Exclusion and Cooperation in Diverse Societies: Experimental Evidence from Israel*

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Abstract

It is well-established that in diverse societies, certain groups prefer to exclude other groups from power and often from society entirely. Yet as many Western societies are diversifying at an increasingly rapid pace, the need for cross-group cooperation to solve collective action problems has intensified. Do preferences for exclusion inhibit the ability for individuals to cooperate and, therefore, diminish the ability for societies to collectively provide public goods? Some scholarship suggests this may not be the case, since preferences are often not diagnostic of behavior. Turning to Israel, a society with multiple overlapping and politically salient cleavages, we use a large-scale lab-in-the-field design to investigate how much preferences for exclusion among the Jewish majority predict discriminatory behavior toward the Arab minority. We establish that such preferences appear to be symbolic attitudes, are held especially strongly by low-status members of the majority group, and are strongly predictive of costly non-cooperation. This preferences-behaviors relationship appears unaffected by mitigating factors proposed in the intergroup relations literature such as outgroup stereotypes and repeated interactions. The influence of symbolic attitudes on directly observed behavior, which has not been empirically demonstrated before, calls for a closer examination of the social roots of exclusionary preferences.

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It is well-understood that across groups and societies, people hold discriminatory attitudes toward social outgroups. One of the most politically consequential ways these attitudes can manifest is in preferences for exclusion, including the exclusion of outgroups from political institutions and power (Sidanius and Pratto, 2001), the imagined community of that nation (Anderson, 1983), or the country itself via restrictive immigration policies (Citrin and Sides, 2008). Yet, despite such barriers and opposition, the ethnic and religious composition of many western democracies continue to diversify and, in recent decades, at an accelerating pace (Putnam, 2007). Within this context of growing diversity, cooperation across social groups is necessary for building and maintaining successful and well-functioning societies (Habyarimana et al., 2009; Singh, 2011). A crucial question then emerges: can individuals with a strong preference for outgroup exclusion, nevertheless, put these preferences aside in order to cooperate and solve challenges of collective action that face modern diverse societies?

There are many examples of the relevance of this question. African Americans in the United States, once legally excluded from most private and public institutions in parts of the country, overcame exclusionary barriers in their effort to gain equality. When this happened, were white citizens willing to cooperate with newly enfranchised African Americans for their mutual benefit or did they retreat into enclaves of non-cooperation, thus hindering their ability to provide public goods, such as schools?[1] In South Africa, a similar challenge was faced with the end of Apartheid. Currently, anti-immigrant political parties and politicians in the United States and Western Europe have gained in power and popularity, but, nevertheless, immigration to these places continues. Will the supporters of anti-immigrant policies be willing to cooperate with the immigrants that have already arrived? And in Israel, majorities of Jewish Israelis hold exclusionary preferences toward Arab Israelis (Zussman, 2013). Can Jews holding these preferences cooperate with their Arab fellow citizens, a large

[1] This particular case has been thoroughly studied and it seems that non-cooperation around public goods became a norm for many. See, for example, Alesina and Glaeser (2004) and Valentino and Sears (2005).

and rapidly growing minority group in Israel?

Put in more general terms, the key question at stake is whether and to what degree exclusionary attitudes affect willingness to cooperate? This question has implications for both the success of outgroup members to achieve political and economic gains and the ability of society as a whole to work together for the greater good. Are exclusionary attitudes separable from behaviors? Even if members of the hegemonic group want to exclude an outgroup, will they still work with outgroup members for their mutual benefit in the creation and allocation of public goods, such as social welfare institutions and common defense?

On the one hand, there is reason to believe such attitudes are separable from behaviors. Cooperation is often treated as a strategic choice that can be updated with repeated interactions with outgroup members and other learning processes (Axelrod, 2006). Yet, on the other hand, others argue that certain exclusionary attitudes are a matter of deeply held prejudicial distaste (Hainmueller and Hiscox, 2010; Hainmueller and Hangartner, 2013) and may not be easily altered (Hopkins, Sides, and Citrin, 2016). These two approaches have very different implications for addressing the challenges faced by diverse societies. If cooperation is mostly a strategic choice, then economic incentives, interactions, or learning can result in a stable equilibrium of cooperation. But if non-cooperation reflects prejudical exclusionary preferences, it might not be addressed simply by material incentives for cooperation or by providing new information about outgroups.

The connection between cooperation and exclusion remains under-explored in the theoretical and empirical literature on this topic because the two components of the relationship, cooperative behaviors and intergroup attitudes, tend to be studied separately. Political scientists have developed a standard tool kit for studying cooperative behaviors but have focused on institutional and contextual moderators of cooperation rather than on interpersonal attitudes. And while psychologists frequently study intergroup attitudes, they rarely employ the costly decision-making tasks on which political scientists and economists rely to

represent economic transactions in diverse contexts. And thus, a longstanding debate in the literature remains regarding whether exclusionary attitudes in fact predict discriminatory behavior (LaPiere, 1934; Pager and Quillian, 2005).

We combine these two elements, deploying a large-scale multi-site lab-in-the-field study and in-depth survey in Israel to examine actual costly cooperation and how it is related to exclusionary attitudes of the Jewish majority toward the Arab Israeli minority.[2] We measure cooperative behaviors using an economic decision-making game and, in order to measure exclusionary preferences, we rely on an underutilized measure among political scientists: social distance (Bogardus, 1926). Social distance, which is an individual's preference for sharing social space with a member of another group, is widely used in psychology and sociology but has largely been overlooked by political scientists in the context of experimental games used to measure cooperation. Despite the relative lack of attention to social distance, because it captures the inclusion or exclusion of minority groups, it has implications for the study of immigration, pluralism, and a wide range of other scholarship. To our knowledge, this is the first exploration of the relationship between social distance and cooperation. In the aggregate, such a relationship is likely to carry major implications for diverse societies.

In this manuscript, we make several contributions to understanding the nature and potential consequences of exclusionary preferences. First we explore the levels of exclusionary preferences among the Jewish majority toward the Arab minority in Israel. We find that 1) levels of exclusionary attitudes among Jews toward Arabs are high and such attitudes are not applied evenly across outgroups, being far more exclusionary toward Arabs than Jewish outgroups. 2) As predicted by some social-psychology theory, levels of exclusionary preferences are highest among low-status Jews (the relatively poor and uneducated ultra-Orthodox

[2] Some refer to this minority outgroup as "Palelstinian citizens of Israel" (Canetti-Nisim, Ariely, and Halperin, 2008) or just Palestinians. We use the term "Arab Israeli citizens" because it is the most direct translation of the common equivalent term in Hebrew, which was used in the survey and experimental instruments.

population). We explore the nature of these preferences and find that 3) exclusionary attitudes appear *symbolic* in nature, indicating they are stable and powerfully affect other attitudes. We then turn to the behaviors associated with these attitudes and 4) find that the cooperation of Jewish and Arab Israeli citizens is strongly predicted by preferences for exclusion—Jews who endorse greater exclusion of Arabs, e.g., greater social distance, systematically cooperate less with Arabs, despite the mutual material benefits of cooperation. Finally, we ask if this strong connection between attitudes and behaviors can be moderated by factors thought to promote cooperation and we find that 5) the relationship holds also when accounting for perceptions of Arabs' trustworthiness, suggesting that outgroup exclusionary attitudes do not merely reflect statistical, stereotype-based discrimination, but rather a symbolic attitude. We also look at measures of repeat interaction between groups, a very common solution to non-cooperation in the literature (Axelrod, 2006; Enos, 2017) and find that the connection between exclusionary attitudes and cooperation is unaffected. In short, we find that exclusionary attitudes are a robust predictor of cooperative behavior, one that appears to be deeply rooted in individual psychology and not easily modifiable.

Substantively, the strong link between attitudes-behaviors suggests that diverse societies must directly address the sources of exclusionary preferences in order to overcome collective action problems rather then merely focus on the material benefits of cooperation, provide information about the trustworthiness (or other stereotypes) of minorities, or assuming that repeated interactions would by themselves induce cooperation. These findings resonate with important research on the limited ability of material benefits to address core elements of national conflicts in general and the Arab-Israeli conflict in particular (Manekin, Grossman, and Mitts, 2016). Additionally, our findings that low-status members within the hegemonic (Jewish) majority are, in fact, more likely to hold exclusionary preferences toward and to practice non-cooperation with the low-status (Arab) minority, sheds light on the deep barriers for political cooperation across low-status groups.

Theoretically, these findings contribute to the literature on intergroup relations in diverse societies (Alesina, Baqir, and Easterly, 1999; Lieberman and McClendon, 2013; Uslaner, 2012; Whitt and Wilson, 2007), which has largely neglected psychological characteristics. Our analysis also contributes to research on ethnic and racial discrimination, not only in political science, but also in sociology and economics (Charles and Guryan, 2011; Hainmueller and Hangartner, 2013; Pager and Quillian, 2005; Pager and Shepherd, 2008; Zussman, 2013).

Methodologically, our combination of survey and experimental evidence allows us to address a longstanding debate regarding the relationship between discriminatory attitudes and discriminatory behaviors. Because collecting behavioral data is often costly and cumbersome, much research takes survey measures of discrimination as proxies of discriminatory behaviors without empirical validation of this assumption (Pager and Quillian, 2005). However, currently "most of the existing literature on discrimination finds that stated attitudes are practically useless in explaining behaviour" (Zussman, 2013, 436).[3] In fact, recent scholarship has also claimed that even popular implicit measures of prejudice (Greenwald, McGhee, and Schwartz, 1998) are poor predictors of discriminatory behavior (Mitchell and Tetlock, 2017). By showing the strong and robust connection between exclusionary attitudes and cooperation, we present a counterpoint to these claims. We suggest that a possible path forward in research on prejudice and discrimination, rather than relying on noisy self-reported measures of behavior or poorly understood laboratory constructs, is to make use of the social distance scale next to well-validated tools of behavioral economics.

Relatedly, our evidence for a direct connection between attitudes and behaviors also represents an important improvement over much of the literature on intergroup relations—a literature plagued by unresolved controversies over the nature and meaning of survey attitudes (e.g., Sniderman and Tetlock (1986); Hochschild (2000); Enos and Carney (2015)). Because we focus on questions that directly measure exclusion and connect these to revealed

[3] For a review of related literature, see Pager and Shepherd (2008).

behaviors in an economic game, our outcomes are less likely than many other to reflect artifacts of measurement error (Achen, 1975), capture non-attitudes (Zaller, 1992), or suffer from false positives (Kramer, 1986). It is, perhaps, not surprising if a survey attitude is correlated with a survey attitude measuring a similar concept, especially given the large menu of survey items often available to researchers. However, as discussed above, it is not obvious that a survey attitude will correlate with a behavior, especially a costly one like non-cooperation. By demonstrating this connection, we move beyond determining the meaning of surveyed attitudes by examining other surveyed attitudes and, instead, show that these attitudes are meaningful because they are tied to costly behaviors that are thought to represent politically important phenomena.

We proceed as follows. First we discuss the nature of exclusion and cooperation. We then describe our data collection procedure and the context in which it was collected. In the results section, we show why exclusionary attitudes may be regarded as symbolic attitudes that are likely hard to change and then examine the relationship between preferences for exclusion and cooperation, accounting also for group stereotypes and repeated interactions. We conclude by discussing lessons that can be drawn from Israel for other diverse countries.

Exclusion

We define exclusion as closing all or our part of a society from certain people. Conflicts over the legal exclusion of various minorities or other low-status populations have been central to the politics of countries across the globe (Sidanius and Pratto, 2001) and is at the heart of many political conflicts in advanced democracies, including immigration, segregation, and equal protection under the law. We focus on preferences for exclusion, not just from the country in the from of restricting immigration, but from national and subnational communities (Anderson, 1983), in the form of not accepting individuals as included in the national identity or in a local institution, such as a workplace.

To measure exclusion, we turn to the concept of social distance. Social distance is a commonly used concept in sociology and psychology (see, for example Liviatan, Trope, and Liberman (2008)), but has seen little use in political science (but see, in the Israeli context, Halperin, Canetti-Nisim, and Pedahzur (2007)). It measures a person's willingness to participate in relationships of varying degrees of closeness with a member of a group in order to measure "personal-group relations" (Bogardus, 1933), that is the affective feelings of an individual toward a group.

We measure social distance using the popular scale developed by Bogardus. This scale measures the degree to which respondents (in our case, Jewish Israelis) prefer to exclude out-group members (in our case, Arab Israelis) by asking whether they would accept a member of the group at decreasing levels of closeness. The scale ranges from family relative (minimal distance) to friend, neighbor, coworker, citizen, visitor and none (maximal distance). Agreement with any one of the items implies agreement with the previous items, so it is assumed that if a person would accept a person as a family member, they would also accept them as visitor and everything in between.

This scale has attractive properties that improve over other common measures of intergroup attitudes. Political scientists often measure intergroup attitudes through culturally specific stereotype (e.g., asking if a group is "intelligent" (Kinder and Kam, 2009)); through questions specific to one group, such as African Americans (e.g., Tarman and Sears (2005)); or through questions about specific policy measures, such as immigration (e.g., Enos (2014)). While these measures can all certainly be useful, culture- and group-specific measures make it difficult to compare attitudes across different groups (e.g., African Americans and Muslims) and individuals may also hold negative feelings about a group without endorsing specific stereotypes (Banaji, Hardin, and Rothman, 1993). Furthermore, attitudes about specific policies are problematic for capturing the attitudes of the large majority of most mass publics that have low engagement in politics and holds unstable attitudes (Zaller, 1992).

The social distance scale, in contrast, in addition to speaking to the relevant concept of exclusion, was intended as a general measure to be used across multiple groups (Bogardus, 1926) and to capture attitudes that are largely generalizable: a person does not have to endorse specific stereotypes to know that they do not want to have a person from an outgroup as a spouse or coworker. Thus, a great advantage of this measure is that it allows a comparison across groups, so that, for example, in the American context, attitudes about African Americans can be compared to attitudes about Latino immigrants. Thus in Israel, we can usefully compare exclusion toward Arabs to exclusion to other social groups, for instance different groups of Jews.[4]

Cooperation

We connect preference for exclusion with cooperative behaviors. Cooperation is often necessary to maintain public goods, from roads to schools (Habyarimana et al., 2009), and for the operation of democratic institutions, such as legislatures (Axelrod, 2006)—but the logic of collective action means that cooperation can be difficult to achieve (Olson, 1971). Given the central importance of cooperation, social scientists have developed a standard tool-kit for measuring it, including the Prisoner's Dilemma or Public Goods game. This simple game rewards participants for mutual cooperation, but rewards them more for defecting and allowing the other player to carry the cost. As is well known, this tends to lead to mutual defection where neither player cooperates and the mutually undesirable outcome of mutual defection is achieved rather than the mutually desired outcome of mutual cooperation.

This game has been argued to mimic the dynamics underlying the inability for societies to allocate public goods and the tendency for diverse societies in particular to fail at doing so. Habyarimana et al. (2009) note that the Prisoner's Dilemma "captures the challenge of

[4] Other measures commonly found in political science, such as "feeling thermometers" theoretically have similar properties, but responses to these questions tend to have little variation, calling into question their ability to usefully discriminate between attitudes (Krosnick, 1991).

public goods provision directly" and use results from such games to argue that the failure to cooperate across ethnic groups in social situations analogous to the Prisoner's Dilemma is the *primary* reason that diverse societies fail to allocate desirable public goods. Habyarimana et al. (2009) attribute this lack of cooperation across ethnic groups to a lack of norms of cooperation. In other social science work, variation in play in the Prisoner's Dilemma and other trust-based economic games is ascribed to differences in institutions (Alexander and Christia, 2011), culture (Henrich et al., 2006), geographic context (Enos and Celaya, 2015), or statistically-based stereotypes (Fershtman and Gneezy, 2001).

The focus in political science and economics on norms and institutions as determinants of cooperative behavior is understandable given the intellectual foundation of both disciplines. Yet this focus may neglect important sources of variation that speak to how institutions in diverse societies should be constructed in order to promote cooperation. Cooperation may, of course, be structured by individual-level differences, such as belief systems, prejudices, and psychological traits—such as the attitudes associated with exclusionary preferences. Besides a strong intuition that persons with exclusionary attitudes may not want to cooperate with outgroup members, there are also robust findings from psychology that point to this connection. For example, the cognitive biases associated with ingroup favoritism cause individuals to seek maximum distinctiveness between groups, even when it is costly to their own group (Tajfel et al., 1971; Tajfel and Turner, 1979; Turner and Oakes, 1986; Fiske, 2000). In other words, when choosing how to allocate money, anti-outgroup or pro-ingroup biases (Brewer and Miller, 1984) cause people to forgo allocations that are beneficial to their own group or mutually beneficial to both groups, to select allocations that maximizes the difference in monetary payout between groups. A bias for maximizing differences would predict defection in a Prisoner's Dilemma, rather than mutually beneficial cooperation.

Despite the reasons to believe exclusion and cooperation are related, the relationship between discriminatory attitudes and discriminatory behaviors is heavily contested in the

literature (Pager and Quillian, 2005; Pager and Shepherd, 2008; Mitchell and Tetlock, 2017; LaPiere, 1934) and other findings in psychology may point to reasons to believe these attitudes and behaviors should be unrelated. In particular, strategic behavior in games like the Prisoner's Dilemma may not reflect prejudicial attitudes like preferences for exclusion—after all, a central premise of both cognitive psychology and behavioral economics is that the mind is characterized by two systems (Kahneman, 2003), one of which makes the fast, heuristic decisions associated with affective associations, like exclusionary preferences, and another which makes the slower, more deliberate decisions that characterize strategic choice. The latter system is known to overrule the former when the stakes are high. Laboratory cooperation games are intentionally made to be costly and invoke this sort of strategic behavior.

Indeed, there are real-world examples of the separation of strongly held prejudices and cooperative behavior in costly situations. For example, Axelrod (2006), drawing on the logic of the Prisonders' Dilemma, describes the system by which opposing forces in World War I, despite the presumably strong feelings involved, developed cooperative systems of "live and let live" in order to avoid the devastating costs of trench warfare.

In the face of these contrasting theoretical intuitions and empirical findings, our analyses take the first step toward showing that exclusion and cooperation are strongly related and, as such, further shed light on the challenges that diversifying societies face in overcoming barriers for cooperation. Because we cannot randomly assign a preference for exclusion, we cannot, of course, speak directly to the causal effect of exclusionary attitudes on cooperation. However, even though demonstrating so is not our focus, we do show that exclusionary attitudes can be characterized by associations that suggest they are developed early in life and are, therefore, causally prior to cooperative behavior.

Jewish-Arab Relations in Israel

With its high levels of diversity along multiple dimensions (national, religious, and ethnic), Israel provides a fertile case for the study of intergroup relations. With due sensitivities to the unique features of Israeli society, it is a case that is useful in understanding social dynamics in other societies that are becoming increasingly heterogeneous. As noted by Canetti-Nisim, Ariely, and Halperin (2008), "Israel's ethno-national character as a Jewish state, the ongoing Arab-Israeli conflict, [and] the complex relations between Jews and Arabs in Israel [...] have turned Israel into a laboratory conducive to the study of the development of negative political attitudes toward various minority groups."

We focus on intergroup relations between the Jewish and Arab citizens of Israel, a social-political cleavage, defined on religious and nationalistic lines, that is highly salient in Israeli politics. The Arab minority constitutes around 20% of the Israeli population.[5] As a marginalized and underprivileged minority, the Arab citizens are characterized by a low socio-economic status, low participation in the labor market, and are subject to discrimination by state institutions (Okun and Friedlander, 2005).

There is long-standing research on Israeli public opinion about both domestic and international Jewish-Arab tensions (Smooha, 1987, 1992, 2002, 2004; Zeitzoff, 2014; Gubler and Kalmoe, 2015; Gubler, Halperin, and Hirschberger, 2015; Zeitzoff, 2016), with clear evidence of the strain of prejudice toward Arabs on Israeli society. Pedahzur and Yishai (1999) document "deep resentment toward the Arabs", with more than 56% of Jewish respondents in their survey sample opposed to granting Arab citizens' equal social rights to those of Jewish citizens. Bar and Zussman (Forthcoming) show that around 40% of Jewish Israelis would be

[5] For more on this cleavage, see Canetti-Nisim, Ariely, and Halperin (2008). Note that we examine Israeli-Jews' attitudes and behaviors toward Arab-Israeli citizens, as opposed to non-citizen Palestinians or citizens of neighboring Arab countries, the West Bank and Gaza. For research on Israeli Jews' attitudes toward non-citizen Arabs, see Inbar and Yuchtman-Yaar (1986) The 20% figure does not include the West Bank or Gaza populations.

willing to pay more in order to receive services from Jewish workers rather than from Arab workers and Zussman (2013) shows that more than half of the respondents in his sample would prefer not to have an Arab neighbor.[6]

The Arab citizens in Israel are not only a national-religious minority within a state defined by Jewish nationality; they are also often perceived as a security threat or a "fifth column" in the context of Israel's armed conflicts with its surrounding Arab neighbors (Canetti-Nisim, Ariely, and Halperin, 2008). Smooha (2004) shows that a substantial share of Jewish Israelis believe that the Arab citizens support terrorism and may rebel against Israel in the future. This makes the case of exclusion of Arabs in Israel potentially informative for thinking about minority groups elsewhere: perceptions of security threats affect attitudes toward Muslim immigrants to Western countries post-9/11 (Hellwig and Sinno, 2016) and stereotypes of criminality are often associated with Latin American immigrants to the United States. Furthermore, the situation of a minority group having cultural and familial ties to neighboring states can also be found elsewhere, again such as with Latino immigrants to the United States.

We focus on the general issue of exclusion by Jewish Israelis toward Arab Israelis, but also on the particular question of the attitudes of ultra-Orthodox Jews. Ultra-Orthodox are distinctive among the Jewish majority for their strict religious beliefs and traditional dress and lifestyle, including low formal education and widespread non-participation in the workforce, resulting in a population that is substantially poorer than the general Jewish population. Furthermore, there are also barriers for cooperation between the ultra-Orthodox and the rest of the Israeli Jewish population (Enos and Gidron, 2016). The Ultra-Orthodox thus present and informative case because, not only are they the fastest growing segment of the Jewish population in Israel, but with low levels of income and education, Ultra Orthodox

[6] There are, however, contrasting findings with regard to whether Arab citizens of Israel are subject to stronger or weaker discrimination by the Jewish majority group compared to other non-Jewish minorities such as labor immigrants (Canetti-Nisim, Ariely, and Halperin, 2008; Raijman, 2010).

are also, arguably, close to Arabs on a social hierarchy. According to prominent social-psychological theories, they may, therefore, may have more exclusionary attitudes due to greater perceived threat to their relative status (Blumer, 1958; Bobo and Hutchings, 1996; Sidanius and Pratto, 2001). And, of course, a poor sub-group of the high-status population having politically relevant exclusionary preferences toward a low-status minority has obvious parallels in the other societies: the tendency for poor whites in the United States to oppose the social integration of African Americans has a long been noted (Key, 1949) and anti-immigrant sentiment among poor whites in the U.S. and Great Britain has been implicated in the recent election of Donald Trump and Brexit (Enos, 2017). More generally, cooperation or competition over resources is often most relevant to the low-income portion of a majority group that shares schools and other social welfare institutions with low-status minority groups (Bobo and Hutchings, 1996) (although, notably, in the Israeli context, ultra-Orthodox and Arabs are largely institutionally separated).

In some analyses below, we divide the sample into secular and ultra-Orthodox based on respondents' self-identification. By dividing the sample, we can see whether the exclusionary preferences of the low-status ultra-Orthodox group are higher than those of other Jews, as would be predicted by the theories just noted. Additionally, in the cooperative games, Jewish subjects played against, in addition to an Arab, both secular and ultra-Orthodox Jewish players. There is a social cleavage between ultra-Orthodox and secular Jews and these two poles can serve as social identities (Hasson and Gonen, 1997; Enos and Gidron, 2016), so the inclusion of the ultra-Orthodox and the secular Jewish opposing players allows us to measure cooperation with a Jewish player who is clearly an ingroup member and clearly an outgroup member. And, when measuring exclusionary preferences, we can see whether the preferences toward the Jewish outgroup (a religious and social cleavage) are as strong as they toward the Arab outgroup (a religious, social, national, and linguistic cleavage). The convergence of cleavages dividing Arabs and Jews may make the exclusionary preferences particularly strong

(Brewer and Miller, 1984) and so we should see that anti-Arab exclusionary preferences will be greater than anti-Jewish exclusionary preferences.

Data and Research Design

The data was collected through lab-in-the-field experiments across 20 locations in Israel, with wide variation in the local proportion Arab.[7] Using a laboratory allows for careful measurement of play in the economic games necessary for this design and bringing the lab to the respondents—rather than the other way around—increases the external validity of the results in two primary ways. First, we are able to have a sample that is more representative of the Israeli Jewish population than could be obtained when relying on university students—a limitation that may be especially problematic when needing variation in illiberal intergroup attitudes. Not only do college students tend to have a distinct psychological profile (Sears, 1986; Jones, 2010), including strong norms of equality and low-levels of prejudice (Sidanius et al., 2008), but their play in economic games varies substantially from the play of other populations (Henrich et al., 2006). Second, as Grossman (2011) notes, laboratory experiments—in contrast to lab-in-the-field experiments—are especially limited in their ability "to inform the study of cooperation in social dilemmas." Lab-in-the-field experiments can overcome the limited ability of "sterile" laboratory experiments to replicate the contexts in which group identities and norms of cooperation operate.

Fieldwork and data collection were conducted during the summer of 2013 by a professional survey team and under our direct supervision. Our sample includes 439 subjects, all of whom are Jewish Israelis. Since we are interested in the implications of exclusion, we

[7] Data was collected in the following cities: Ashdod, Kiryat Malachi, Elad, Arad, Bet Shemesh, Kiryat Gat, Haifa, Bnei Brak, Tveria, Safed, Rehovot, Zichron Yaakov, Ofakim, Netivot, Modi'in-Makabim-Reut, Tel Aviv. In addition, we sampled 4 neighborhoods in Jerusalem: Neve Yaakov, Ramat Shlomo, City Center, and Kiryat Yovel. The share of non-Jewish (mostly Arab) population in these locations vary from none to 37% in Jerusalem, according to Israel's Central Bureau of Statistics census data from 2008. In analysis to follow, we use non-Jewish population, rather than percent Arab because Israeli Census does not include ethnicity of non-Jewish residents and some of the non-Jewish population may not be Arab. However, it is reasonable to assume that the overwhelming share of this population is Arab.

choose to focus on the hegemonic majority group—in our case, Jews—because that is the group with the power to exclude. While the sample is broadly representative of the Jewish population of Israel, ultra-Orthodox Jews are intentionally over-represented (see Table A1 in the Appendix).

Respondents were selected to participate in our study using a random walk strategy, with a participation rate of about 17%. Participation took around 40 minutes and was conducted inside participants' homes. Participants worked independently on computers provided by our fieldworkers, to ensure their privacy. Compensation for participation was determined by randomly selecting the outcome of one of the economic decision-making games, with a minimum guarantee of 20 NIS.

Participants were first asked to play a public goods game with three rounds: against an Arab opposing player, a Jewish secular opposing player, and against an ultra-Orthodox opposing player. In each round, participants were given 20 NIS and had to decide whether to cooperate by sharing the full sum or defect by keeping the full sum to themselves. After announcing their decision, they were informed of the opposing player's decision, which we recorded in advance. In line with the standard procedure of the Prisoner's Dilemma, payoffs were multiplied by 1.5 and divided equally between the two participants. Note that playing against pre-recorded moves of opposing players, as we did here, has been used successfully in previous lab-in-the-field studies (Enos and Gidron, 2016; Whitt and Wilson, 2007).

After completing the experimental games, respondents were asked a series of demographic survey questions. They were then asked for their opinions about intergroup relations in Israel, including how they would position different outgroup members—including Israeli Arabs—along the social distance scale and about the trustworthiness of different groups in Israeli society.[8]

[8]We used the following wording for the Social Distance question: "Below are some groups of people in Israel. Look at each of them and say which is the closest relationship you would find acceptable for each group. For example, if you would accept someone from a group living on your street, but not as a close

Results

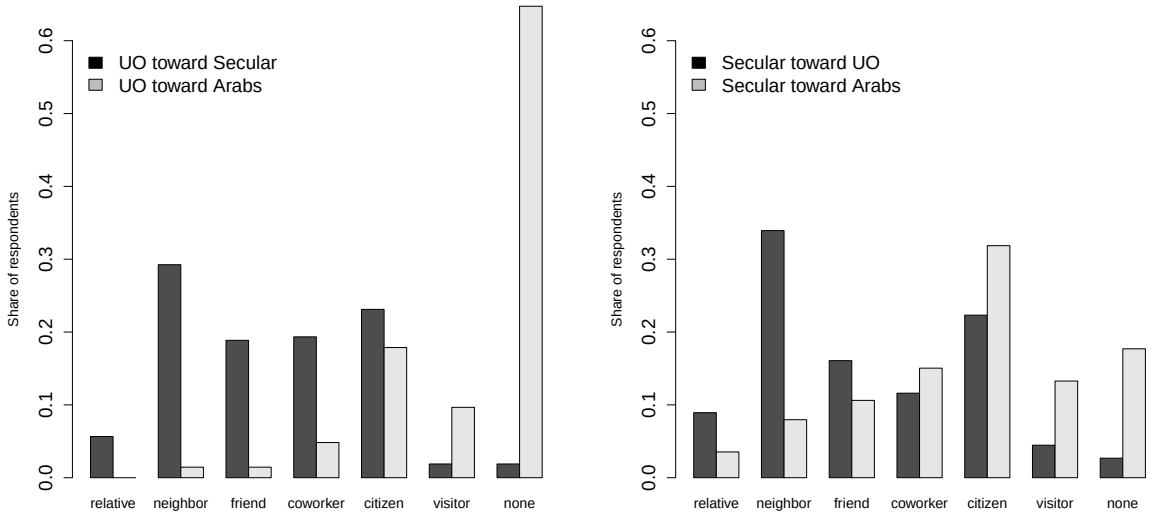
Before exploring the relationship between exclusionary preferences, as measured by social distance, and cooperation, we first examine the distribution of preferences for exclusion and how the social distance variable should be characterized. Because social distance is rarely used in political science literature, this will help us to interpret the meaning of the variable and its relationship with cooperation.

In Figure 1 we show the distribution in our sample of social distance attitudes among ultra-Orthodox Jews toward secular Jews and Arabs and secular Jews toward ultra-Orthodox Jews and Arabs.[9] The distribution of Jews' preferred social distance from Arabs is striking: only a minority of Israeli Jews, either secular or ultra-Orthodox, expresses a willingness to have even minimal interpersonal relationships with Arabs. The high share of ultra-Orthodox Jews who would prefer Arabs not to be citizens of Israel is especially noteworthy: over 60 percent of ultra-Orthodox respondents would prefer not to admit Arabs to Israel at all—not even as visitors. Less than 10 percent would event accept Arabs as coworkers and levels of acceptance for closer relationships are vanishingly small.

Notably, for both ultra-Orthodox and secular Jews, the distribution for exclusion toward a Jewish outgroup is starkly different. Even though many secular Jews have marked hostility toward ultra-Orthodox (Enos and Gidron, 2016), secular Jews are far more accepting of this group than of the Arab outgroup, with a majority willing to access ultra-Orthodox as friends or closer but a majority not willing to accept Israeli Arabs in any personal relationship, not even as a coworker. The differences between levels of exclusion toward the Jewish outgroup

friend, then you would choose "neighbors on the same street". Respondents were asked to choose from the following options, ranging from minimal to maximal distance: relative, friend, neighbor, coworker, citizen, visitor, and none.

[9] Note that we are subetting the data here only for those respondents who self-identify as either secular or Ultra-Orthodox. We account for the full range of religious identities in Israel—Ultra-Orthodox, religious, traditional, and secular—in later analyses. While we also included a category for 'anti-religious', since only 4 respondents identified as such we merged this category with 'secular' in the regression analyses below.



(a) Ultra-Orthodox

(b) Secular

Figure 1: Social Distance by Group

and Arabs suggets that hostility may not necessarily manifest in consequential exclusionary attitudes and that exclusionary attitudes are an independent and consequential attitude.

Exclusionary Preferences as Symbolic Attitudes

What is the nature of exclusionary preferences? A crucial question for predicting their relationship with cooperation is whether these preferences are informed by symbolic attitudes. In the intergroup context, symbolic attitudes are attitudes developed around affective responses to particular groups (in this case, Arabs) that are socialized early in life, are stable over a lifespan, and tend to dominate other attitudes (Tarman and Sears, 2005). The canonical example of symbolic attitudes is attitudes toward Blacks and other racial and ethnic groups in the United States (Sears and Henry, 2003). Recent empirical work in American politics suggests that attitudes toward immigrants are also symbolic attitudes (Hopkins, Sides, and Citrin, 2016).

Whether preferences for exclusion should be understood as symbolic attitudes is important because it speaks to their likelihood of dominating other attitudes and also of changing in the face of shifting demographics. Because symbolic attitudes are supposed to remain stable, if exclusionary preferences are informed by symbolic attitudes, they are likely to remain stable even as the demographic context in which an individual lives changes. It also means that if these attitudes are brought to bear on political questions, that exclusionary attitudes will likely dominate other attitudes and strongly affect opinion. For example, turning to the American context, classic literature demonstrates how whites' attitudes toward Blacks dominated other considerations in policy questions from school busing (Kinder and Sears, 1981) to healthcare (Tesler, 2012). Indeed, given the centrality of the Arab minority and concerns about neighboring Arab states in Israeli political discourse, this might mean that attitudes toward Arabs influences public opinion over a range of topics. A common quantitative test of whether an attitude is symbolic is to see if it is a significant predictor of attitudes and behaviors when included in multiple regression analysis with other considerations. We take this up below.

First, we test to see whether social distance preferences are related to variables that tend to be socialized early in life and remain stable, another marker of symbolic attitudes. In an ideal study, we would test the stability of these attitudes using longitudinal panel data over the course of a lifetime, starting with early adult socialization—however, such data is unavailable. As such, we use a method common in the literature and turn to whether these preferences are predicted by other stable features of a person's psychology that were likely established early in life. The literature on attitudes toward outgroup minorities in general and in Israel in particular points to several such factors:

- Religion: Stronger religiosity may strengthen and reinforce ingroup identity and outgroup exclusionary preferences, especially when national dividing lines follow religious cleavages, as in Israel. Conversely, religious beliefs may generate a sense of solidarity

toward the less well-off, which under certain circumstances may also encompass minority outgroups (Ben-Nun Bloom, Arikan, and Courtemanche, 2015; Johnson, Rowatt, and LaBouff, 2010; Knoll, 2009).

- Political ideology: Right-wing ideological self-identification, which is likely to be linked with strong national sentiments, may be associated with stronger exclusionary preferences (Golder, 2003; Semyonov, Raijman, and Gorodzeisky, 2006).
- Education: higher education is associated with greater cultural openness (Stubager, 2008, 2009), which may lead to greater openness toward outgroups. Indeed, Pedahzur, Halperin, and Canetti (2007) find that within the Israeli context, higher education—more than other measures of socio-economic status such as employment—is associated with lower social distance from minority groups.

In Table 1 we present the results of OLS regressions, with social distance as the dependent variable (ordered logit regression provides substantively similar results). Political ideology, education, and religiosity all appear to be strongly related to social distance, with more right-wing, more religious, and less educated subjects expressing more exclusionary preferences.

In Model 2, we also include a measurement of self-reported social interactions with Arabs. The results in this model suggest that those who interact with Arabs more frequently are also likely to report lower exclusionary attitudes toward them.[10] Of course, there is a question of endogeneity: it might be that those who are more accepting of Arabs are more willing to interact with them, rather than the other way around. But, nevertheless, note that with the inclusion of this variable, ideology and religion remain strong predictors of social distance, suggesting that social distance is rooted in ideological and other stable features of a person. While they may be influenced by current context and social interactions, such variables do not explain all of the variation in exclusionary preferences.

We display predicted values of exclusionary preferences from Model 1 in Table 1 in

[10] On the potential of interactions to decrease Jewish-Arab prejudice, see Schroeder and Risen (2015).

Table 1: Social distance with Arabs

	Dependent variable:	
	Social Distance	
	(1)	(2)
Age	−0.003	−0.004
	(0.005)	(0.005)
Foreign Born	−0.326*	−0.246
	(0.197)	(0.188)
Male	−0.519***	−0.376***
	(0.149)	(0.144)
Left-right	0.314***	0.276***
	(0.055)	(0.052)
Religiosity (baseline: religious)		
Secular	−0.425*	−0.353
	(0.256)	(0.246)
Traditional	0.236	0.287
	(0.285)	(0.272)
Ultra Orthodox	0.650***	0.495**
	(0.241)	(0.232)
Education (baseline: graduate)		
High-school	0.368	0.250
	(0.337)	(0.321)
Primary-school	1.013**	0.634
	(0.466)	(0.458)
Undergrad	0.570*	0.430
	(0.340)	(0.325)
Income (baseline: average)		
High income	−0.474*	−0.384
	(0.270)	(0.260)
Low income	−0.096	−0.180
	(0.216)	(0.208)
Very high income	0.151	−0.108
	(0.402)	(0.387)
Very low income	−0.002	0.048
	(0.202)	(0.195)
Ethnicity (baseline: Ashkenazy)		
Mixed	−0.358	−0.478*
	(0.283)	(0.269)
Other	0.232	−0.186
	(0.456)	(0.438)
Sephardic	0.132	0.137
	(0.163)	(0.157)
Interactions (baseline: day)		
Month		0.931***
		(0.296)
Never		1.486***
		(0.259)
Week		0.469
		(0.311)
Year		1.166***
		(0.312)
Constant	3.846***	3.046***
	(0.556)	(0.560)
Observations	375	372
R^2	0.289	0.370
Adjusted R^2	0.255	0.332
Note:	*p<0.1; **p<0.05; ***p<0.01	

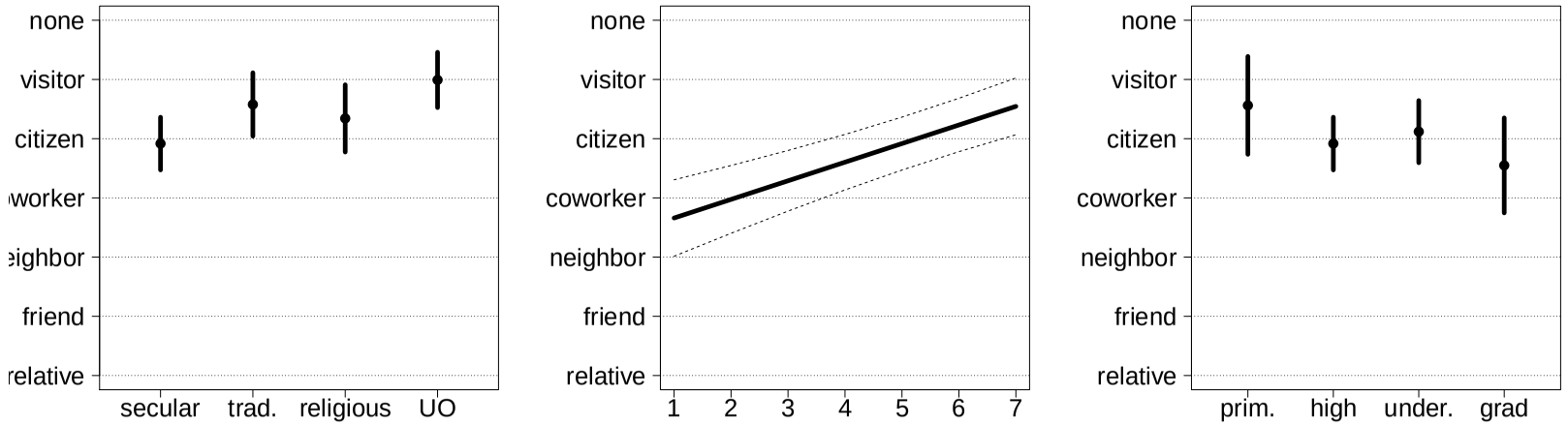
OLS regressions of social distance with Arabs (range 1-7) on individual-level variables (column 1) and measurement of interactions with Arabs (column 2).

Figure 2. In these figures, we predict values for a secular, 38-year-old Sephardi male with average income, high-school education, and center-right political identity (5 on the 1-7 scale). Religion, ideology, and education vary in Figures a, b, and c, respectively. Note that in all these figures predicted values range only between "coworker" and "visitor," reflecting the high levels of exclusionary preferences in our sample of Israeli Jews.

As noted above, ultra-Orthodox Jews, which share with the Arabs several characteristics of low-status such as lower income and education, express strong social distance from Arabs. We also find no evidence that low status in terms of income or education is likely to reduce social status across ethnic boundaries. Jews of Sephardic origins (those whose origins trace to Muslim-majority countries), which are often stigmatized in Israeli society (Fershtman and Gneezy, 2001; Lamont and Mizrachi, 2012), are also not likely to have less exclusionary attitudes. These findings fit with research on status concerns, according to which low-status groups within the hegemonic majority are likely to seek ways to differentiate themselves from low-status outgroups (Bobo and Hutchings, 1996; Sidanius and Pratto, 2001).

We also examine whether social distance is a strong predictor of policy preferences in the face of competing considerations. We focus on respondents' perceptions of whether Arabs receive too much or too little from the government. Social distance overwhelmingly predicts perceptions of governmental spending on Arabs, as shown in Table A2 in the Appendix, even when accounting for demographic factors and other related factors such as political ideology. Social distance, as is expected with a symbolic attitudes, appears to dominate other considerations when forming policy preferences.

These results strongly suggest that social distance is symbolic attitudes. It is associated with variables that are likely to remain mostly constant throughout adulthood and are socialized early in life and dominates other considerations in forming policy preferences. This makes us suspect that exclusionary attitudes, as measured by social distance, will strongly predict behavior, even in the face of potential mitigating factors. We now turn to examine



(a) Religiosity (b) Political Ideology (c) Education

Figure 2: Religiosity, ideology, education and social distance

Subfigure (a) presents the predicted values for social distance by varying levels of religiosity: secular, traditional, religion, and Ultra Orthodox respondents. Subfigure (b) presents the predicted values for social distance by ideology, ranging from far left (1) to far right (7). Subfigure (c) presents the predicted values for social distance by levels of education: primary school, high school, undergraduate degree, and graduate degree.

the relationship between exclusionary preferences and cooperative economic behaviors and examine such mitigating factors.

Preferences for Exclusion and Cooperation

In order to examine the relationship between exclusionary preferences and cooperation, we created a dichotomous variable of high and low exclusion based on whether or not the subject would accept an outgroup member as a coworker or closer, meaning that respondents who would accept Arabs as co-workers, neighbors, friends, or relatives are coded as low exclusionary preference and everyone else is coded as high exclusionary preference. Creating a dichotomous variable allows us to avoid assumptions of linearity about the scale.[11] Looking at cooperation as a function this dichotomous variable, a t-test for difference of means yields $\mu = 0.19, t = 3.26, p < 0.001$, indicating that that high exclusion subjects are significantly less likely to cooperate with Arabs (cooperation $\sigma = .47$, Cohen's D = .40).

To test whether this relationship will hold when controlling for other variables that may explain cooperation, we use social distance as a predictor of cooperation in multivariate regression. The estimated coefficients from this logit regression are presented in Table 2. Strong exclusionary attitudes are highly predictive of lack of cooperation, both with and without individual-level covariates (columns 1 and 2 respectively). Notably, in these regressions, we include a number of variables that might also influence economic decision-making, including gender, political ideology, and income, and yet the influence of this basic exclusionary attitude remains large and significant. Not only do exclusionary preferences powerfully predict cooperation, suggesting that people who advocate for the exclusion of minority groups will not subsequently come to cooperate, but a preference for exclusion seems to dominate other attitudes, as is expected if exclusionary preferences are symbolic attitudes. Even with con-

[11] Note that this dichotomy is roughly at the midpoint of the scale. The median of the distribution is at "visitor." If we chose to dichotomize our variable here, the results we report below would show an even stronger relationship between social distance and cooperation.

trol variables, moving from low exclusion to high exclusion reduces the predicted probability of cooperation by 14.6 percentage points [95% CI: -0.287:-0.003].

Potential mitigating factors in the preferences-behavior link

We now turn to checking the power of exclusionary attitudes to predict behavior in the face of possibly mitigating covariates. Theoretically, because exclusionary preferences appear to be symbolic attitudes, their relationship with behaviors should not be affected by changes in local context or other perceptions. We focus on three such related factors: stereotypes of the trustworthiness of outgroup members, repeated interactions with outgroup members, and the local residential environment.

First, it could be that lack of cooperation stems not from symbolic exclusionary preferences toward Arabs but rather from general stereotypes that Arabs are not trustworthy and therefore likely to defect in the Prisoner's Dilemma. For instance, Zussman (2013) finds that Jews discriminate against Arabs in the Israeli car market since they believe they are more likely to be cheated by an Arab. We therefore include a binary variable for respondents' perceptions of whether Arabs can be trusted, with and without individual level covariates (Table 2 columns 3 and 4 respectively).[12] Again, exclusion predicts a lack of cooperation, suggesting that the failure to cooperate is not rooted merely in statistical discrimination based on outgroup stereotypes, but in exclusionary preferences.

Second, we examine whether repeated interactions with outgroup may nudge individuals with a distaste for the outgroup toward cooperation, as argued by the important work of Axelrod (2006) on the evolution of cooperation. To test this, we interact the binary social distance variable with respondents' self-reported frequency of interaction with Arabs. This variable takes values of "daily," "weekly," "monthly," "yearly," or "never'." The results, presented in Table A3 in the Appendix, suggest that repeated interactions across groups

[12] The variable 'Trust in Arabs' take the value of 1 for those who have some or a lot trust in Arabs, 0 otherwise.

Table 2: Behavioral consequences of social distance, public goods game

	Dependent variable:			
	Cooperation with Arabs (=1)			
	(1)	(2)	(3)	(4)
Social Distance (binary)	−0.820***	−0.631**	−0.639**	−0.579*
	(0.243)	(0.306)	(0.264)	(0.319)
Trust in Arabs			0.536*	0.419
			(0.291)	(0.341)
Age		−0.002		−0.002
		(0.008)		(0.008)
Foreign Born		0.137		0.053
		(0.318)		(0.325)
Male		0.318		0.286
		(0.245)		(0.251)
Left-right		−0.208**		−0.198**
		(0.093)		(0.095)
Religiosity (baseline: religious)				
Secular		−0.916**		−1.097***
		(0.411)		(0.424)
Traditional		−0.728		−0.919*
		(0.459)		(0.470)
Ultra Orthodox		−0.357		−0.501
		(0.386)		(0.394)
Education (baseline: graduate)				
High-school		0.826		0.974
		(0.583)		(0.604)
Primary school		0.934		1.060
		(0.773)		(0.792)
Undergrad		0.469		0.604
		(0.590)		(0.613)
Income (baseline: average)				
High		−0.085		−0.036
		(0.435)		(0.441)
Low		−0.409		−0.430
		(0.348)		(0.353)
Very high		0.158		0.086
		(0.625)		(0.632)
Very low		−0.356		−0.326
		(0.323)		(0.326)
Ethnicity (baseline: Ashkenazi)				
Mixed		−0.135		−0.137
		(0.456)		(0.460)
Other		0.593		0.998
		(0.715)		(0.752)
Sephardic		−0.312		−0.262
		(0.267)		(0.270)
Constant	0.774*	1.666*	−0.168	1.027
	(0.442)	(0.960)	(0.676)	(1.148)
Observations	439	375	432	371
Log Likelihood	−274.275	−226.808	−268.588	−222.142

Note: *p<0.1; **p<0.05; ***p<0.01

Logit regressions of cooperation with Arabs in public goods game (range 0-1) on prejudice toward Arabs, trust in Arabs, and additional individual-level variables.

do not significantly mitigate the relationship between prejudice and lack of cooperation, again suggesting that, as would be expected of a symbolic attitude, preferences for exclusion are stable and not immediately responsive to context. This also suggests that interpersonal contact (Allport, 1954; Pettigrew and Tropp, 2006), a common policy solution for intergroup harmony in the academic literature, has little effect on cooperation in this context.

Third, we examine whether social distance reflects the local residential context. It may be that exclusionary social distance is associated with a residential context characterized by a low share of Arabs or by a segregated Arab community, either because residential selection reflects exclusionary preferences or the segregation causes exclusionary preferences (Enos, 2017). Indeed, local residential context has previously been shown to be a powerful predictor of intergroup attitudes in Israel (Enos and Gidron, 2016). As such, we again estimate our regressions, but also include the percent of the local non-Jewish population and levels of segregation for each locality.[13] The results are presented in Table A4 in the Appendix.

Even when accounting for the local residential context, social distance remains a strong predictor of cooperative behaviors—including the size and segregation of the local Arab population has little affect on the size or significance of the social distance coefficient. It is important to note that we do not argue that local context does not matter for shaping intergroup attitudes or behaviors. Instead, our results demonstrate that when holding constant levels of social distance, contextual residential factors—either the share of the outgroup, its level of segregation, or the interaction between outgroup share and segregation—are weak predictors of cooperation.[14]

[13] Following the standard in the literature we measure segregation based on the dissimilarity index (Massey and Denton, 1993). The dissimilarity scale captures the share of one of the two groups that would have to relocate to different geographic units to produce a distribution in each geographical units that matches that of the relevant locality. Data used to calculate levels of segregation is taken from the Israeli Census of 2008. The dissimilarity scores are based on data at the level of Statistical Area, which is the smaller geographical unit within the Israeli Census.

[14] Note too that in most locations, the share of the non-Jewish outgroup population is relatively small. Future research should examine this issue across location with greater variations in the size and segregation of the relevant outgroup.

Robustness check

It could also be that exclusionary attitudes reflect a more general orientation toward cooperation or trust (see Dinesen and Sønderskov (2015)) and not about attitudes toward Arabs in particular. To look for this, we tested for the relationship between exclusionary preferences toward Arabs and cooperation with the ingroup (secular Jews for secular Jews and ultra-Orthodox for ultra-Orthodox). Table A5 in the Appendix, shows no relationship between social distance and cooperation with the ingroup. This supports the argument for a direct link between social distance toward a specific group and cooperative behaviors with individuals from this group.

There is of course, a concern about cooperation inducing preferences for exclusion, so that once a subject chooses not to cooperate with the outgroup, they report survey attitudes in line with their previous behavior. If this were the case, the connection between exclusion and cooperation we find might be described as a survey artifact, not a meaningful relationship between attitudes and behavior. However, if this were true, we would also likely see cooperation affect perceptions of trustworthiness—an obvious way to justify non-cooperation—thus confounding the relationship between cooperation and exclusionary attitudes. However, as just noted, the inclusion of trust in the model does not affect the relationship between cooperation and exclusionary preferences, thus not indicating any significant confounding and mitigating concerns that that cooperative behavior is causing preferences for exclusion.

Conclusion

In this manuscript, we have shown that social distance, a measure of exclusionary preferences, is strongly predictive of cooperation in a public goods game. Furthermore, we have shown that this tendency springs from basic prejudices, rooted in stable features of a person's socialization. Even within the same institutional context and when holding other variables

constant, those with more exclusionary attitudes were less likely to choose a cooperative strategy when facing an outgroup member.

What do our findings say about the ability of diverse societies to provide public goods? Our results suggest that exclusionary preferences are strongly implicated in inadequate cooperation. A large faction of individuals in many countries express a desire to exclude immigrants and other minorities, but nevertheless find themselves in increasingly diverse societies as the flow of immigrants is unabated. Our results suggest that these individuals may be unwilling to engage with these immigrants as they become fellow citizens. Indeed, this could be the phenomenon described by Putnam (2007), who argued that diversity causes people to "hunker down" and avoid pro-social activities. Our findings suggest that many people, as a result of socialization, may have always preferred not to engage cooperatively with their neighbors who are different from them and the hunkering down reflects a behavioral response to the increased exposure to an outgroup.

We have also noted that the correlations between stable demographic features of an individual and exclusionary preferences suggests that social distance is unlikely to change within an individual as other features of that individual or her context change. However, this does not mean that exclusionary preferences will not change within a society across time. Notably, Parrillo and Donoghue (2005) showed that average social distance toward a number of groups in the United States, including African Americans, has become less exclusionary in the over eighty years since the Social Distance Scale was created and even significantly less exclusionary in the last forty years.[15] While this does not signal that inclusion and harmony happens quickly, it does suggest that a society's psychological barriers to cooperation can be lowered overtime.

Of course, this does not mean that aggregate exclusionary preferences will *necessarily*

[15] Using different measures, others have found decreasing social distance in other societies, for example Storm, Sobolewska, and Ford (2017) in Great Britain.

lessen with time. In Israel in particular, that the most exclusionary preferences are found among ultra-Orthodox reinforces the potential for exclusionary attitudes to shift in a more exclusionary direction. Ultra-Orthodox represent the fastest growing segment of the Jewish population of Israel and aggregate preferences for exclusion among Jewish Israelis may increase as this population grows. If these attitudes are induced by threats to position on a social hierarchy, as suggested by some scholarship, then this speaks to the role of welfare-enhancing policies and institutions in promoting harmonious attitudes and cooperation.

More generally, our findings suggest that diverse societies have to directly face the challenge of exclusionary attitudes in order to overcome barriers for cooperation, as simply stressing the material incentives for cooperation or providing information on outgroups' stereotypes will not suffice to enhance cooperation. Rather, if these preferences are rooted in symbolic attitudes that are socialized early in life, then the roots of these attitudes should be addressed. As our analyses of ultra-Orthodox–Arab cooperation (or lack thereof) suggest, this point is also especially relevant for understanding intergroup relations among low-status groups. Because low status groups exist in every society, including those diversifying via immigration, this issue of how to promote cooperation between low status groups is relevant for a large variety of contexts.

In Israel in particular, attitudes among ultra-Orthodox show little hope of a coalition of low-status groups: even though both ultra-Orthodox Jews and Israeli Arabs have lower socio-economic status compared to secular Jewish Israelis, and both groups face institutional barrier for inclusion in mainstream Israeli society and the labor market, our results show little prospects for the type of cooperative behavior necessary to build a political coalition and often pointed to as a potential source of political empowerment for low status groups in other contexts (Browning, Marshall, and Tabb, 1984; Krochmal, 2016). Our findings here indicate that, despite the idealistic calls for such coalitions, the psychology of threats to status (Blumer, 1958; Bobo and Hutchings, 1996; Sidanius and Pratto, 2001) may be a

stronger guide to behavior.

Appendix

Table A1: Sample description

	Our sample	Gutmann Sample
Male	52%	48%
College Degree	35%	34%
Sephardic	50%	48%
Income Above Average	15%	39%
Income Below Average	68%	34%
Average Age	41	43
Average left-right self-placement	5.2	4.8
Born in Israel	79%	64%
Ultra-Orthodox	51.6%	7.4%
N	459	2,803

This table presents the descriptive statistics of our sample, compared to data collected for the study 'A Portrait of Israeli Jews Beliefs, Observance, and Values of Israeli Jews, 2009', published by the Israel Democracy Institute (Arian and Keissar-Sugarmen, 2012). Ultra-Orthodox are intentionally over-represented in our sample, to allow for a close examination of the role of religion in shaping intergroup behaviors and attitudes.

Table A2: Social distance from Arabs and policy preferences

	Dependent variable:
	Government spending on Arabs
Social Distance (binary)	0.188***
	(0.040)
Age	−0.004
	(0.004)
Foreign Born	0.158
	(0.142)
Male	−0.069
	(0.110)
Left-right	0.132***
	(0.041)
Religiosity (baseline: religious)	
Secular	−0.036
	(0.184)
Traditional	0.040
	(0.203)
Ultra Orthodox	0.066
	(0.174)
Education (baseline: graduate)	
High-school	0.351
	(0.248)
Primary-school	1.085***
	(0.347)
Undergrad	0.216
	(0.253)
Income (baseline: average income)	
High income	0.089
	(0.200)
Low income	−0.094
	(0.156)
Very high income	−0.108
	(0.296)
Very low income	−0.035
	(0.147)
Ethnicity (baseline: Ashkenazy)	
Mixed	0.164
	(0.201)
Other	−0.130
	(0.325)
Sephardic	−0.050
	(0.118)
Interactions (baseline: day)	
Month	0.005
	(0.223)
Never	−0.178
	(0.202)
Week	0.003
	(0.233)
Year	−0.244
	(0.238)
Constant	1.572***
	(0.444)
Observations	361
R^2	0.189
Note:	*p<0.1; **p<0.05; ***p<0.01

This table presents the results of OLS regressions for respondents' answers to the following question: Some people think Arabs receive too much from the government, some people think they don't receive enough. Thinking about the following groups [Arabs], do you think they receive too much, too little, or just the right amount from the government? Answers range between Far too much (5), Somewhat too much (4), About the right amount (3), Somewhat too little (2), Far Too little (1).

Table A3: Social distance and repeated Interactions with outgroup members

	Dependent variable:		
	Cooperation with Arabs (=1)		
	(1)	(2)	(3)
Social Distance (binary)	-0.820^{***}	-0.367	-0.085
	(0.243)	(0.528)	(0.620)
Interactions		0.298	0.390
		(0.298)	(0.346)
Distance:Interactions		-0.150	-0.184
		(0.171)	(0.197)
Age			-0.001
			(0.008)
Foreign Born			0.138
			(0.320)
Male			0.295
			(0.250)
Left-right			-0.204^{**}
			(0.094)
Religiosity (baseline: religious)			
Secular			-0.982^{**}
			(0.416)
Traditional			-0.711
			(0.462)
Ultra Orthodox			-0.376
			(0.388)
Education (baseline: graduate)			
High-school			0.831
			(0.582)
Primary school			1.020
			(0.785)
Undergrad			0.465
			(0.590)
Income (baseline: average)			
High			-0.025
			(0.442)
Low			-0.312
			(0.359)
Very high			0.272
			(0.636)
Very low			-0.291
			(0.330)
Ethnicity (baseline: Ashkenazy) Mixed			
Mixed			-0.145
			(0.461)
Other			0.696
			(0.721)
Sephardic			-0.366
			(0.270)
Constant	0.774^{*}	-0.134	0.433
	(0.442)	(0.992)	(1.360)
Observations	439	434	372
Log Likelihood	-274.275	-270.227	-223.032
Akaike Inf. Crit.	552.549	548.454	488.064

Note: *p<0.1; **p<0.05; ***p<0.01

This table examines whether repeated interactions with Arabs diminishes the negative relationship between exclusionary attitudes and cooperation (Axelrod, 2006). We find no support in the analysis for this argument. The interaction variable ranges from 1 (never) to 5 (daily). Note that more than 50% of our sample never interactions with Arabs.

Table A4: Social Distance and local context

	Dependent variable:				
	Cooperation with Arabs (=1)				
	(1)	(2)	(3)	(4)	(5)
Social Distance (binary)	−0.823***	−0.622**	−0.809***	−0.620**	−0.638**
	(0.243)	(0.307)	(0.244)	(0.307)	(0.310)
Age		−0.002		−0.002	−0.002
		(0.008)		(0.008)	(0.008)
Foreign Born		0.163		0.139	0.131
		(0.321)		(0.319)	(0.324)
Male		0.330		0.318	0.333
		(0.245)		(0.245)	(0.246)
Left-right		−0.211**		−0.203**	−0.209**
		(0.093)		(0.093)	(0.093)
Religiosity (baseline: religious)					
Secular		−0.879**		−0.952**	−0.887**
		(0.414)		(0.413)	(0.417)
Traditional		−0.699		−0.729	−0.691
		(0.460)		(0.459)	(0.460)
Ultra Orthodox		−0.363		−0.381	−0.356
		(0.386)		(0.387)	(0.388)
Education (baseline: graduate)					
High-school		0.853		0.761	0.822
		(0.584)		(0.584)	(0.588)
Primary school		0.961		0.847	0.889
		(0.775)		(0.777)	(0.780)
Undergrad		0.512		0.403	0.469
		(0.594)		(0.592)	(0.597)
Income (baseline: average income)					
High		−0.107		−0.102	−0.095
		(0.436)		(0.437)	(0.440)
Low		−0.418		−0.434	−0.435
		(0.349)		(0.350)	(0.352)
Very high		0.162		0.106	0.116
		(0.625)		(0.630)	(0.628)
Very low		−0.312		−0.388	−0.332
		(0.328)		(0.326)	(0.331)
Ethnicity (baseline: Ashkenazy)					
Mixed		−0.131		−0.083	−0.064
		(0.456)		(0.459)	(0.460)
Other		0.591		0.597	0.574
		(0.714)		(0.717)	(0.721)
Sephardic		−0.304		−0.265	−0.255
		(0.267)		(0.271)	(0.272)
Local context					
Non-Jewish percentage	−0.016	−0.017			0.016
	(0.018)	(0.021)			(0.045)
Non-Jewish segregation*Non-Jewish percentage					−0.003
					(0.004)
Non-Jewish Segregation			0.024	0.020	0.042
			(0.018)	(0.020)	(0.035)
Constant	0.950**	1.782*	0.499	1.498	1.348
	(0.483)	(0.972)	(0.486)	(0.974)	(1.042)
Observations	439	375	439	375	375
Log Likelihood	−273.850	−226.460	−273.335	−226.334	−225.695

Note: *p<0.1; **p<0.05; ***p<0.01

This table presents the results of logit regressions for cooperation with Arabs while accounting also for the share of the non-Jewish population and its segregation in the locality. Segregation scores were computed based on the dissimiliarity index. In most localities, it is reasonable to assume that many (although not all) of the non-Jewish population is Arab.

Table A5: Social distance from Arabs and cooperation with ingroup

	Dependent variable:			
	secular ingroup		uo ingroup	
	(1)	(2)	(3)	(4)
Social Distance from Arabs (binary)	−0.547	−0.691	−1.560	−1.876
	(0.411)	(0.511)	(1.047)	(1.168)
Age		0.003		0.005
		(0.016)		(0.016)
Foreign Born		−0.365		−1.010
		(0.583)		(0.679)
Male		0.337		0.156
		(0.454)		(0.445)
Left-right		−0.097		0.181
		(0.201)		(0.160)
Education (baseline: graduate)				
High-school		−0.364		0.355
		(1.028)		(1.030)
Primary school				0.811
				(1.326)
Undergrad		−0.544		0.798
		(1.062)		(1.030)
Income (baseline: average)				
High		−0.019		0.646
		(0.659)		(0.965)
Low		0.220		0.046
		(0.629)		(0.624)
Very high		−1.853		−0.281
		(1.361)		(1.352)
Very low		0.308		0.226
		(0.652)		(0.560)
Ethnicity (baseline: Ashkenazy) Mixed				
Mixed		−0.705		−0.606
		(0.853)		(0.809)
Other		−0.388		14.167
		(1.058)		(882.744)
Sephardic		−0.138		0.240
		(0.544)		(0.424)
Constant	1.350*	2.386	4.268**	3.206
	(0.709)	(1.640)	(2.072)	(2.456)
Observations	113	103	207	173
Log Likelihood	−74.628	−64.893	−109.181	−82.372

Note: *p<0.1; **p<0.05; ***p<0.01

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