms, such as the need for a new government to be formed simultaneously with the old one losing power.[37] This allowed the democratic coalition to rule despite losing its parliamentary majority early on (in parallel with developments in the Reich). The Prussian Interior Ministry vigorously cracked down on paramilitary units of the right and the left (the SA and the Red Front associations), regularly banned public demonstrations and assemblies planned by both the Communists and the Nazis, forbid the use of uniforms in public, and for extended periods stopped Hitler from speaking on Prussian territory. A strong democratic leadership was not afraid to make tough decisions, even when it came to "sacred cows" of its own ideological camp.[38] For all these reasons – and despite Prussia's reputation for militarism – the regional state was a stronghold of democracy (Orlow 1986).

While Weimar's political, social and economic upheavals affected Prussian citizens as well, they had good reasons not to give up on the democratic process overall. Inclusive institutions ultimately require both pluralism and political centralization; at times, there can be a trade-off between the two (Acemoglu 2013; Acemoglu 2005). Weimar on the whole erred on the side of excessive pluralism, allowing the enemies of an open society to abuse the rights of free assembly, free speech, and freedom of association. Prussia, on the other hand, successfully balanced the demands of pluralism and state capacity; it was as close to turning Weimar's political system into an 'inclusive institution' as was feasible given nation-wide constraints at the time.

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[36] This is the same coalition that came to power nationwide after the revolution of 1918; it lost power in the next parliamentary elections (Bookbinder 1996).

[37] Prussia pioneered this so-called "constructive vote of no confidence"; this feature was later adopted by the Federal Republic of Germany (Skach 2005).

[38] In one (in)famous episode, the SPD-appointed police chief of Berlin had banned all assemblies for May Day 1929. When the Communist party organized demonstrations in defiance of the ban, subsequent clashes turned violent, leading to 19 killed (Kurz 1988).

We expect the high quality of institutions in Prussia to matter for several reasons. Strong leadership can help to align beliefs by changing expectations (Acemoglu and Jackson 2011); the democrats in power in Prussia demonstrated the importance of well-functioning institutions in defending order and governing even-handedly and responsibly. It is for the same reasons that the Prussian government under Prime Minister Otto Braun was eventually removed in July 1932, when the increasingly right-wing national government under Chancellor von Papen seized power in Prussia in a coup d'état (*Preussenschlag*).

In Table 8, we analyze the extent to which the link between association density and Nazi Party entry also held in Prussia. We use early party entries as the dependent variable because we expect the difference to be particularly pronounced before 1930, which brought increasing pressure from the central government. First, we split the sample. The Prussian part comprises about one half of all cities in our sample. Column 1 in Table 8 shows that for the 49 non-Prussian cities, the relationship between association density and Party entries remains strong and significant. This suggests that fewer observations themselves do not affect our results. Next, for Prussia only (col 2), the coefficient on associations for early party entry is small (only one third as compared to col 1) and insignificant. In column 3, we use the full sample again and include an interaction term between the Prussia dummy and association density.[39] It shows clearly that the relationship between early party entry and association density was systematically weaker in Prussia before 1930. Columns 4-6 repeat the analysis for late party entries. As expected, we do not find any significant differences between Prussia and the rest of Weimar Germany: Association density is correlated with more entries in both subsamples, and the interaction term is positive and insignificant. Thus, social capital eventually showed its "dark side" in Prussia, too. Eventually, economic and political problems in Germany as a whole became overwhelming. This period coincided with a gradual weakening of the independent role of the Prussian government, which was eventually deposed by the Reich in a coup d'état in July 1932. Table A.8 in the appendix shows that these results also hold in alternative specifications, and for other measures of association density.

[39] We also include interaction terms with the controls, to avoid that ASSOC×Prussia alone captures all interaction effects associated with Prussia. However, results are almost identical when including only ASSOC×Prussia – see Table A.8 in the appendix, which also shows that the interaction effect is particularly strong (negative) for military associations.

In parts of Weimar Germany where the regional government worked well, civic associations were markedly less potent as pathways for infection with Nazi ideology. The difference is particularly marked for early entrants, who joined the party before the general economic and political crisis of Weimar's final years fanned the flames of discontent everywhere. These findings strongly suggest that a functional, strong, democratic regional government – in charge of providing essential services such as policing and education – could do much to ensure that social capital did not develop a "dark side". In other words, in the presence of inclusive institutions, the potentially malign effects of a vibrant civic society can be kept in check. Our findings suggest an important interaction effect between social capital and institutions, and they allow us to assess what it takes for social capital to be a beneficial – fair, strong, and inclusive government.[40]

4.6 Workers' Associations

One important question concerns interpretation – is it the case that in towns and cities with more civic associations, people were simply more social, and joined all manners of clubs, societies and parties to a greater extent? Ideally, we would like to test if entry rates at the opposite end of the political spectrum, for example for the Communist party, were higher as well in places with more associations. Unfortunately, Communist membership records are not available for the period. Instead, we turn the question around to ask: i) is there a general sociability component in association membership – are there also more *workers*' associations in cities with generally high membership rates; ii) is the density of workers' associations also correlated with Nazi Party entry (which would lend support to the notion of a location-specific sociability).

Table 9 performs such a test and finds strong support for i), but none for ii): locations with more associations in general also had greater densities of workers' associations (col 1 and 2). However, workers' associations have no predictive power for NSDAP entry (col 3 and 4). In addition, our baseline measure of association density is not affected by controlling for workers' associations (col 5). In sum, these results suggest that places with high social capital were more sociable across the political spectrum, but sociability alone cannot explain the rise of the Nazi Party. Middle-class clubs acted as gateways to

[40] Here, our conclusions are similar in spirit to the findings by Acemoglu et al. (2013), who show that social capital is associated with worse governance outcomes in Sierra Leone because it strengthens the role of traditional chiefs.

the Nazi movement, but working class associations did not – "infection" apparently required a minimum degree of ideological compatibility.

In addition to providing evidence for the role of institutions, the above analysis further alleviates the concern that unobserved third factors drive our results (see Section 4.3). The relationship between association density and Nazi Party entry is present throughout the sample in non-Prussian territories, but only after 1929 in Prussia. Our setup is thus similar in spirit to a difference-in-difference-in-differences (DDD) setup, represented by a 2x2 matrix with a territorial and a time dimension. Our main result holds only in the cells with weak institutions at the corresponding time. Location-specific unobservables cannot explain this pattern.

5 Robustness

How robust are our findings? We examine the strength of the main effect in varying subsamples, the use of the logarithm of the dependent variable, matching estimation, and the robustness to including a larger set of socioeconomic controls.

In Table 10, we define a number of subsamples and present results for our three association measures in panels A-C. Do the main results hold if we look at predominantly Catholic areas? Do towns and cities with more workers provide less effective recruiting grounds via associations for the Nazi Party? Are the share of Jews, or the size of cities important modifying variables? The results for $ASSOC_{all}$ in Panel A suggest that, while the size of effects varies, the basic relationship between civic associations and membership entry remains the same. Where Catholics dominated, more clubs and societies led to proportionately faster entry than in Protestant areas (col 1 and 2), but the effects are highly significant in both cases. Catholic areas were typically more resistant to the lure of the Nazi Party. That is why it is interesting that where Catholics were in a majority, the NSDAP grew particularly quickly the denser the network of associations (although this pattern is reversed for military associations in panel C). Next, on balance, localities with a predominance of workers saw the same increases in NS entry as a function of association density as the rest. There is also no evidence that the presence of Jews modified the basic relationship between the density of civic associations and the rise of Nazi membership. Finally, city size does not appear to be crucial for the relationship between associations and party entry (col 7 and 8). This is important, because it alleviates the concern that arose in our balancedness test in Table 2 – that cities with high

association density are on overage smaller. We further address this concern in the next table.

Table 11 reports results based on propensity score matching. Since our sample does not include a typical zero-one treatment variable for social capital, we construct an indicator that equals one for the upper tercile of association density (for each of the three measures), and zero for the lower tercile. We exclude the middle tercile because it contains cities with very similar association density. We begin by matching cities with similar population size (panel A, col 1-3). The coefficients for all and non-military associations are both economically and statistically significant, indicating that cities in the upper tercile of association density saw Nazi Party entry rates that were 0.88 standard deviations higher than those in cities of similar size with lower-tercile association density. For military associations, the coefficient is lower and insignificant. Adding the remaining baseline controls as matching variables (panel A, col 4-6) yields similar results. In addition, in panel B of Table 11 we match cities by geographic location, based on longitude and latitude. Comparing places close to each other addresses problems associated with omitted variables, as well as geographic clustering. In col 1-3 we compare nearby cities of similar size, and in col 4-6 we add the full set of baseline controls as matching variables. The results remain almost unchanged when focusing on local variation.

So far, we have only controlled for the share of population that is Catholic, for the share of blue-collar workers, and the size of each city. We now control for a much wider range of additional variables. Table 12 shows the results. In columns 1-3 we add political controls, including votes for nationalistic parties in 1912, the percentage of Jews in each town in 1925, and the number of Hitler speeches in 1932. In columns 4-6 we also add a variety of socioeconomic controls, such as measures of immiseration during the Great Depression (welfare recipients and social insurance pensioners), income and wealth (measured by tax receipts), as well as war veteran density.[41] There are few significant and consistent findings across specifications. The depth of the economic downturn in 1933 – which may reflect underlying economic vulnerabilities in the 1920s already – is not significantly associated with party entry. The same is true for most other socioeconomic variables, as well as for the share of Jews. Hitler speeches are an exception. As one should expect, these are positively associated with party entry (and causality could run

[41] These data are from Adena et al. (2013).

either way). Vote shares for the conservative parties in 1912 also show consistent coefficients across specifications – albeit with opposite signs. Votes for the National Liberal Party predict higher Nazi Party entries, while the effect of the German Conservative Party is negative. This underlines the important ideological (and class) differences between German conservatism in general and National Socialism. Most importantly, including this ample set of controls does not weaken our main results.

We perform a number of additional robustness checks in the appendix. First, there is no particular reason to use either entry rates or the log of entry rates as a dependent variable. In Table A.4, we show that results are largely unchanged if we use a log specification. Next, to examine the potential effect of outliers, we use a robust estimator in Table A.5. Down-weighting observations with high leverage does not affect our results: The size and significance of coefficients is close to the baseline in Table 3. The same conclusion arises when we use median regressions as an alternative way to reduce the influence of extreme values (Table A.6).

Is the effect of association density on party entry rates uniform throughout the range of towns and cities – from the most Nazi-skeptical locations to the most enthusiastic ones? Or are our results driven by behavior at one of the extremes? To examine this question, we estimate quantile regressions where the conditional 25^{th} or 75^{th} percentile is the dependent variable (and we minimize the absolute deviations, not the square). As shown in Table 13, the effect is somewhat smaller in the sample of all associations for the lower entry rates (col 1) than for the high entry rates (col 4), but the difference is small and not significant. For non-military groups, the size of the coefficients is very similar, and for military associations, entry rates are somewhat more strongly influenced at the top end.[42]

6 Conclusion

When is social capital beneficial? While a rich literature has documented a positive relationship between desirable outcomes and denser networks of civic associations and clubs, the analysis of negative effects has mostly focused on crime and related activities (Field 2003). Recent work on the potentially negative effects of social capital on

[42] In Figure A.2 in the appendix, we plot the full range of coefficients for all quantiles from the 5th to the 95th, for the main specification (for all associations, with controls). The coefficients rise slightly with Nazi Party entry rates, but are overall remarkably stable and significant..

governance has begun to correct this imbalance, emphasizing the entrenchment of existing power holders (Acemoglu et al. 2013). In this study, we examine an even starker consequence – the possibility that dense networks of civic associations facilitate the rise of radical movements seeking to overthrow the existing democratic order. In interwar Germany at least, the vigor of civic society facilitated the spread of the Nazi Party, thus contributing to the eventual collapse of democracy and the rise of one of the most destructive regimes in history. Our main result suggests that the dark side of social capital – in one famous and arguably pivotal case – went far beyond criminal activities and the entrenchment of established politicians. This conclusion is also in stark contrast to an earlier literature that had blamed Germany's path to dictatorship on a "civic non-age" of low social capital, harking back to the 19th century (Stern 1972).[43]

Our results emerge clearly from new cross-sectional evidence collected from municipal archives and city libraries for the purpose of our study. In towns and cities with more grass-root clubs and associations, the Nazi Party grew markedly faster. This is true both for the party's early years and for its final ascendancy to power, after the start of the Great Depression. Our results also highlight the importance of personal, face-to-face interactions in the spread of a radical new movement.[44] There is also good reason to believe that the link is causal: The share of variation in civic society indicators explained by deeper historical roots of association-based sociability strongly predicts NS entry rates.

One important question in the literature on social capital is why civic associations are associated with benign outcomes in some contexts, but not in others. To address this issue, we examine regional political variations within Germany that affected the strength of the link between party entry. Democratic institutions in interwar Germany as a whole did not work well – governments were weak and short-lived, economic policy often failed, and extremist parties soon took over (Bracher 1978). Amid the chaos, the state of Prussia was a bastion of well-functioning republican institutions. There, the "Weimar coalition" reigned without interruption from 1919 to 1932. It was composed of politicians from the middle of the political spectrum, and their defense of democracy was vigorous (Orlow 1986). We find that in Prussia, the link between association density and Nazi

[43] Stern argued that Germans lacked "the kind of voluntary, civic activity that attracted their English and American counterparts… Civic initiative takes practice, and German society never fostered it. Most Germans looked to the state for guidance and initiative." (Stern 1972).
[44] Here, our results echo those of Zuckerman (2005) and Madestam et al. (2013).

Party entry was markedly weaker than in the rest of the country. This suggests that the effects of social capital depend on the institutional context; where democratic politics on the whole "works", civic society is not associated with the rise of extremist sentiment.

Tocqueville (1835), who pioneered the argument that social capital was crucial for the vigor of democracy, was well-aware of the ambiguities involved. In particular, he observed that civic associations could also undermine the vigor of democracy, depending on the maturity of institutions and the cultural context:

> The most natural privilege of man… is that of combining his exertions with those of his fellow creatures and of acting in common with them. The right of association therefore appears to me almost as inalienable in its nature as the right of personal liberty. … Nevertheless, if *the liberty of association is only a source of advantage and prosperity to some nations, it may be perverted or carried to excess by others, and from an element of life may be changed into a cause of destruction.* [italics added]

In line with Tocqueville's reasoning, we find that social capital can indeed have a "dark side", and that it can imperil the survival of democracy when it facilitates the growth of an extremist movement. It therefore becomes crucial to ask under what specific conditions the widely documented benefits of social capital can go into reverse. To address this issue, we examine the case of Prussia. Despite the general political situation in Germany, Prussia's strong, inclusive institutions ensured that a vibrant civil society did not encourage the rise of an extremist movement. Our results therefore suggest that the political effects of social capital are heavily dependent on the wider institutional context.

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FIGURES

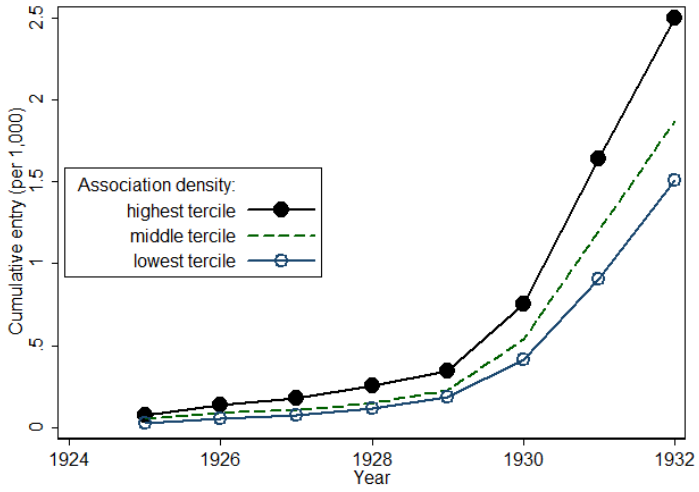

Figure 1: Cumulative NSDAP membership, by tercile of association density

Note: Each data point reflects the cumulative NSDAP entry rate (per 1,000 inhabitants), starting in 1925 and averaged across the cities with lower, middle, and upper tercile of association density. The data are described in Section 3. NSDAP entries are from the Berlin-Minneapolis sample (Schneider-Haase 1991); starting in 1930, we correct aggregate entry rates for a change in sampling methodology, as described in Appendix C.

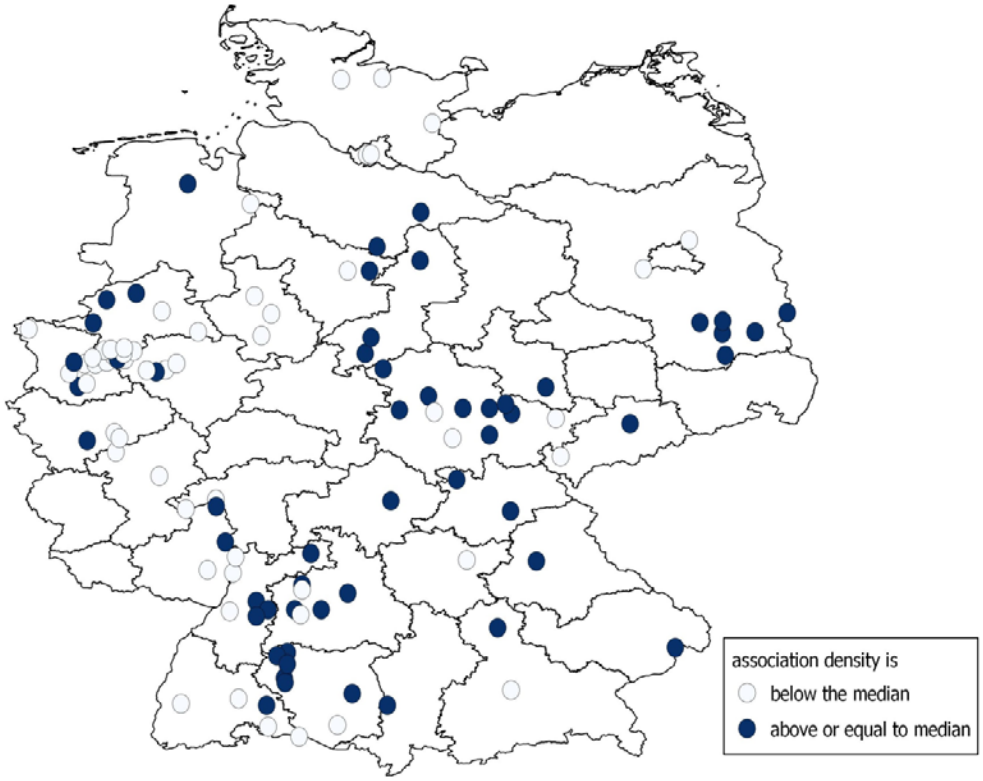

Figure 2: Location of towns and cities in the sample, by association density

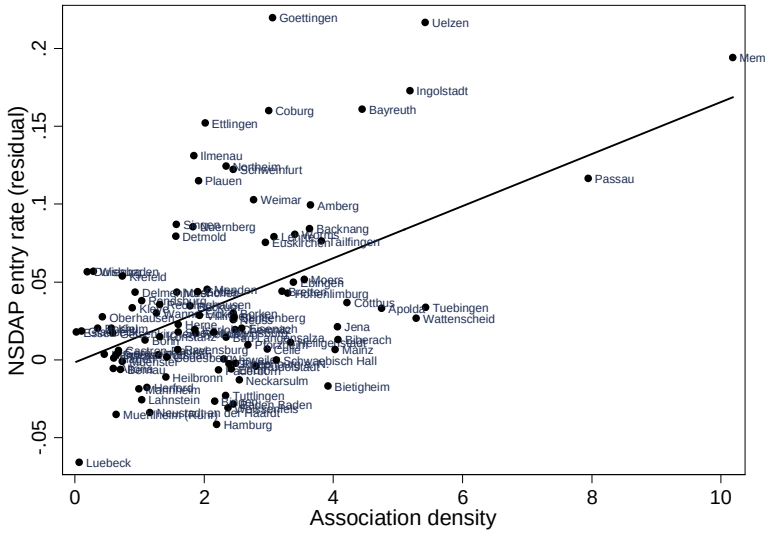

Figure 3: Conditional scatter, NSDAP entry rate and association density

Note: The y-axis plots the variation in NSDAP entry rates (per 1,000 inhabitants) after controlling for the share of Catholics, ln(population), and the of share blue collar workers, all measured in 1925. The regression line has a beta coefficient of 0.420 with a t-statistic of 4.73 (as in Table 3, col 4).

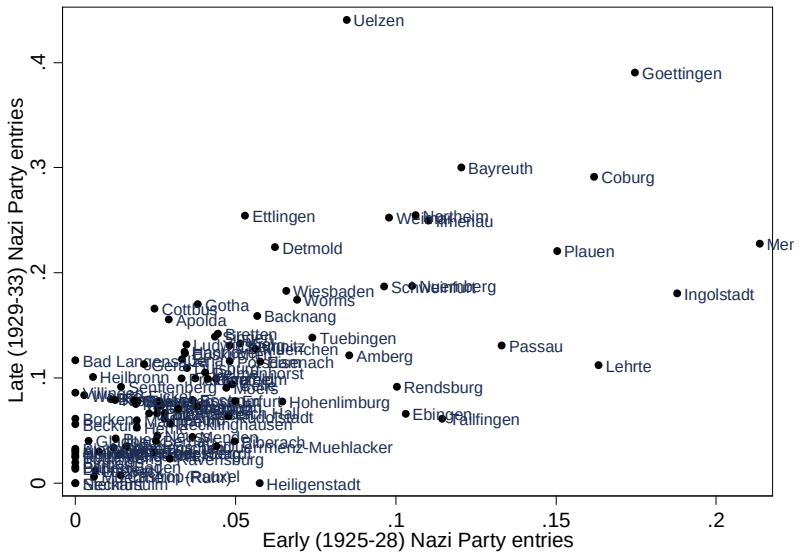

Figure 4: Early and late Nazi Party entries, by locality

Note: The x-axis plots average rates of Nazi Party entry (per 1,000 inhabitants) in each city over the period 1925-28, and the y-axis over the period 1929-33. Data are described in Section 3.

TABLES

Table 1: Data representativeness: Sample vs. German Reich

		Means		Standard deviations		
Variable	**Sample**	**Urban[a]**	**Reich**	**Sample**	**Urban [a]**	**Reich**
Socio-economic variables						
blue collar (1925)	51.6%	48.8%	45.9%	10.9%	10.0%	11.5%
white collar (1925)	43.6%	46.1%	41.5%	9.8%	9.0%	8.3%
unemployment (1933)	27.4%	25.2%	18.6%	6.0%	7.2%	9.3%
pop. size (1933)	92,916	30,924	12,973[b]	166,850	82,306	49,992 [b]
Elections of March 1933						
NSDAP	38.6%	38.3%	44.1%	6.5%	8.1%	11.4%
Zentrum (conservative)	15.2%	12.9%	15.1%	12.3%	13.7%	16.9%
KPD (communists)	15.8%	16.1%	11.8%	5.6%	7.5%	7.4%
SPD (social democrats)	19.2%	20.7%	17.6%	8.2%	8.2%	8.6%
Religious affiliation						
Protestant (1925)	58.9%	63.3%	63.4%	26.5%	27.4%	32.8%
Jewish (1925)	1.1%	1.5%	0.9%	0.7%	2.0%	1.5%
Catholic (1925)	39.7%	29.9%	32.3%	30.1%	29.4%	34.1%

Notes: The construction of our sample is described in Section 3.
a) Excludes eastern territories (east of the *Oder-Neisse line*) and towns with less than 5,000 inhabitants.
b) Towns with less than 2,000 inhabitants are not listed individually in the official *Reichsstatistik*, and are therefore excluded from these calculations.

Table 2: Balancedness: Controls for high and low association density

		Ass. dens. rel. to median		
year	variable	below	above	t-test
1912	National Liberal Party (NLP)	0.17	0.14	(0.68)
	German Conservative Party (DKP)	0.03	0.06	(-1.57)
1925	Share Catholics	0.45	0.34	(1.68)
	Population	126,381	53,628	(2.40)
	Share blue collar workers	0.52	0.48	(1.92)
	Share of Jews	0.01	0.01	(0.27)
1933	Share of unemployed	0.25	0.19	(4.53)
	Welfare recipients per 1000	31.1	26.5	(1.54)
	War participants per 1000	1.29	0.65	(1.65)
	Social insurance pensioners per 1,000	9.69	9.08	(0.67)
	Log(Average income tax payment)	2.51	2.62	(-0.82)
	log(Average property tax payment)	6.55	6.62	(-0.44)

Note: * "below" and "above" refer to the median of association density. The t-test for the corresponding difference is reported in the last column of the table.

Table 3: Baseline results: Nazi Party entry and association density

Dependent variable: Nazi Party entry rates, 1925-33

	(1)	(2)	(3)	(4)	(5)	(6)
ASSOC measure	all	non-military	military	all	non-military	military
ASSOC	0.407***	0.225**	0.386***	0.420***	0.276**	0.308***
	(4.82)	(2.53)	(4.49)	(4.73)	(2.50)	(3.16)
Share Catholics				-0.312***	-0.372***	-0.345***
				(-3.73)	(-3.79)	(-3.85)
ln(pop)				0.161*	0.252**	0.135*
				(1.83)	(2.58)	(1.71)
Share Blue-collar				-0.236***	-0.279***	-0.238***
				(-3.16)	(-3.18)	(-3.20)
Observations	103	82	97	100	79	94
Adjusted R^2	0.157	0.039	0.140	0.315	0.262	0.305

Notes: Dependent variable is the average rate of Nazi Party entry (per 1,000 inhabitants) in each city over the period 1925-33. Standardized beta coefficients; t-statistics in parentheses * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. *ASSOC* is the number of associations per 1,000 inhabitants in each city counting all, only non-military, or only military associations, as indicated in the table header.

Table 4: Early entries and association density

Dependent variable: Early Nazi Party entry rates, 1925-28

	(1)	(2)	(3)	(4)	(5)	(6)
ASSOC measure	all	non-military	military	all	non-military	military
ASSOC	0.508***	0.291***	0.292***	0.549***	0.322**	0.213**
	(5.46)	(3.10)	(2.90)	(4.73)	(2.61)	(2.03)
Baseline controls				yes	yes	yes
Observations	103	82	97	100	79	94
Adjusted R^2	0.250	0.073	0.075	0.301	0.199	0.174

Notes: Dependent variable is the average rate of Nazi Party entry (per 1,000 inhabitants) in each city over the period 1925-28. Standardized beta coefficients; t-statistics in parentheses * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. *ASSOC* is the number of associations per 1,000 inhabitants in each city counting all, only non-military, or only military associations, as indicated in the table header. Baseline controls include the share of Catholics, ln(city population), and the share of blue collar workers, all in 1925.

Table 5: IV results
Dependent variable: Nazi Party entry rates, 1925-33

	(1)	(2)	(3)	(4)	(5)	(6)
ASSOC measure	all	non-military	military	all	non-military	military
			PANEL A: Second Stage			
ASSOC	1.206***	1.196***	1.213***	0.856***	0.767***	1.093***
	[0.0009]	[0.0042]	[0.0014]	[0.0050]	[0.0058]	[0.0058]
Controls	No	No	No	Yes	Yes	Yes
			PANEL B: First stage for association density			
p-value for instruments	0.009	0.060	0.023	0.013	0.068	0.165
Overidentification test (p-value)	0.829	0.828	0.453	0.421	0.329	0.332
N	103	82	97	100	79	94

Notes: Dependent variable is the average rate of Nazi Party entry (per 1,000 inhabitants) in each city over the period 1925-33. Standardized beta coefficients; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. *ASSOC* is the number of associations per 1,000 inhabitants in each city counting all, only non-military, or only military associations, as indicated in the table header. Second stage results report the p-values [in square brackets] for the Anderson-Rubin (Chi-square) test of statistical significance (heteroskedasticity-robust). This test is robust to weak instruments (see Andrews and Stock, 2005 for a detailed review). Controls include %Catholic, ln(population), and %of blue collar workers, all measured at the city level in 1925. Instruments in the first stage are the density of gymnast association members in the 1860s (per 1,000 inhabitants in 1863), and participants from each city in the 1861 Sängerfest (singer festival) in Nuremberg (again normalized by city population in 1863). All regressions are weighted by a proxy for the comparability of 1863 population data, due to territorial changes (see footnote 32 for detail).

Table 6: Selection on Unobservables

Controls in restricted set	Controls in full set	Association density includes: All	Non-military	Military
none	*Baseline controls*	[<0]	[<0]	3.3
none	*Baseline controls* + *socialeconomic controls* + *political controls*	9.3	[<0]	2.5

Notes: The table reports the relative strength of selection on unobservables that is required to completely explain the effect of each association density measure on Nazi Party entry, using the methodology from Altonji, Elder, and Taber (2005). The entry [<0] indicates that the respective Altonji et al ratio is negative; in these cases, observables are on average negatively correlated with the outcome variable, suggesting a downward bias for our OLS estimates due to unobservables (if these have similar correlation patterns as the included observables). *Baseline controls* include: share Catholic, ln(pop '25), and share blue collar. *Socialeconomic controls* include: unemployment rate, welfare recipients per 1,000 inhabitants, social insurance pensioners per 1,000 inhabitants, war veterans per 1,000, log(avg. income tax), log(avg. property tax), all from the 1933 Statistik des Deutschen Reichs. *Political controls*: number of Hitler speeches in 1932, share of Jews in 1925, vote shares for nationalist parties from the 1912 federal election: National Liberal Party (NLP), German Conservative Party (DKP).

Table 7: Bridging and bonding social capital

Dependent variable: Nazi Party entry rates, 1925-33

	(1)	(2)	(3)	(4)	(5)	(6)
$ASSOC_{bonding}$	0.447***		0.321*		0.357***	
	(3.11)		(1.98)		(2.92)	
$ASSOC_{bridging}$		0.137		0.202*		0.237*
		(1.52)		(1.71)		(1.87)
Baseline Controls			yes	yes	yes	yes
Additional Controls					yes	yes
Observations	97	97	94	94	91	91
Adjusted R^2	0.191	0.009	0.305	0.247	0.447	0.370

Notes: Dependent variable is the average rate of Nazi Party entry (per 1,000 inhabitants) in each city over the period 1925-33. Standardized beta coefficients; t-statistics in parentheses * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. $ASSOC_{bonding}$ and $ASSOC_{bridging}$ are bonding (briding) clubs per 1,000 inhabitants. Baseline controls include the share of Catholics, ln(city population), and the share of blue collar workers, all in 1925. *Additional controls* include the full set of political and socioeconomic controls listed in the note to Table 6.

Table 8: Entry rates and association density – the case of Prussia

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent variable:	Early Nazi Party entry rates			Late Nazi Party entry rates		
Sample:	non-Prussia	Prussia	All	non-Prussia	Prussia	All
$ASSOC_{all}$	0.664***	0.199	0.700***	0.342***	0.351*	0.301***
	(6.86)	(1.44)	(6.87)	(3.27)	(1.68)	(3.27)
Prussia × $ASSOC_{all}$			-0.386***			0.122
			(-2.87)			(0.55)
Baseline controls + Prussia			yes			yes
Prussia × Baseline controls			yes			yes
Observations	49	51	100	49	51	100
Adjusted R^2	0.351	0.259	0.345	0.101	0.383	0.266

Notes: Dependent variable is the average rate of Nazi Party entry (per 1,000 inhabitants) in each city over the period 1925-28 (col 1-3) and 1929-33 (col 4-6). Standardized beta coefficients; t-statistics in parentheses * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. $ASSOC_{all}$ is the number of associations per 1,000 inhabitants in each city. Baseline controls include the share of Catholics, ln(city population), and the share of blue collar workers, all in 1925. Prussia is a dummy that equals one for cities located in the Prussian state.

Table 9: Workers' associations

Depend. Variable:	(1) $ASSOC_{workers}$	(2) $ASSOC_{workers}$	(3) Nazi Party entry rates	(4) Nazi Party entry rates	(5) Nazi Party entry rates
$ASSOC_{all}$	0.420***	0.303***			0.293**
	(4.58)	(2.89)			(2.21)
$ASSOC_{workers}$			-0.023	0.061	-0.022
			(-0.21)	(0.50)	(-0.16)
Baseline controls		yes		yes	yes
Observations	99	96	99	96	96
Adjusted R^2	0.168	0.274	0.003	0.233	0.283

Notes: Standardized beta coefficients; t-statistics in parentheses * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. $ASSOC_{all}$ ($ASSOC_{worker}$) is the number of all (workers') associations per 1,000 inhabitants in each city. Baseline controls include the share of Catholics, ln(city population), and the share of blue collar workers, all in 1925.

Table 10: Subsamples
Dependent variable: Nazi Party entry rates, 1925-33

	(1) Catholic share	(2) Catholic share	(3) Worker share	(4) Worker share	(5) Jewish share (rel. to median)	(6) Jewish share (rel. to median)	(7) City size (rel. to median)	(8) City size (rel. to median)
	<50%	≥50%	<50%	≥50%	below	above	below	above
PANEL A: All associations								
ASSOC	0.319**	0.658***	0.454***	0.320*	0.452***	0.429***	0.460***	0.266*
	(2.16)	(3.76)	(5.09)	(1.76)	(2.85)	(4.88)	(4.78)	(1.86)
Baseline Controls	yes	yes	yes	yes	yes	yes	yes	yes
Observations	58	42	61	39	49	51	50	50
Adjusted R^2	0.272	0.309	0.320	0.124	0.313	0.272	0.329	0.264
PANEL B: Non-military associations								
ASSOC	0.289**	0.484*	0.230	0.518**	0.320	0.285**	0.123	0.385**
	(2.14)	(1.98)	(1.47)	(2.70)	(1.57)	(2.19)	(0.94)	(2.36)
Baseline Controls	yes	yes	yes	yes	yes	yes	yes	yes
Observations	46	33	45	34	40	39	43	36
Adjusted R^2	0.246	0.028	0.276	0.174	0.212	0.239	0.183	0.315
PANEL C: Military associations								
ASSOC	0.349***	0.112	0.281**	0.296*	0.466***	0.204	0.316*	0.362**
	(3.99)	(0.70)	(2.49)	(1.95)	(3.33)	(1.26)	(2.00)	(2.16)
Baseline Controls	yes	yes	yes	yes	yes	yes	yes	yes
Observations	57	37	56	38	46	48	47	47
Adjusted R^2	0.312	-0.064	0.306	0.088	0.417	0.177	0.304	0.279

Notes: Dependent variable is the average rate of Nazi Party entry (per 1,000 inhabitants) in each city over the period 1925-33. Standardized beta coefficients; *t* statistics in parentheses * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. *ASSOC* is the number of associations per 1,000 inhabitants in each city, counting the associations indicated in the header of each panel. Baseline controls include the share of Catholics, ln(city population), and the share of blue collar workers, all in 1925.

Table 11: Matching estimation and geographic location

Dependent variable: Nazi Party entry rates, 1925-33

ASSOC measure	(1) all	(2) non-military	(3) military	(4) all	(5) non-military	(6) military
PANEL A: Matching estimation[a]						
ASSOC	0.881***	0.877**	0.519	0.841***	0.601**	0.305
	(2.71)	(2.37)	(1.61)	(3.39)	(2.57)	(1.10)
Matching var.	ln(city pop in 1925)			baseline controls		
Observations	69	55	65	66	53	63
PANEL B: Matching estimation by geographic location[b]						
ASSOC	0.779***	0.698**	0.209	0.984***	0.793***	0.268
	(2.79)	(2.56)	(0.64)	(3.67)	(2.81)	(1.01)
Matching var.	ln(city pop) + longitude, latitude			baseline controls + longitude, latitude		
Observations	69	55	65	66	53	63

Notes: Dependent variable is the average rate of Nazi Party entry (per 1,000 inhabitants) in each city over the period 1925-33. Standardized beta coefficients; t-statistics in parentheses * $p < .10$, ** $p < .05$, *** $p < .01$. *ASSOC* is the number of associations per 1,000 inhabitants in each city counting all, only non-military, or only military associations, as indicated in the table header. 'Baseline controls' include: share Catholic, ln(pop '25), and share blue collar.

[a] Matching estimation based on the variables listed in the row "Matching var." Treatment variable is an indicator that equals one for the upper tercile of association density (for each of the three measures) and zero for the lower tercile. The average treatment effect for the treated (ATT) is reported, using robust nearest neighbor estimation with the three closest matches.

[b] Matching estimation based on geography; the matching characteristics are longitude and latitude in addition to the matching variables used in Panel A.

Table 12: Additional controls

Dependent variable: Nazi Party entry rates, 1925-33

	(1)	(2)	(3)	(4)	(5)	(6)
ASSOC measure	all	non-military	military	all	non-military	military
ASSOC	0.421***	0.263**	0.315***	0.399***	0.309***	0.307***
	(4.73)	(2.44)	(3.55)	(4.76)	(2.72)	(3.32)
ln(1+Hitler speeches), 1932	0.209**	0.349***	0.263***	0.202**	0.293***	0.265***
	(2.24)	(3.51)	(2.73)	(2.11)	(2.84)	(2.68)
Share of Jews (1925)	-0.077	0.017	-0.004	-0.096	0.003	-0.038
	(-0.80)	(0.15)	(-0.03)	(-0.99)	(0.02)	(-0.34)
Vote for NLP (1912)	0.189**	0.198*	0.151	0.185**	0.214*	0.157
	(2.15)	(1.89)	(1.56)	(2.06)	(1.94)	(1.56)
Vote for DKP (1912)	-0.227***	-0.205**	-0.258***	-0.218***	-0.191**	-0.253***
	(-2.99)	(-2.39)	(-3.58)	(-2.73)	(-2.09)	(-3.28)
Unemploym. (1933)				-0.008	-0.049	0.021
				(-0.07)	(-0.37)	(0.16)
Welfare recipients per 1000				0.110	0.233*	0.232*
				(0.77)	(1.87)	(1.88)
War participants per 1000				0.084	0.017	0.036
				(1.15)	(0.26)	(0.61)
Social insurance pensioners per 1000				0.065	0.028	-0.081
				(0.57)	(0.24)	(-0.68)
ln(Average income tax payment)				0.331	0.321	0.349
				(1.21)	(1.20)	(1.27)
ln(average property tax payment)				-0.260	-0.259	-0.258
				(-0.98)	(-1.05)	(-0.97)
Baseline controls	yes	yes	yes	yes	yes	yes
Observations	98	77	92	97	77	91
Adjusted R^2	0.403	0.389	0.412	0.416	0.396	0.423

Notes: Dependent variable is the average rate of Nazi Party entry (per 1,000 inhabitants) in each city over the period 1925-33. Standardized beta coefficients; t-statistics in parentheses * $p < .10$, ** $p < .05$, *** $p < .01$. *ASSOC* is the number of associations per 1,000 inhabitants in each city counting all, only non-military, or only military associations, as indicated in the table header. Baseline controls include the share of Catholics, ln(city population), and the share of blue collar workers, all in 1925. Data on Hitler speeches are from Aldena et al. (2013) *NLP* and *DKP* are nationalist parties in the 1912 federal election: the National Liberal Party and the German Conservative Party, respectively. All socialeconomic controls starting from unemployment are from the 1933 Statistik des Deutschen Reichs.

Table 13: Quantile regressions

Dependent variable: Nazi Party entry rates, 1925-33

	(1)	(2)	(3)	(4)	(5)	(6)
ASSOC measure	all	non-military	military	all	non-military	military
	25th percentile			75th percentile		
ASSOC	0.264***	0.257***	0.175**	0.418***	0.245	0.356**
	(3.02)	(3.26)	(2.52)	(3.11)	(1.21)	(2.09)
Baseline controls	yes	yes	yes	yes	yes	yes
Observations	100	79	94	100	79	94

Notes: Dependent variable is the average rate of Nazi Party entry (per 1,000 inhabitants) in each city over the period 1925-33. Standardized beta coefficients; *t* statistics in parentheses * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. $ASSOC_{all}$ is the number of associations per 1,000 inhabitants in each city. *ASSOC* is the number of associations per 1,000 inhabitants in each city counting all, only non-military, or only military associations, as indicated in the table header. Baseline controls include the share of Catholics, ln(city population), and the share of blue collar workers, all in 1925.

ONLINE APPENDIX

BOWLING FOR FASCISM: SOCIAL CAPITAL AND THE RISE OF THE NAZI PARTY IN WEIMAR GERMANY, 1919-33

Shanker Satyanath — NYU
Nico Voigtländer — UCLA and NBER
Hans-Joachim Voth — UPF and CREI

APPENDIX A
Additional Figures

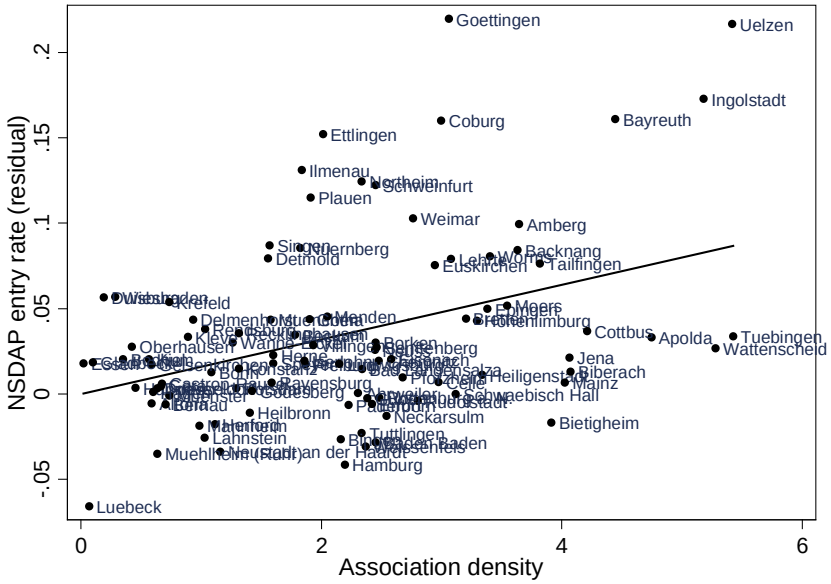

Figure A.1: Conditional scatter

Note: The figure is the same as Figure 3 in the paper, but without high leverage cities: Memmingen and Passau. The y-axis plots the variation in NSDAP entry rates (per 1,000 inhabitants) after controlling for the share of Catholics, ln(population), and the of share blue collar workers, all measured in 1925. The regression line has a beta coefficient of 0.327 with a t-statistic of 2.70.

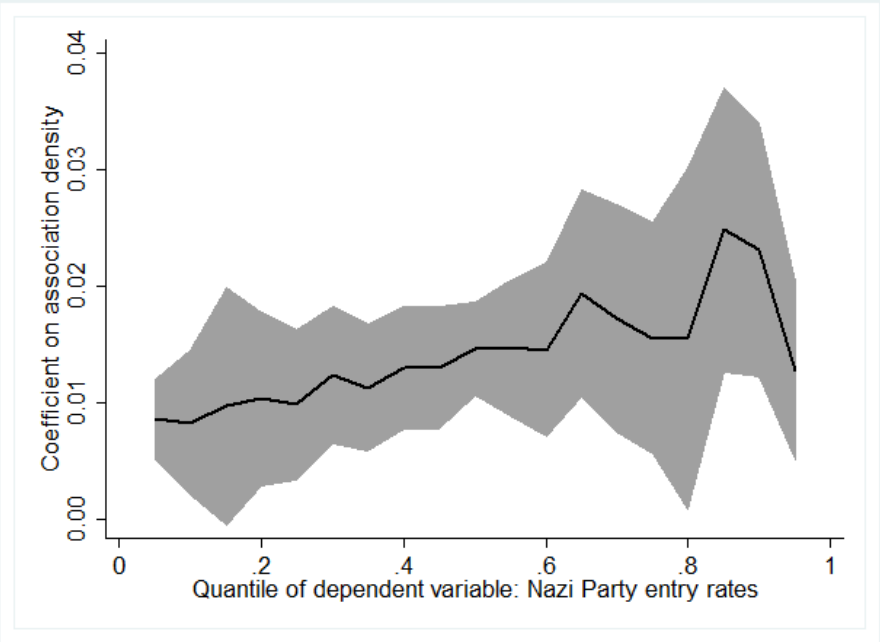

Figure A.2: Quantile regression graph

Note: The figure shows the effect of a unit increase in association density on Nazi Party entry rates, by quantile of the dependent variable. The shaded area reflects the 95% confidence interval of the quantile regressions. The figure is derived for our main specification, with the three baseline controls: share of Catholics, ln(population), and the of share blue collar workers, all measured in 1925. Absolute coefficient sizes are plotted. For standardized beta coefficients, see Table 13 in the paper.

APPENDIX B

Classification scheme: "bridging" vs. "bonding" social capital

Bridging social capital

- Gymnastic clubs
- Athletic associations
- Rifle clubs
- Animal breeding
- Singing associations
- Music clubs
- Chess players
- "odd fellows" etc.
- Alpine societies
- Youth clubs

Bonding social capital

- Verein Deutscher Studenten
- Hunters
- Corps
- Burschenschaften
- Herrenklubs

APPENDIX C

Adjusting aggregate entry rates in the Berlin-Minneapolis NSDAP member sample

The Berlin-Minneapolis sample of NSDAP member records (Schneider-Haase 1991) was drawn as follows. Membership records are stored in card boxes. In a first step, every 25th of these boxes was randomly chosen (yielding altogether 203 boxes). Each box was separated in half, and for each half, the following sampling method was applied: 1) Draw all German NSDAP members with entry dates before 1930.[1] 2) For those who entered in 1930-32, draw the first five in the order of appearance. 3) Draw also five individuals who entered in 1933, but instead of keeping the first five drawn, use only every third in the order of the cards (Schneider-Haase 1991, p.120).

This approach has the advantage that it provides a sufficiently large number of entries for cross-sectional comparisons, even in earlier years when entries were less frequent. Correspondingly, the average entry rates for each year are relatively stable over time in the Berlin-Minneapolis sample. This is shown in Figure A.3, which also reveals substantial cross-sectional variation within each year (as indicated by the black lines). Our econometric analysis uses the original sample data, because it exploits cross-sectional variation. However, the change in methodology in 1930 introduces a time-inconsistency, so that *overall* entry rates cannot be directly compared. In the following, we describe how we adjust aggregate entry rates over time, and show that our results are robust to these adjustments.

[1] For example, Austrians and Sudeten German members were excluded.

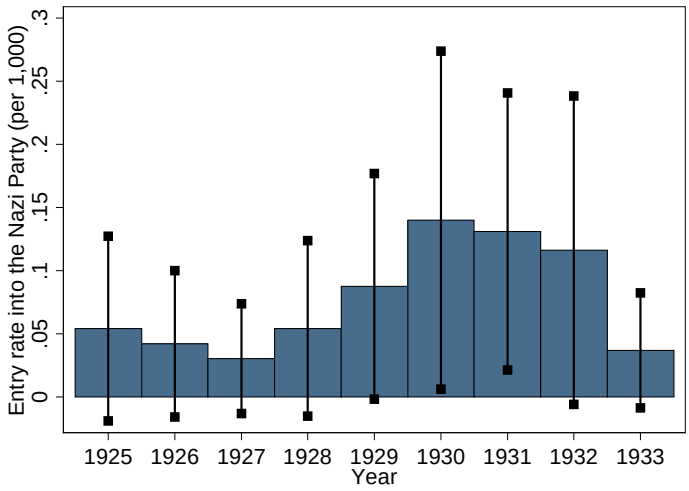

Figure A.3: NSDAP party entries 1925-1933 and cross-sectional variation

Note: Black lines indicate the range of one standard deviation.

Adjusting Nazi Party entries

Kater (1980) collected a sample with a consistent sampling strategy which allows us to infer the aggregate growth in membership for each year.[2] We follow three steps to adjust the Berlin-Minneapolis sample: First, we use the growth rates from the Kater sample to extrapolate total entry for each year, starting in 1930; this yields $TotalEntry_t^K$, where $t \geq 1930$ is the year, and K indicates 'Kater'.[3] Second, we calculate the ratio of Kater-adjusted total entries to actual entries in the Berlin-Minneapolis sample ($TotalEntry_t^K / TotalEntry_t^{BM}$). Third, we use this ratio to adjust location-specific entry rates, using the formula:

$$Entry_{it}^{adj} = Entry_{it}^{BM} \cdot \frac{TotalEntry_t^K}{TotalEntry_t^{BM}}$$

where $Entry_{it}^{BM}$ denotes entries in location i in year t, as reflected in the Berlin-Minneapolis sample. This adjustment yields the pattern of entry rates over time shown in Figure A.4 (and Figure 1 in the paper). Later Nazi Party entries are now much more

[2] However, the Kater sample is less adequate for our cross-sectional analysis than the Berlin-Minneapolis sample. The Kater sample includes only 2,339 entries before 1933, Germany-wide. On the other hand, it has a disproportionately larger coverage for the years after the Nazi Party rose to power – 15,916 entries between 1933 and 1945.

[3] The Kater totals are 112 in 1929, 361 in 1930, 829 in 1931, 905 in 1932, and 3,502 in 1933. Thus, for example, $TotalEntry_{1930}^K$ is calculated by multiplying the 1929 entries from the Berlin-Minneapolis sample by 361/112.

frequent than early ones. Thus, when calculating average entry rates for each city between 1925 and 1933, the later years dominate. This is particularly true for party entries in 1933, which grew by a factor of almost four over one year, according to the Kater sample (and are not shown in Figure A.4). However, since most of these party entries occurred after the NSDAP gained power in March 1933, they are less representative for the purpose of this paper. Below, we show regression results for the Kater-adjusted sample with and without 1933.

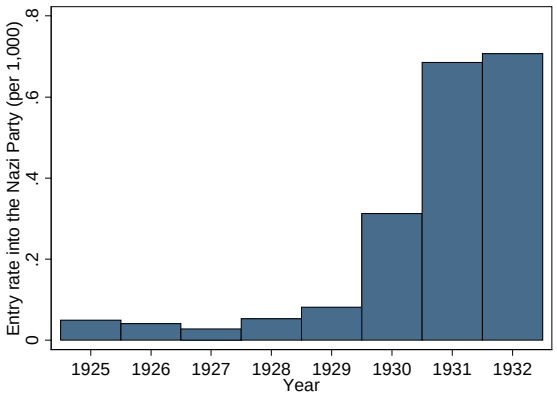

Figure A.4: Adjusted NSDAP entries 1925-1932

Regressions using adjusted entry rates

Table A.1 repeats our basic analysis (Table 3 in the paper), using Kater-adjusted entry rates. Panel A excludes 1933 for the reasons discussed above, and Panel B includes 1933. Despite the fact that later entry years now receive higher implicit weights, results are remarkably similar to those presented in the paper.[4]

[4] As one should expect, including 1933 yields a worse fit, because it introduces substantial noise (which also receives a particularly high weight when calculating average entry rates for 1925-33, because of the large overall entry rates in 1933).

Table A.1: Baseline results with adjusted aggregate entry rates

Dependent variable: Nazi Party entry rates

ASSOC measure	(1) all	(2) non-military	(3) military	(4) all	(5) non-military	(6) military
			PANEL A: Excluding 1933			
ASSOC	0.364***	0.159*	0.415***	0.375***	0.212*	0.341**
	(3.75)	(1.75)	(3.57)	(3.99)	(1.97)	(2.61)
Baseline controls				yes	yes	yes
Observations	103	82	97	100	79	94
Adjusted R^2	0.124	0.013	0.163	0.323	0.280	0.358
			PANEL B: Including 1933			
ASSOC	0.171**	0.214**	0.113	0.144	0.252*	0.059
	(2.31)	(2.25)	(1.60)	(1.61)	(1.99)	(0.58)
Baseline controls				yes	yes	yes
Observations	103	82	97	100	79	94
Adjusted R^2	0.020	0.034	0.002	0.013	0.024	-0.009

Notes: Dependent variable is the average rate of Nazi Party entry (per 1,000 inhabitants) in each city over the period 1925-32 (Panel A), and 1925-33 (Panel B). Party entry rates in this table have been adjusted for the change in sampling methodology in the Berlin-Minneapolis dataset, as described in the text. Standardized beta coefficients; t-statistics in parentheses * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. *ASSOC* is the number of associations per 1,000 inhabitants in each city counting all, only non-military, or only military associations, as indicated in the table header. *Baseline controls* include: share Catholic, ln(pop '25), and share blue collar.

Regressions using annually standardized entry rates

As an additional check, we standardize entry rates in each year 1925-33 before calculating average entry rates. This procedure gives the same importance to entries from each year, by exploiting the city-level variation relative to the mean entry rate. Table A.2 gives the results, again with and without 1933. The results are highly significant and of almost identical magnitude as in our baseline analysis in Table 3 in the paper.

Table A.2: Baseline results with annually standardized entry rates

Dependent variable: Average of standardized Nazi Party entry rates

	(1)	(2)	(3)	(4)	(5)	(6)
ASSOC measure	all	non-military	military	all	non-military	military
			PANEL A: Excluding 1933			
ASSOC	0.437***	0.235**	0.382***	0.462***	0.289**	0.303***
	(5.09)	(2.58)	(5.37)	(4.80)	(2.52)	(3.90)
Baseline controls				yes	yes	yes
Observations	103	82	97	100	79	94
Adjusted R^2	0.183	0.043	0.137	0.331	0.275	0.310
			PANEL B: Including 1933			
ASSOC	0.422***	0.250***	0.351***	0.441***	0.305**	0.272***
	(5.30)	(2.76)	(5.07)	(4.87)	(2.61)	(3.45)
Baseline controls				yes	yes	yes
Observations	103	82	97	100	79	94
Adjusted R^2	0.170	0.051	0.114	0.296	0.238	0.255

Notes: Dependent variable is the *standardized* rate of Nazi Party entry (per 1,000 inhabitants) in each city, averaged over the period 1925-32 (Panel A), and 1925-33 (Panel B). Standardized beta coefficients; t-statistics in parentheses * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. *ASSOC* is the number of associations per 1,000 inhabitants in each city counting all, only non-military, or only military associations, as indicated in the table header. *Baseline controls* include: share Catholic, ln(pop '25), and share blue collar.

APPENDIX D

Further robustness checks

In this appendix, we examine the effect of using logs of the dependent variable, and examine the robustness of our findings by using median regressions. All results presented in the following use data from the original Berlin-Minneapolis sample. Table A.3 shows that we obtain results that are very similar to the baseline in Table 3 when analyzing only late Nazi party entries (1929-33).

Table A.3: Late entries

Dependent variable: Late Nazi Party entry rates, 1929-33

	(1)	(2)	(3)	(4)	(5)	(6)
ASSOC measure	all	non-military	military	all	non-military	military
ASSOC	0.321***	0.179*	0.390***	0.318***	0.235**	0.319**
	(3.35)	(1.93)	(3.15)	(3.61)	(2.16)	(2.29)
Baseline Controls				yes	yes	yes
Observations	103	82	97	100	79	94
Adjusted R^2	0.094	0.020	0.143	0.277	0.251	0.308

Notes: Dependent variable is the average rate of Nazi Party entry (per 1,000 inhabitants) in each city over the period 1929-33. Standardized beta coefficients; t-statistics in parentheses * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. *ASSOC* is the number of associations per 1,000 inhabitants in each city counting all, only non-military, or only military associations, as indicated in the table header.

In Table A.4, we use logs of the dependent variable – entry rates into the NSDAP – and of the main explanatory variable. We find nearly-identical results to those presented in Table 3.

Table A.4: Log specification

Dependent variable: Natural log of Nazi Party entry rates, 1925-33

	(1)	(2)	(3)	(4)	(5)	(6)
ASSOC measure	all	non-military	military	all	non-military	military
ln(ASSOC)	0.363***	0.226**	0.336***	0.396***	0.310***	0.252*
	(3.94)	(2.58)	(2.82)	(3.60)	(2.78)	(1.97)
Baseline Controls				yes	yes	yes
Observations	103	82	97	100	79	94
Adjusted R^2	0.123	0.039	0.104	0.283	0.274	0.279

Notes: Dependent variable is the natural logarithm of the average rate of Nazi Party entry (per 1,000 inhabitants) in each city over the period 1929-33. Standardized beta coefficients; t-statistics in parentheses * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. *ASSOC* is the number of associations per 1,000 inhabitants in each city counting all, only non-military, or only military associations, as indicated in the table header. *Baseline controls* include: share Catholic, ln(pop '25), and share blue collar.

Table A.5 uses a robust estimator that first drops all observations with a Cook's D statistic greater than unity; in a second round, the influence of the remaining observation is reduced using Huber weighting, i.e., in line with the size of the OLS residual. This procedure again yields very similar results, suggesting that our results are not driven by outliers.

Table A.5: Robust regression results

Dependent variable: Nazi Party entry rates, 1925-33

	(1)	(2)	(3)	(4)	(5)	(6)
ASSOC measure	all	non-military	military	all	non-military	military
ASSOC	0.318***	0.190**	0.378***	0.376***	0.285***	0.371***
	(4.17)	(2.06)	(4.71)	(4.89)	(3.11)	(4.69)
Baseline Controls				yes	yes	yes
Observations	103	82	97	100	79	94
Adjusted R^2	0.138	0.038	0.181	0.269	0.237	0.319

Notes: Dependent variable is the average rate of Nazi Party entry (per 1,000 inhabitants) in each city over the period 1929-33. Standardized beta coefficients; t-statistics in parentheses * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. *ASSOC* is the number of associations per 1,000 inhabitants in each city counting all, only non-military, or only military associations, as indicated in the table header. *Baseline controls* include: share Catholic, ln(pop '25), and share blue collar.

In Table A.6, we use median regressions, where we analyze the conditional median instead of the conditional mean by minimizing the absolute deviations from the expected value, and not of the square of deviations. Coefficients are large, and significance levels are high; results are largely identical with those derived in the baseline estimation results under OLS.

Table A.6: Median regression results

Dependent variable: Nazi Party entry rates, 1925-33

	(1)	(2)	(3)	(4)	(5)	(6)
ASSOC measure	all	non-military	military	all	non-military	military
ASSOC	0.345***	0.259***	0.352***	0.392***	0.255**	0.332***
	(5.35)	(2.65)	(3.13)	(7.22)	(2.27)	(4.16)
Baseline Controls				yes	yes	yes
Observations	103	82	97	100	79	94

Notes: Dependent variable is the average rate of Nazi Party entry (per 1,000 inhabitants) in each city over the period 1929-33. Standardized beta coefficients; t-statistics in parentheses * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. *ASSOC* is the number of associations per 1,000 inhabitants in each city counting all, only non-military, or only military associations, as indicated in the table header. *Baseline controls* include: share Catholic, ln(pop '25), and share blue collar.

In Figure A.2, we show the effect of a unit increase in association density on NS entry rates, by quantile of the dependent variable. The size of the coefficient rises slightly for higher rates of Nazi Party entry, and stays significant for the full range of values, as indicated by the 95% confidence interval.

In the main analysis, we excluded observations for towns with populations below 5,000 inhabitants. These are excluded in the baseline because of the potential for noise to overwhelm the estimation. The noise arises for two reasons. First, it reflects the difficulty of finding NS members in any one locale in the digitized subset of membership records.

Second, as the size of a city falls, the need to formally constitute clubs, associations, and societies declines – in small towns, many inhabitants know each other personally. Next, we include also small cities in the regressions.

Table A.7 gives the results for the full sample with up to 111 towns and cities. The coefficients in the specifications without controls are now smaller and insignificant. However, once we include the set of controls (which also raises the R^2 substantially), the coefficients are again highly significant and very similar to the baseline.

Table A.7: Including results for towns with less than 5,000 inhabitants

Dependent variable: Nazi Party entry rates, 1925-33

	(1)	(2)	(3)	(4)	(5)	(6)
ASSOC measure	all	non-military	military	all	non-military	military
ASSOC	0.212	0.108	0.058	0.414***	0.276**	0.304***
	(1.63)	(1.21)	(0.44)	(4.68)	(2.50)	(3.13)
Share Catholics				-0.321***	-0.372***	-0.352***
				(-3.90)	(-3.79)	(-4.02)
ln(pop)				0.171*	0.252**	0.142*
				(1.95)	(2.58)	(1.83)
Share Blue-collar				-0.245***	-0.279***	-0.244***
				(-3.37)	(-3.18)	(-3.37)
Observations	111	89	105	101	79	95
Adjusted R^2	0.036	0.000	-0.006	0.323	0.262	0.317

Notes: Dependent variable is the average rate of Nazi Party entry (per 1,000 inhabitants) in each city over the period 1929-33. Standardized beta coefficients; t-statistics in parentheses * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. *ASSOC* is the number of associations per 1,000 inhabitants in each city counting all, only non-military, or only military associations, as indicated in the table header.

Finally, Table A.8 provides additional results for our analysis of the Prussian case in Section 4.4. Panel A shows that for early Nazi Party entries, the interaction between the Prussia dummy and association density is negative in all, and significant in most specifications. Panel B shows that across the different measures of association density, the interaction effect is never significant (and has inconsistent signs) when focusing on late Nazi Party entries.

Table A.8: Entry rates and association density – the case of Prussia

ASSOC measure	(1) all	(2) non-military	(3) military	(4) all	(5) non-military	(6) military
PANEL A: Early Nazi Party Entries, 1925-28						
ASSOC	0.622***	0.343**	0.695***	0.700***	0.431**	0.793***
	(6.23)	(2.34)	(3.79)	(6.87)	(2.45)	(4.23)
Prussia×*ASSOC*	-0.289**	-0.156	-0.489**	-0.386***	-0.119	-0.712***
	(-2.10)	(-0.80)	(-2.46)	(-2.87)	(-0.54)	(-3.58)
Prussia	0.188	0.104	0.064	2.119**	1.759	2.436**
	(1.59)	(0.57)	(0.57)	(2.13)	(1.63)	(2.46)
Baseline controls				yes	yes	yes
Controls×Prussia				yes	yes	yes
Observations	103	82	97	100	79	94
Adjusted R^2	0.267	0.058	0.112	0.345	0.200	0.237
PANEL B: Late Nazi Party Entries, 1929-33						
ASSOC	0.240***	0.164	0.320	0.301***	0.299*	0.321
	(2.97)	(1.11)	(1.15)	(3.27)	(1.67)	(1.17)
Prussia×*ASSOC*	0.133	-0.128	0.078	0.122	-0.113	0.001
	(0.55)	(-0.75)	(0.25)	(0.55)	(-0.52)	(0.00)
Prussia	-0.168	-0.036	-0.155	0.240	1.049	0.681
	(-1.03)	(-0.18)	(-1.04)	(0.25)	(1.01)	(0.73)
Baseline controls				yes	yes	yes
Controls×Prussia				yes	yes	yes
Observations	103	82	97	100	79	94
Adjusted R^2	0.084	0.020	0.141	0.266	0.217	0.284

Notes: Standardized beta coefficients; t-statistics in parentheses * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. $ASSOC_{all}$ is the number of associations per 1,000 inhabitants in each city. *Baseline controls* include: share Catholic, ln(pop '25), and share blue collar. Prussia is a dummy that equals one for cities located in the Prussian state.

APPENDIX E

Relaxing Instrument Exogeneity

In this appendix, we describe our implementation of the generalized IV approach in Conley, Hansen and Rossi (2012), which allows for a direct effect of the instrument on the outcome variable. Since our analysis includes two instruments, we first compute their principal components. This combines our instruments into one variable – note that linear combinations of valid instruments remain valid instruments – c.f. Bai and Ng (2010); Winkelried and Smith (2011).

We first confirm that the IV regressions with the principal component as instrument yield very similar results as those presented in the paper.[5] We then assume, following Conley et al. (2012), that the (potential) direct effect of the instrument on Nazi Party entry, γ, is uniformly distributed in an interval [0,δ], with δ>0. By varying δ, we identify the threshold at which the second-stage coefficient on (instrumented) association density becomes insignificant at the 10% level. Figure A.5 shows the results for our main specification, using the standard controls and $ASSOC_{all}$ as measure of association density. We identify a threshold of $\hat{\delta} = 0.0076$. That is, as long as the direct effect of our instruments on party entry is smaller than 0.0076, our second stage is still significant at the 10% level.

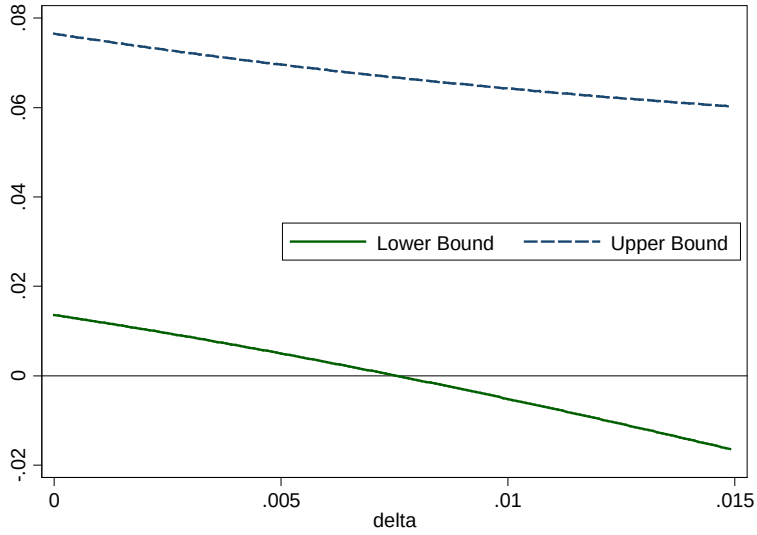

Figure A.5: 90% Confidence interval of main effect

Note: The figure shows the upper and lower bound of the 90% confidence interval of the second-stage coefficient on association density, using our baseline IV specification from column 4 in Table 5 in the paper. The instrument is the first principal component of the two instruments used in Table 5. Following Conley et al. (2012), we allow for a direct effect of the instrument on Nazi Party entry, assuming that this is uniformly distributed over an interval [0,δ], with δ>0. The interval size δ is plotted on the x-axis. At δ=0.0076, the second-stage coefficient on (instrumented) association density becomes insignificant at the 10% level (i.e., where the lower bound in the graph falls below zero).

To gauge magnitudes, we compare this to the overall reduced-form effect of the principal component instrument on party entry, which is 0.0145 (we also include the baseline controls in this regression; the corresponding beta coefficient is 0.267, and the t-

[5] For example, for the main specification based on all associations (column 4 in Table 5), we obtain a second-stage coefficient on $ASSOC_{all}$ of 1.211 with an Anderson-Rubin p-value of 0.0001, and a first-stage p-value of 0.0186.

statistic is 4.21). Therefore, the direct effect of the instruments on party entry would have to be about one-half of the overall effect to render our IV results insignificant.

APPENDIX F

Cities and Associations in the Sample

Table A.9: Towns and cities in the sample

1. Ahaus	38. Ettlingen	75. Passau
2. Ahrweiler	39. Euskirchen	76. Menden
3. Altona	40. Freiburg	77. Moers
4. Amberg	41. Gelsenkirchen	78. Moessingen
5. Apolda	42. Gera	79. Muehlheim (Ruhr)
6. Backnang	43. Gifhorn	80. Muenchen
7. Bad Langensalza	44. Gladbeck	81. Muenster
8. Baden Baden	45. Godesberg	82. Neckarsulm
9. Bayreuth	46. Goettingen	83. Neuss
10. Beckum	47. Gotha	84. Neustadt an der Haardt
11. Bernau	48. Guben	85. Northeim
12. Biberach	49. Hannover	86. Pforzheim
13. Bietigheim	50. Heilbronn	87. Plauen
14. Bingen	51. Heiligenstadt	88. Potsdam
15. Bochum	52. Herford	89. Ravensburg
16. Bonn	53. Herne	90. Recklinghausen
17. Borken	54. Hohenlimburg	91. Rendsburg
18. Bretten	55. Ilmenau	92. Rottenburg a. N.
19. Buchen	56. Ingolstadt	93. Rudolstadt
20. Buer	57. Iserlohn	94. Schwaebisch Hall
21. Calau	58. Jena	95. Schweinfurt
22. Castrop-Rauxel	59. Kiel	96. Senftenberg
23. Celle	60. Kleve	97. Singen
24. Chemnitz	61. Konstanz	98. Speyer
25. Coburg	62. Krefeld	99. Steinfurt
26. Cottbus	63. Lahnstein	100. Tailfingen
27. Delmenhorst	64. Lehrte	101. Tuebingen
28. Detmold	65. Luckau	102. Tuttlingen
29. Duerrmenz-Muehlacker	66. Ludwigsburg	103. Uelzen
30. Duesseldorf	67. Luebbenau	104. Villingen
31. Duisburg	68. Luebeck	105. Wanne-Eickel
32. Ebingen	69. Mainz	106. Wattenscheid
33. Eisenach	70. Mannheim	107. Weimar
34. Erfurt	71. Memmingen	108. Weissenfels
35. Essen	72. Nuernberg	109. Westerstede
36. Hagen	73. Oberhausen	110. Wiesbaden
37. Hamburg	74. Paderborn	111. Worms

Table A.10: Associations in the sample

English category	German category	total number	percentage of total
sports clubs	Sportvereine	1,663	19.2%
choirs	Chöre	1,397	16.1%
military associations	Militärclubs	1,240	14.3%
animal breeders	Kleintierzüchter	598	6.9%
gymnastics associations	Turnvereine	567	6.5%
student associations	Burschenschaften	445	5.1%
homeland clubs	Heimatvereine	385	4.4%
rifle clubs	Schützenvereine	263	3.0%
music associations	Musikvereine	256	3.0%
freemasons	Logen	147	1.7%
citizens associations	Bürgervereine	132	1.5%
women's clubs	Frauenvereine	118	1.4%
youth clubs	Jugendvereine	107	1.2%
alpine clubs	Alpenvereine	92	1.1%
"Old boys" club	Altherren	75	0.9%
chess clubs	Schachclubs	43	0.5%
hunters association	Jäger	42	0.5%
Steel Helmet (veteran's association)	Stahlhelm	20	0.2%
gentlemen's club	Herrenclubs	18	0.2%
others	andere	1,048	12.1%
	Total	8,661	100%

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