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How Social Context Affects Immigration Attitudes

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Selection bias represents a persistent challenge to understanding the effects of social context on political attitudes. We attempt to overcome this challenge by focusing on a unique sample of individuals who were assigned to a new social context for an extended period, without control over the location they were sent: missionaries for the Church of Jesus Christ of Latter-day Saints. We interviewed a sample of 1,804 young people before and after their mission service in a diverse set of locations around the world and find strong evidence that the policy views of respondents became more tolerant toward undocumented immigrants when respondents were assigned to places where contact with immigrants was more likely. Within the United States, missionaries who served in communities with larger Hispanic populations, and those assigned to speak a language other than English, experienced the largest increases in pro-immigrant attitudes.

Politicized nativism appears to be on the rise in many advanced industrial societies. From El Paso to Christchurch, acts of hostility and even violence by natives have been aimed at new migrants. Basic theories in anthropology and psychology suggest that such hostility might be a core human trait, such that members of in-groups come to feel threatened by the sudden appearance of out-groups. In media accounts and academic studies alike, a common claim is that the arrival of new, unfamiliar groups among stable populations provokes antagonism among natives toward immigrants, clearing the way for anti-immigrant political parties and policies. This is a worrisome phenomenon, given that continued violence, poor governance, and climate change are likely to induce considerable additional migration around the world in the years ahead, and contact between migrants and longtime residents will become more common.

However, immigration need not inevitably provoke lasting cycles of nativist backlash. Countries like the United States, Australia, and Canada have seen massive in-migration over the last 200 years. In contemporary surveys, voters in those places express some of the warmest attitudes toward migrants, especially in the locales where immigrants are concentrated. Furthermore, studies have shown that votes for anti-immigrant parties and candidates have grown fastest in places with relatively few immigrants.

What explains the geographic clustering of pro-immigrant sentiment in places with relatively large numbers of immigrants? This article addresses the possibility that some part of

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Data collection followed all American Political Science Association guidelines for human subjects research. This protocol was reviewed and approved by the Brigham Young University (BYU) institutional review board (IRB; approval no. F130063), Massachusetts Institute of Technology (MIT) IRB (approval no. 1302005525), and Stanford IRB (approval no. 27066). The project was also approved by the dean of students at BYU because recruitment e-mails were sent to a large number of students. This research received funding from BYU, MIT, and Stanford University. Replication files are available in the *JOP* Dataverse (https://dataverse.harvard.edu/dataverse/jop). The empirical analysis has been successfully replicated by the *JOP* replication analyst. An appendix with supplementary material is available at https://doi.org/10.1086/722339.

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the explanation lies in Allport's (1954) classic conjecture about the palliative impact of intergroup contact on social relations between groups. Positive contact between immigrants and natives may lead to "perceptions of common interests and common humanity" (261), diminished ethnocentrism, or, at the very least, an understanding among natives of the policy interests of immigrants. Moreover, it is possible that in geographic clusters containing immigrants and a set of natives with pro-immigrant attitudes, those attitudes can spread to other natives via contact in local social networks that do not include immigrants themselves.

Any such impact of social context or intergroup contact on individual preferences is notoriously difficult to identify. The mere presence of a correlation between neighborhood-level exposure to immigrants, on the one hand, and the expression of pro-immigrant attitudes, on the other, could arise for a number of reasons. For example, immigrants and pro-immigrant natives might choose to live in the same communities for a variety of reasons, or anti-immigrant political entrepreneurs might be more successful in places with few labor market opportunities and, hence, few immigrants.

How, then, might researchers evaluate the simple hypothesis that exposure to and social interaction with immigrant communities has a causal impact on attitudes related to immigration? A large observational literature has examined the correlation between attitudes and neighborhood characteristics or self-reported contact with out-groups (see, e.g., Hawley 2011; Newman 2013; Schneider 2007; Taylor 1998). A more recent set of studies examines the short-term voting behavior and attitudes of natives in the wake of "shocks" to immigration that might be viewed as natural experiments (e.g., Genovese, Belgioioso, and Kern 2017). And finally, a nascent literature attempts to experimentally manipulate social contact and context either in the laboratory or through field experiments (see Busby 2018; Enos 2014).

For the most part, the experimental literature focuses on relatively weak, one-off manipulations of a native in-group's social context or contact with members of an immigrant out-group. These studies are few in number, and their findings are mixed. Problems relate to timing and the intensity of the treatment: it is possible that hostile but fleeting reactions to an out-group will occur in the short term but that warmer attitudes can develop over time through acclimation or deep and sustained social interaction. Studies with treatments of appropriate duration and intensity are notoriously difficult to implement.

This article makes use of a unique opportunity to examine the effect of a strong, immersive treatment in which the social context of each subject is dramatically altered for an extended period of time and individuals have no ability to sort themselves into their desired locations. Specifically, we exploit the assignment of young college-age members of the Church of Jesus Christ of Latter-day Saints (LDS) to missions around the world. We interviewed 2,193 missionaries before they departed for their missions, then reinterviewed 1,804 upon their return. The set of missionaries in our sample was assigned to 120 different countries and all states within the United States. Most importantly, missionaries do not choose the residential setting of their missions, which generates for each missionary random exposure to widely varying social contexts and subsequently to differential interaction with immigrants, both in the United States and abroad.

We examine changes in the missionaries' attitudes about immigration policy after spending an average of 19 months in a new location. As a descriptive matter, we note that across a wide swath of residential environments, the experience of being in a new place is associated with warmer attitudes toward immigrants in the postmission survey. Our main focus, however, is on differences in differences related to specifics of the residential environment of the mission. First of all, while two-thirds of the missionaries in our sample were assigned to foreign locations, no single country received more missionaries than the United States. For missionaries serving domestically, positive changes in respondents' views about immigrants and pro-immigration policy preferences were larger in counties with larger Latino populations and among missionaries assigned to speak a language other than English. In the full sample of missionary location assignments across the world, we also find a positive relationship between service in places with a larger population of migrants and pro-immigration policy attitudes. What is particularly noteworthy is that we find these effects weeks and even months after missions end, which means that these diverse contexts and contact with out-groups had a lasting impact on people's opinions, sustained even after settling back into one's own home.

Second, the United States—a nation of immigrants—is one of the most immigrant friendly of all countries, and missionaries assigned to the United States experienced larger increases in pro-immigrant sentiment than those assigned to foreign locations, including both policy views and rejection of negative stereotypes about immigrants. A country-level correlation between local attitudes toward immigration and the magnitude of the change in the sentiment of the missionaries can also be seen more broadly in the full sample of countries in our study.

In the subsequent sections, we situate our study within the existing literature. We then describe our identification strategy, research design, and the unique aspects of our data set, with a focus on questions of both internal and external validity. We next review the results of our analyses and conclude with a discussion of the implications of this study for

our understanding of how geographic context and contact (direct and indirect) affect political and social attitudes.

CONTACT, CONTEXT, AND CAUSALITY IN THE STUDY OF IMMIGRATION

Considerable scholarly effort has been devoted to exploring the relationship between social context and attitudes toward out-groups (see, e.g., Gay 2006; Key 1949), but only a small portion of this literature explicitly focuses on foreign-born immigrants or policies related to immigration (Hopkins 2010; Maxwell 2019). The empirical literature is motivated by two broad and contrasting theoretical ideas about how context might matter. First, the introduction of an out-group can trigger a perception of economic or power threat that fosters hostility among the in-group (Blalock 1967; Taylor 1998). Second, social contact might lead to warmer attitudes or even a dissolution of boundaries between in-groups and out-groups (Allport 1954; Pettigrew 1998).

One of the vexing problems is that both things can happen in a specific context through a process that unfolds over time (Clayton, Ferwerda, and Horiuchi 2021; Laurence and Bentley 2018). In the short run, a sudden large-scale influx of an unfamiliar group may provoke a hostile reaction as natives feel threatened. But over time, after sufficient interaction and efforts at acculturation, perceived boundaries between in-groups and out-groups can change, especially with the arrival of new out-groups (Gerstle 2001; Higham 1955).

At the aggregate level, whether one examines country-level data from around the world, or state- or county-level data from within the United States, residents of places with larger immigrant populations express warmer attitudes toward immigrants (see fig. A9). It is possible that diverse places with histories of immigration and social contact between groups develop norms of civility and forbearance (Ha 2010; Wessendorf 2014). But it is just as likely that migrants and immigrant-friendly natives sort themselves into tolerant and more diverse neighborhoods (Ebert and Ovink 2014; Maxwell 2019), with migrants avoiding areas where hostile residents might implement legal restrictions on immigration or otherwise scapegoat immigrants for taking jobs or consuming public resources (Slotwinski and Stutzer 2018; Varsanyi 2011). And migrants are likely to end up in locations where there is a demand for their labor; both a paucity of immigrants and high levels of anti-immigrant sentiment might be clustered in areas that have been left behind in the globalized knowledge economy. These possibilities suggest the need for more precise causal estimates of the effects of contact with immigrant populations on attitudes toward immigrants.

Moving beyond aggregate data, a large empirical literature has established a connection between intergroup contact, as self-reported by individuals, and lower levels of intergroup prejudice (Oliver and Wong 2003; Pettigrew and Tropp 2006). However, the vast majority of these studies have little to do with immigration, and many are observational studies that do not randomly assign contact and, thus, do not allow for strong inferences about its causal role (Bertrand and Duflo 2017; Paluck, Green, and Green 2019).

There are, however, other ways to study this phenomenon. Recent studies attempt to gain causal leverage by focusing on large-scale shocks to the stock of immigrants in a community and resulting short-term attitudinal and behavioral responses (Genovese et al. 2017; Schaub, Gereke, and Baldassarri 2021). Although these "immigration shock" studies are designed to find evidence of hostility from threat, the findings are quite mixed. In studies exploiting plausibly exogenous variation in Syrian refugee flows to Greece and to Austria, very brief exposure to migrants was associated with higher vote shares for the far right and increased anti-immigrant attitudes (Dinas et al. 2019; Hangartner et al. 2019). However, other analyses lead to different conclusions. In the communities of Upper Austria where asylum seekers actually settled, the communities with direct exposure to refugees experienced lower levels of support for the far right, and respondents expressed greater optimism about the possibility of successful integration (Steinmayr 2016). A similar study in East Germany demonstrated that the presence of migrants was associated with political moderation (Schaub et al. 2021).

Scholars have also endeavored to solve the problem of causal inference by manipulating social contact via experimental methods. One approach is to use classroom settings, exposing students to either mixed or heterogeneous learning groups, then examining changes in attitudes or interactions between the two groups after some period of time (Page-Gould, Mendoza-Denton, and Tropp 2008; Scacco and Warren 2018). Scholars have also manipulated the assignment of college roommates to examine the impact of sustained interaction with a member of a different racial group (Gaither and Sommers 2013; Shook and Fazio 2008).

Experimental work of this kind is illuminating, but vexing problems of timing, intensity of treatment, and external validity remain. We do not know the duration and level of intensity with which subjects must be exposed to interaction with the out-group before we might expect contact to yield improvements in attitudes. For instance, Enos (2014) found short-term increases in anti-immigrant attitudes associated with Spanish speakers on train platforms in white suburban areas, but these effects quickly dissipated. Similarly, Kalla and Broockman (2020) and Adida, Lo, and Platas (2018) demonstrate that perspective-taking exercises decreased exclusionary immigration attitudes and increased the immediate likelihood of writing a letter in

support of Syrian refugees, respectively, but these effects tended to be small in magnitude or disappeared over time. With the exception of the roommate studies, experimental treatments have been rather fleeting and far removed from the experience of actually living in a heterogeneous social setting. The more sustained studies also do not look at contact between immigrant and native-born individuals, much less how effects may differ given the ethnic heterogeneity of both immigrant and native groups.

Ideally, rather than observing unexpected immigration shocks, or attempting to create them artificially in the laboratory or the field, one would assign subjects to a holistic, immersive treatment condition that involves finding housing, shopping, negotiating public transportation, eating at restaurants in different types of neighborhoods, and other exposure to features of daily life in a given location in a way that resembles the real world.

Such a research design requires something that is rarely available: a long-term, longitudinal study involving quasi-random assignment of individuals to preexisting real-world social contexts. Perhaps the most relevant example of this type of study is by Mo and Conn (2018), who contrasted attitudes of individuals selected for the Teach for America program with those who fell just short of selection. Using a regression discontinuity design, they find strong evidence that extended contact with low-income students affects the political and social attitudes of the selected teachers, especially when contextualized in a service context. Particularly important for our purposes, they found that those selected as teachers were more sympathetic toward immigrants than their counterparts who had not served. Our study shares a focus on prolonged contact in the context of service but is unique in a number of ways: all of our respondents were surveyed both before and after their missions, and the breadth of our study's geographic coverage is distinctive, since all respondents migrated to a new city if not country, and many had to learn a new language as part of their service. In addition, our questions focus on interactions with immigrants specifically, with participants living in locations they did not self-select, serving to promote their religion's gospel and not educational equality, and identifying predominantly as Republicans and not racial liberals.

RESEARCH DESIGN AND DATA

Our focus in this study is on young LDS adults who serve voluntary full-time missions—a period of intense exposure to a new geographic location.[1] For our purposes, what is important is that individuals do not select into their mission location, and the application process for missionaries includes no opportunity for prospective missionaries to indicate geographic preferences. Instead, missionaries receive location and language of service assignments from church headquarters, and compliance with these assignments is near perfect—in fact, missionaries have no ability to choose or alter the location of their service. From the perspective of the missionary, these assignments are seemingly random. We exploit this fact to investigate the impact of their mission experience on their political attitudes. After they are received, service assignments do not change because of language ability or individual preferences about language or location, so attrition based on those characteristics is not an issue.

Men are eligible for missionary service at age 18 and are expected to serve for a period of 24 months, while women become eligible at age 19 and serve for 18 months. The Pew Religious Landscape Survey reports that approximately 27% of US members of the LDS Church have served a full-time mission (PFRPL 2012, 13). As of 2019, approximately 65,000 individuals were actively serving in 407 missions around the world (CJCLDS 2019), numbers that represent a modest decline from a peak of more than 85,000 in 2014 (CJCLDS 2012).

Missionary life is rigorous and includes time for personal study of languages and scriptures each morning, followed by appointments, service efforts, visiting homes to share the gospel, or contacting people in the streets or other public venues. Missionaries spend the vast majority of their days interacting with people in their local areas, leaving their apartment each morning and typically returning home after 9:00 p.m. The expected missionary schedule is similar regardless of assignment, a fact that gives us added confidence that differences across locations can be attributed to contact with locals. Extensive contact with the local population in the assigned geographic area is a core expectation of missionary life, and missionaries interact with locals in the language assigned. But as we show below, location assignment is given without regard to existing language skills and is not correlated with attitudes about immigrants. Missionaries assigned to speak a foreign language receive some initial language training at one of 12 Missionary Training Centers around the world, although this training tends to be brief—between three weeks (for missionaries serving in their native language) and nine weeks (depending on the language being learned).

1. One concern might be that only those who are more liberal or tolerant with respect to immigrant out-groups select into missionary service. We find no evidence that missionaries in our sample are especially liberal—if anything, the opposite is true (see table 1). Moreover, our difference-in-differences experimental design measures change from the premission starting point. If those who self-select as missionaries are somehow more tolerant toward out-groups, such an elevated baseline would likely make detecting experimental effects even more challenging.

Our data maximize internal validity in addressing the question of the effects of geographic location on political attitudes, but with some cost to the external validity of the inferences we can draw from our analyses. Specifically, while missionaries live and work in the locations in which they are embedded, they are also part of a unique missionary culture of fellow volunteers. Missionaries serve in teams of two or three with their missionary "companions," which means that their closest and most consistent contact is likely to be with someone from outside the geographic location in which they serve. Missionary life is focused on service to others and to the church, so missionary exposure to some forms of entertainment and cultural life is also likely to be more limited than what a typical visitor might experience. Importantly, this focus on service also means that missionaries are not competing with either immigrants or native residents for jobs, school placements, or other resources. Consistent with Lowe (2021), who finds that adversarial contact between groups can be detrimental, it is possible that a lack of resource competition could be a necessary condition to ensure that the effects of intergroup contact on prejudicial attitudes are positive.

In addition, missionaries typically live in several different locations within their mission "boundaries," which themselves can vary in geographic size. For example, a missionary assigned to the Berlin, Germany, mission may have experience living in both large and diverse urban environments as well as smaller, rural places. Other missions may be concentrated in rural or urban locations (Mexico City alone, for example, is home to at least seven different missions). For all of these reasons, exposure to the treatment of the geographic location and embeddedness in local networks may be more limited than it would be for a person who moves to a geographic location outside of a mission. These facts may limit the size of the effects we find. Nonetheless, the focus on serving those in need increases the likelihood that missionaries will come into direct and frequent contact with locals, including immigrant groups, and we are able to exploit considerable variation across individuals in our study in exposure to different social contexts.

Another potential threat to external validity is the extent to which the opinions of LDS missionaries in our sample are more or less malleable than those of the wider population (Crawfurd 2019). Missionaries are young, which means that their attitudes may be in flux and that new experiences may have a greater formative effect on their political views (Niemi and Jennings 1981). Conversely, perhaps there is something unusually sticky about the political attitudes of church members that would make them less vulnerable to change. Previous work has described LDS as an "ethno-religious group with a distinctive subculture" that affects political and social opinions (Campbell, Green, and Monson 2014, 22). Politically, members of the church tend to self-identify as conservative and are far more likely to align themselves with the Republican Party than Americans as a whole (Campbell et al. 2014; PFRPL 2012; but see Riess [2019] for some evidence of change among younger church members).

To assess the effect of geographic location on political attitudes, we embarked on a multiyear data collection effort. We surveyed missionaries immediately before and shortly after their mission service concluded. We recruited participants to the study in multiple waves over several years. Specifically, we obtained samples from BYU's Office of Institutional Assessment of all enrolled, single students between the ages of 18 and 21 in March 2013, October 2013, and September 2014.[2] We sent all students on the BYU student lists an e-mail invitation and up to two reminders to take part in the study. In total, 24,730 students received e-mail invitations in which we asked those who were planning to serve a mission in the next six months to indicate their interest in the study and complete a short screening questionnaire. Approximately 5,217 students indicated some interest in the study (a response rate of about 21%), and 4,322 completed the sign-up screener, 3,999 of whom were eligible for the study.

Eligible participants were then invited to complete the premission survey. This questionnaire included nearly all of the items on the official church missionary application, including information about the prospective missionary's health status, education and work experience, country of origin, languages spoken (including self-assessments of fluency), interest in learning a language while serving a mission, religious activity levels and experiences, demographic characteristics (e.g., race/ethnicity and family income), and family history of mission service. We also asked detailed information about previous geographic locations where the participant had lived, length of time lived in each location, and self-assessments about which locations had the greatest influence on the participant and with which location the participant most closely identified. The premission survey also included questions about a variety of political and social issues, as well as ideological self-placement and partisan identification. Participants who completed the premission survey were entered into a drawing for a $100 gift certificate.

Of those who indicated interest in the study, 2,193 respondents completed at least some portion of the premission survey—a response rate of approximately 54% of those who were eligible from the screener. We contacted participants again approximately 18–24 months after the estimated start

2. Details of the recruitment and consent process can be found in the appendix, including in fig. A1. We also recruited a small number ($N = 40$) of additional participants through social media and LDS Student Association programs at other colleges and universities, but the vast majority of participants were recruited through the BYU samples.

Table 1. Descriptive Statistics of the LDS Missionaries: Premission Survey

	Mean	SD
Female	.70	.46
Age	19.47	.92
White	.96	.20
Family income	.64	.27
Prior foreign language	.13	.33
Prior health issue	.10	.30
Republican	.77	.23
Conservative	.70	.21

Note. Family income, Republican Party IDs, and conservative ideology are coded on a 0–1 scale.

time for their missions (based on the information provided in the premission survey). A total of 1,804 participants (82% of those who completed the premission survey) also completed the postmission survey, which included detailed information about the length of mission service, the locations in which the participant lived while serving on a mission, open-ended opportunities to tell us about the mission experience, and the same questions about social and political issues that were on the premission survey. Participants who completed the postmission survey were entered into a drawing for a $500 gift card. Returned missionaries completed the postmission survey, on average, about six months after they returned home, although there is considerable variation in the exact timing (SD = 7 months, median = 3 months).[3]

As table 1 shows, our sample reflects many of the attributes that we might have expected of a highly religious population (Campbell et al. 2014). More than two-thirds of the sample identified as conservative, and over three-quarters were Republican. It is also overwhelmingly white, and just over 10% had prior exposure to a language other than their native language. One additional fact about our sample is worth discussion: women (about 70%) outnumber men. This may seem surprising, given that the typical image of LDS missionaries is of men in suits and ties—and in fact, more men than women serve missions. However, just before the beginning of our study, church leaders announced that the age for women to serve missions would be reduced, from 21 to 19. This change prompted a large wave of women to enter missionary service, and because we began recruiting just a few months after the change was announced, our sample caught the full force of this surge of women missionaries. The large number of women in our sample tracks closely reports from both church leaders and the media about the dramatic increase in women serving missions during this time period. For example, the *New York Times* reported that the number of women serving missions nearly tripled between 2012 and 2013, increasing from 8,055 to 21,695. This nearly 270% change is dramatically larger than the approximately 20% rise in the number of men serving missions over that same period.[4]

ASSIGNMENT TO MISSION LOCATIONS

A key feature of our study is the desire to avoid problems of self-selection in understanding the effects of geographic location on political and social attitudes. Missionaries do not choose the locations where they serve, nor do they know beforehand to which part of the world they might be assigned or the language they will be assigned to speak. This decision is made by leaders at the church's worldwide headquarters, and we treat this assignment as quasi random, by which we mean that missionaries in our sample have no control over their location or language assignments and cannot self-select into a location; that the set of missions to which they are assigned encompasses a wide variety of different locations, with different probabilities of coming into contact with immigrants or (more broadly) with cultures that are quite different from the missionary's; and that church leaders make those assignments without regard for the missionary's immigration attitudes or geographic preferences.[5]

Assignment to mission locations thus meets three critical criteria for as-if randomness, as detailed by Dunning (2012): first, those making location assignments have no *information* about the prospective missionary's immigration attitudes or their geographic preferences. They do know whether the missionary has prior language skills, but as balance tests reported below show, that information is not correlated with assignment location. Second, missionaries have strong *incentives* to comply with assignments, regardless of any geographic preferences they may have. They are taught to love and serve the people wherever they are assigned, and noncompliance with location assignments is not a possibility while remaining within the missionary program. Changes in assignments are typically a result only of health issues or visa problems outside the control of either the missionary or church leaders. Third and most importantly, then, missionaries have no *capacity* to self-select into treatment conditions.

3. As a result of repeated invitations over a long period of time, some missionaries completed the postmission survey a year or more after their return home.

4. See Kantor and Goodstein (2014) and *New York Times* (2014) for additional information.

5. See also Crawfurd (2019), who treats missionary assignment as quasi random.

The process of assigning missionaries to a geographic location and language begins with interviews with local ecclesiastical leaders, who assess an individual's readiness and his or her willingness to live in accordance with church guidelines about personal faithfulness. Each prospective missionary completes a long application that includes information about family background, previous church assignments, performance in school, and other information—nearly all of which was included on our premission survey. (We do not have access to any additional confidential information provided by local ecclesiastical leaders during the application process.) As we have emphasized, missionaries have no opportunity or ability to express geographic preferences as part of the application process, and individual preferences about location are not part of the assignment procedure. Once the prospective missionary's application is submitted to church headquarters, high-level church leaders prayerfully consider the application information and the needs of geographic missions around the world (Ballard 2015; Pope 2008).[6] Faithful church members consider the mission assignment decision that emerges from this process to be a result of divine inspiration, and the missionary's assignment, which is then sent via formal letter, is signed by the president of the church, reflecting this sense of sacred importance.

While we have little to say about the religious meaning of the assignment process, participants in our study were assigned to a wide variety of different contexts in the United States and across the globe, as can be seen in figure 1. In total, 65% were assigned to foreign locations, and our sample includes missionaries who served in 120 distinct countries and territories (see table A1 for details). Within the United States, participants served in all 50 states and Washington, DC (table A2), and approximately one-quarter of those who served in the United States were assigned to speak a language other than English.

Our data allow us to explore the extent to which mission assignment is quasi random, by assessing pretreatment covariate balance in the assignment of missionaries to missions in either the United States or abroad. We compare observed covariate differences to those one would observe in a randomized experiment (Hansen and Bowers 2008). We find no statistically significant differences between domestic or foreign assignments on the basis of race, language familiarity, partisanship, or ideology (see table A3). In addition, we find no premission differences in immigration attitudes between those assigned to the United States and those assigned abroad (table A4). Among missionaries assigned to the United States, no statistically significant differences distinguish missionaries assigned to speak Spanish (the most common non-English language assignment) from those assigned to English or other languages. Those assigned to speak Spanish did not differ from others in their premission immigration attitudes (see table A5) or in their demographic characteristics, partisanship, or ideology (see table A6) or in the demographics of the places with which they most identified before their mission (see table A10).[7] Nor were premission immigration attitudes correlated with an assignment to serve in US locations with more Latinos, more immigrants, or more Latino immigrants (table A11).[8] Thus, mission assignment is orthogonal to our key dependent variables. Those with prior health problems were slightly more likely to be assigned to the United States, as were those with lower incomes (see table A3), although the magnitude of the differences is small.[9]

We do find one unexpected difference: women were more likely to be assigned to missions in the United States than to foreign countries.[10] It is possible that this difference is another result of the large influx of women missionaries (with missions in the United States having a greater capacity to take in missionaries). Nonetheless, given this difference, we also explored the findings we report below separately for men and women. As we detail in the appendix, all results are robust to the gender of the missionary.

Various mechanisms for how the assigned social context might affect missionaries' attitudes about immigration are possible. For missionaries assigned to the United States, immigration attitudes may change because of (1) direct contact with immigrants, (2) contact with immigrant-friendly Americans

6. Figure A2 includes photos of the assignment process and a brief description from the social media post of a church leader.

7. The difference that comes closest to statistical significance is age ($p = .06$), but the magnitude is substantively very small, and to the extent that the younger study participants tend to be more immigrant friendly, this works in the opposite direction of the concern that missionary characteristics were made with favorability toward immigrant populations in mind. In addition, among missionaries assigned to the United States, there are no imbalances in immigration attitudes between those assigned to speak English and those assigned to speak any foreign language (table A7). We also find no evidence that those who completed the premission survey only and those who completed both the pre- and postmission surveys differed in either their demographic characteristics (table A8) or their premission immigration attitudes (table A9).

8. We also find no evidence of correlation between the demographic characteristics, such as the percentage of Latinos in a place, of mission service locations and the characteristics of premission locations with which the missionary most identified (table A12).

9. The cost of missionary service is standardized by the church to be the same regardless of mission.

10. Because women are eligible for missionary service at 19 and men at 18, this gender difference also has implications for differences in age between missionaries assigned to serve abroad and those serving in the United States. However, once we stratify by gender, the difference in age disappears (see table A3).

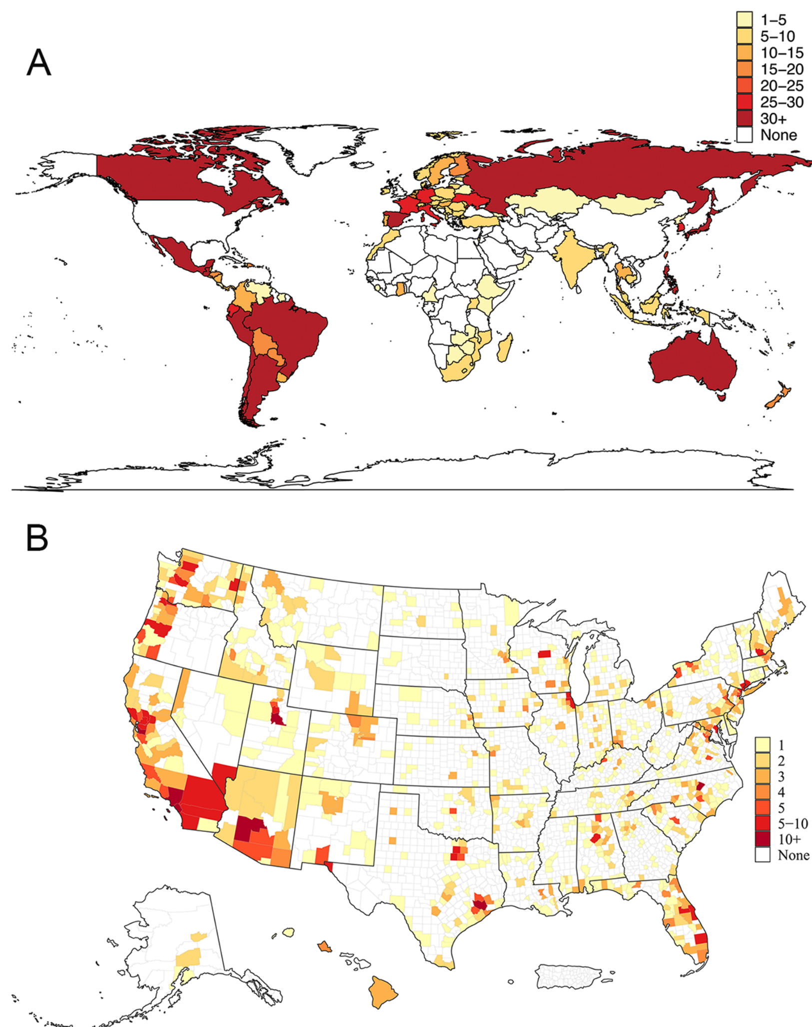

Figure 1. LDS mission locations around the world (*A*) and in the United States (*B*). Colors indicate the number of missionaries in our sample assigned to that location. Missionaries can serve in multiple places within the geographic area of their assigned mission. See tables A1 and A2 for the full distribution of location assignments.

in a different part of the country, and (3) personal experience living as outsiders in a new location. Relative to those who serve abroad, the main difference is that we expect to see larger effects on attitudinal changes for domestic missionaries because our outcome measures about immigration focus on the quintessentially American case of undocumented immigrants, stereotypes of them, and their rights and opportunities. Missionaries assigned to the United States have a greater likelihood of encountering immigrants who match that case. And perhaps most importantly, the United States is one of the most immigrant-friendly countries in our sample. We anticipate that living among immigrants and immigrant-friendly natives has an impact on missionaries' attitudes.

For those serving outside of the United States, attitudes may change via the same mechanisms: direct exposure to migrants in the host country, "spillover" from natives who have contact with migrants in the host country, and personal experiences living as newcomers/migrants themselves in a country where they have to learn to navigate the local culture and language. When these missionaries come back to the United States, their attitudes about American immigrants can be affected via any of these three mechanisms. They could gain knowledge (and change stereotypes) about the motivations of migrants to leave their homes, they could learn how native groups meet migrants with barricades or open arms, and they could feel empathy for newcomers who struggle to buy groceries when they do not speak the native language. This knowledge and empathy could be applied to domestic debates about immigration, although it requires a small cognitive leap to translate lessons learned from one context to another (e.g., from the experiences with Venezuelan refugees in Brazil to those with Mexican immigrants in the United States).

BACKGROUND OF SAMPLE

We are also interested in the sociocultural backgrounds of the missionaries in our sample. We asked our respondents to

list up to 15 places (specific cities or towns) where they had lived before beginning the premission survey and to identify the one place with which they most closely identified. Closest identification with a place served as our indicator of baseline context.

The full distribution is presented in tables A13 and A14. Nearly one-third of the respondents were Utah locals, and almost 10% most closely identified with a place in California. Meaningful numbers of respondents most closely identified with other western states, including Washington, Arizona, Idaho, and Colorado. This western skew is not surprising given the geographic distribution of church members in the United States. These patterns are not simply a reflection of where missionaries were living at the time of the survey (i.e., cities near BYU), since Utah was also the state where most had spent their time before college.

Our sample is fairly homogeneous, with large percentages of study participants having similar premission place-based identities. Nearly all are from the United States. Our sampling frame was young, college-age students, primarily from BYU, who planned to volunteer as missionaries in the near future. Thus, our sample is not meant to be representative of either members of the LDS Church generally or all BYU students specifically (e.g., it is younger, more heavily female, and more Utah centric than either of those populations). However, from the perspective of understanding the effects of living in diverse contexts, this relatively homogeneous geographic baseline has important virtues, allowing us to avoid the concern that premission experiences are somehow driving the result.

Moreover, the Utah-centric nature of the sample is important for understanding immigration attitudes, specifically. Utah's share of foreign-born population—8.2% in 2010—is higher than many Midwest and mountain states, including Montana (2.0%), Wyoming (3.0%), Iowa (4.1%), and Wisconsin (4.6%). Data from the 2010 Cooperative Congressional Election Study (CCES) survey indicate that Utah's residents were more friendly toward immigrants than most states that lean toward Republicans during presidential elections (figs. A3a, A3b, A4, and A5). So, in this way, we are creating a harder test for ourselves; the missionaries started out in a relatively immigrant-friendly environment, arguably making it harder to detect shifts in a pro-immigrant direction given potential ceiling effects.

EMPIRICAL RESULTS

Do LDS missionaries change their views on immigration after serving among immigrants? Did missionaries become more tolerant toward undocumented immigrants if the people they interacted with were friendly toward immigrants? Did they become more supportive of liberal immigration policies? Our data allow us to offer preliminary answers to these questions.

We measured attitudes toward immigration with two types of items. The first was a series of six questions focused on policy views, while the second tapped acceptance of three group stereotypes. Importantly, these questions focused primarily on undocumented immigrants and policies that were relevant in the United States, where much of the debate focused on Latino immigrants at the time the surveys were administered. Exact question wordings and response distributions are shown in the appendix.

We conducted a principal components analysis to assess the structure of the survey items. As expected, two factors sufficiently explained the survey questions about immigration attitudes (see tables A16a and A16b for more details).[11] Cronbach's alphas were 0.76 for premission policy-related items, 0.77 for postmission policy-related items, 0.59 for premission stereotype-related items, and 0.60 for postmission stereotype-related items. In what follows, we present the analysis using two compound additive scales of these items—the first reflecting policy, and the second measuring support for negative stereotypes.[12] Both dependent variables were coded on a 0–1 scale, with 0 suggesting the most liberal view and 1 representing the most conservative view.[13]

Our analysis focuses on differences in attitude changes depending on specific mission locations, beginning with locations in the United States and then moving beyond. But first, in order to understand the results, it is useful to describe and contextualize the attitude changes we observed. Before mission service, responses to the policy measure were roughly normally distributed around the scale midpoint on the policy measure (mean = 0.50, SD = 0.20), and the stereotype measure was skewed in the direction of disagreement with negative stereotypes (mean = 0.24, SD = 0.23). Policy views moved, on average, slightly to the left in the postmission survey (mean = 0.46, SD = 0.20), while stereotypes remained stable in the aggregate (mean = 0.24, SD = 0.25).[14]

Our goal is to ascertain whether any overall leftward movement was greater among missionaries assigned to certain types of areas. We begin by focusing on the country with the largest number of missionaries: the United States. We explore the effect of interacting with three types of communities: Latinos, residents who were born outside the United States, and immigrants who came from Latin American countries. We are interested in the respondents' reactions to all immigrants, but

11. A question about whether legal residents are the victims of "illegal immigration" did not fit clearly on either dimension, so we have excluded it from the indexes.

12. In the appendix, we show that dynamics are similar if we analyze individual items separately. See, e.g., fig. A11.

13. See fig. A8 for distributions of the summary indexes.

14. See table A17 for pre-post comparisons using multivariate regression.

Table 2. Effects of Larger Latino/Immigrant Communities: US Sample

	Policy			Stereotype		
	(1)	(2)	(3)	(4)	(5)	(6)
Diff. in % Latino	−.001*			−.001*		
	(.0004)			(.001)		
Diff. in % Foreign-Born		−.001			−.001	
		(.001)			(.001)	
Diff. in % Foreign-Born from Latin America			−.002**			−.003**
			(.001)			(.002)
Constant	−.079	−.085	−.082	−.130	−.144	−.134
	(.254)	(.254)	(.253)	(.376)	(.377)	(.375)
Demographics?	Yes	Yes	Yes	Yes	Yes	Yes
Mission year FE?	Yes	Yes	Yes	Yes	Yes	Yes
N	413	413	413	412	412	412

Note. Policy and stereotype items are measured on a 0–1 scale. Higher values indicate higher levels of anti-immigrant sentiment. Percentages of Latino/foreign-born/foreign-born from Latin America are on a 0–100 scale. For the US sample, we first compute the difference between the size of the Latino/foreign-born population in host counties and the size of Latino/foreign-born population in counties that contain the cities with which those missionaries identified most. We then regress the change of missionaries' immigration policy attitudes on the difference. Signs of the coefficients are expected to be negative. FE = fixed effects. Standard errors in parentheses.
* $p < .1$.
** $p < .05$.
*** $p < .01$.

given the political discourse on unauthorized immigration in the United States, the public has been focused on Latinos in particular. Furthermore, a casual observer cannot easily differentiate between foreign-born and native-born Latinos. To measure the sizes of these communities, we obtained from the 2010 American Community Survey the county-level Latinos, foreign-born population, and foreign-born individuals from Latin America as percentages of total population (coded 0–100). We used the population context of missionaries' backgrounds as the baseline and computed the difference between the size of Latino/foreign-born population in host counties and the size of Latino/foreign-born population in counties containing the cities with which those missionaries most closely identified. Then, we obtained the statistical association between missionaries' attitudinal change and those contextual differences. To do so, we employed a difference-in-differences approach in which we regressed the pre-post change in the missionary's immigration attitudes on the change in the immigration context relative to the baseline city with which the missionary most closely identified. Models also include controls for the missionary's demographic characteristics and political attitudes as well as fixed effects for mission year.

Table 2 yields compelling evidence that serving in places with more Latino immigrants affected missionaries' immigration attitudes and beliefs about immigrants. In all models, the key independent variable was negatively associated with county-level demographic characteristics, as expected. The more Latinos, foreign-born residents, and foreign-born residents from Latin America in the places where the missionaries served (relative to the premission location with which they most closely identified), the more liberal their immigration attitudes became—on both the policy and stereotype questions. These effects were only statistically significant for the measure of foreign-born residents from Latin America, however, and the magnitude of the effect was substantially larger for that variable than for the others.

Figure 2 presents the simple bivariate relationships between service in a location with a higher percentage of foreign-born Latinos than in the places with which the missionary most closely identified growing up and a change in immigration attitudes.[15] Thus, our strongest evidence is that missionaries became more liberal in their immigration attitudes when they lived in contexts with more immigrants from Latin America and with larger Latino populations. As for the magnitude of the effect, missionaries who served in places with large Latino immigrant communities like Los Angeles County (21% foreign-born Latinos) became about 4.8 percentage points (or,

15. It appears that there is one outlier (Diff. in % Foreign-Born Latino = 34%) in the figure. We dropped this observation and reran the analysis. The results did not change, giving us confidence that the result was not driven by this study participant.

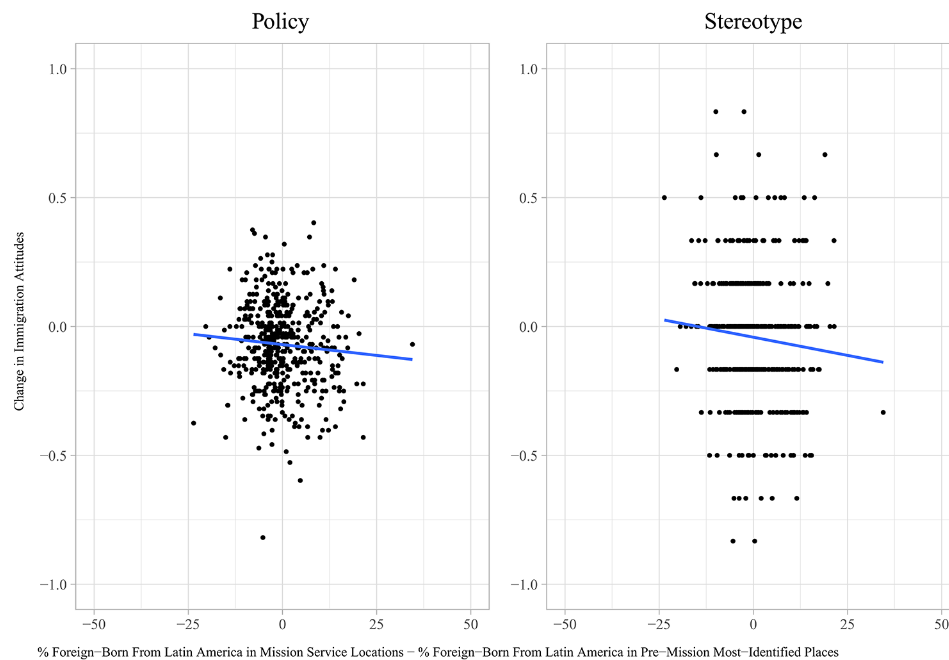

Figure 2. Bivariate relationship between the change in immigration attitudes and the difference in foreign-born Latino population between host counties and cities with which those missionaries identified most. Policy and stereotype items are measured on a 0–1 scale. Higher values indicate higher levels of anti-immigrant sentiment. Percentage of foreign-born from Latin American countries is coded on a 0–100 scale.

alternatively, about one-quarter of a standard deviation) more favorable toward immigrants on the policy items than those who served in places with only about 0.18% immigrants from Latin America (e.g., Kanawha County, WV).

An alternative explanation might be that the attitudes of local residents influenced missionaries' attitudes. We tentatively tested this possibility by estimating the correlation between immigration attitudes of the locals (measured by the 2010–11 CCES, which is collected before our treatments and is large enough to estimate county-level attitudes) and change in missionaries' attitudes (table 3). The positive sign on the coefficient is in the expected direction, so we cannot definitively rule out this possibility. However, the effect is not statistically discernible from 0 because of large standard errors. When it comes to immigration attitudes, our most compelling and robust evidence is that living with larger foreign-born populations from Latin America matters most.[16]

We also examined the effect of serving in Latin America, to see whether living near Latinos in any country would lead to similar effects (see table A20). This analysis suggests that the liberalizing effects of being assigned to the United States are significantly larger. Thus, we conclude that changes in attitudes about immigration were not merely a result of interacting with Latinos but emerged most powerfully from contact with Latino immigrants in the United States specifically.

LANGUAGE AND IMMIGRATION ATTITUDES

Because the assignment of language is exogenously determined, we can use language as an indicator of the likelihood of interacting with immigrant communities in the US context. A key responsibility of missionaries is to meet and serve local populations in the language assigned, so missionaries speaking a language other than English in the United States were highly likely to be immersed in a social context with many immigrants. This is true in part because immigrant communities are often the most responsive to the missionaries' message. In our worldwide sample, roughly two-thirds of the respondents said they were called to speak a non-English language.[17] Missionaries who had experience learning a new language before their missions were more likely to be assigned to speak a language other than English, although the difference in premission language skills between those assigned to serve abroad and those assigned to serve domestically is substantively small and not statistically significant (table A3), and missionaries who received the assignment to speak a language other than English were not necessarily assigned to the language they studied previously.

16. Since we know that local attitudes are related to the size of the local immigrant population (see fig. A9), we also ran models adding % Foreign-Born alone and as an interaction with locals' attitudes. Results are similar no matter the specification.

17. For details of the determinants of foreign language assignment, see table A21.

Table 3. Effects of Immigration Attitudes of the Local People: US Sample

	Policy		Stereotype	
	(1)	(2)	(3)	(4)
Attitudes of the locals	.066	.014	.086	.157
	(.065)	(.074)	(.096)	(.109)
% Foreign-born	−.002**	−.002**	−.0001	−.0003
	(.001)	(.001)	(.001)	(.002)
Female		−.014		−.019
		(.025)		(.036)
Age		−.004		−.006
		(.011)		(.016)
White		.007		−.072
		(.053)		(.078)
Family income		−.002		.006
		(.035)		(.051)
Prior health issue		−.019		−.004
		(.024)		(.035)
Prior foreign language		.011		−.003
		(.033)		(.049)
Republican		−.067		.004
		(.059)		(.088)
Conservative		.050		−.051
		(.063)		(.093)
Constant	−.043***	.137	−.042**	−.056
	(.014)	(.303)	(.021)	(.446)
Mission year FE?	No	Yes	No	Yes
N	412	362	410	361

Note. We used 2010–11 CCES to measure the county-level immigration attitudes and then regressed missionaries' attitudinal change on the measured attitudes, using missionaries' backgrounds as a baseline. Policy and stereotype items are measured on a 0–1 scale. Attitudes of the locals are measured on a 0–1 scale as well. Higher values indicate higher levels of anti-immigrant sentiment. Percentage of foreign-born countries is coded on a 0–100 scale. FE = fixed effects. Standard errors in parentheses.
* $p < .1$.
** $p < .05$.
*** $p < .01$.

Outside of the United States, learning a foreign language means interacting with local residents who are different in a variety of respects from US residents, but such interaction may or may not include immigrant communities. Inside the United States, assignment to speak a foreign language is likely highly correlated with the probability of regular contact with immigrant groups. Of those assigned to serve in the United States, approximately 24% (136 out of 575) were assigned to speak a language other than English. Among those 136 who were assigned to speak a foreign language, 119 (87.5%) were assigned to speak Spanish.[18] As we emphasized above, within the United States, the assignment to speak Spanish was not correlated with immigration attitudes or other demographic characteristics in the premission survey (see tables A5 and A6).

We applied the differences-in-differences formula to estimate effects of being assigned to speak a foreign language, using the US sample. Figure 3 suggests that US missionaries who were assigned to foreign language missions became more pro-immigrant.[19] Results are larger for policy-related items among US-based missionaries, but speaking a foreign language also led to less negative stereotypes of immigrants. Effect sizes are very similar if we use the assignment to speak Spanish as our measure. As with our previous findings, effects are substantial: for those who served in the United States, being assigned to speak a foreign language is associated with a 9 percentage point shift in immigration policy attitudes in a pro-immigrant direction, accounting for more than half of the sample standard deviation. Cohen's D for the effect of the assignment to speak a foreign language in the United States on the policy dimension is 0.57, and on the stereotype measure it is 0.20. These represent moderate effect sizes for policy and small changes in stereotype judgments. As a point of comparison, the effects on policy are more than six times larger than the pooled intent-to-treat effects reported by Kalla and Broockman (2020) on policy attitudes toward immigrants in their recent study of the effects of perspective taking and interpersonal conversation.[20]

18. We also asked questions about whether missionaries actually ended up speaking the language they had been assigned to speak. Of those 119 US respondents who were called to speak Spanish, 118 of them reported that Spanish was their most frequent language spoken during the mission, meaning that compliance with language assignment was extremely high.

19. There was no corresponding language effect among missionaries serving outside the United States (see table A22). This null finding complicates earlier findings about serving a foreign-language-speaking mission based solely on observational data (Campbell et al. 2014). We caution, though, that the interpretation of the findings for language assignment outside the United States is complex, as we are essentially comparing missionaries who learned all foreign languages in every country outside the United States to those assigned to English-speaking nations like the United Kingdom, Australia, and New Zealand.

20. Effects on policy attitudes of serving in the United States are approximately five times larger than the average treatment effect they measured one week after treatment and nearly seven times larger than the effects after three to six months. Like our study, Kalla and Broockman (2020) also measured attitudes along two dimensions: policies related to immigrants and anti-immigrant prejudice. The effects on stereotypes of being a foreign-speaking missionary in the United States are more than two times larger than the pooled effect on prejudice they report. Comparisons with Kalla and Broockman (2020) are generated from details in their appendix tables OA.10–11. One important difference in these studies is that Kalla and Broockman study the effects of nonjudgmental

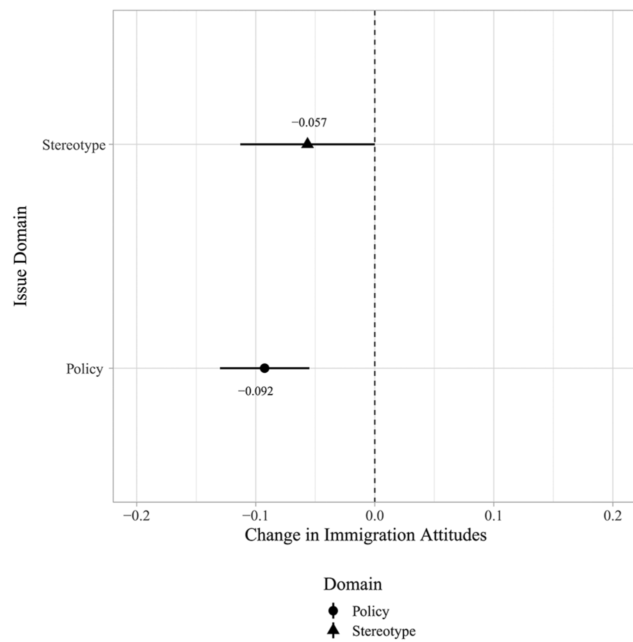

Figure 3. Effects of being assigned to speak a foreign language during the mission, US sample. We regressed the pre-post difference in immigration attitudes on the variable of interest. Policy and stereotype are measured on a 0–1 scale. Higher values indicate higher levels of anti-immigrant sentiment. Control variables include gender, age, race, family income, prior health issue, foreign language skill before the mission, party ID, ideological preference, and cohort (mission year) fixed effects.

Finally, if we restrict the analysis to only those assigned to speak Spanish, missionaries' policy and stereotype attitudes became significantly more pro-immigrant among those who served in the United States than among those who served elsewhere (see table A23), providing additional evidence that the context for contact with Latinos matters. By contrast, a placebo test in which we restrict the analysis to only those serving in the United States yields no difference in abortion attitudes between those assigned to speak Spanish and others (see fig. A13).

THE UNITED STATES IN COMPARATIVE PERSPECTIVE

Our results thus far suggest that leftward movement in immigration attitudes among our sample of domestic missionaries was driven disproportionately by those serving in areas with greater foreign-born Latino populations and among those speaking a foreign language during their mission. But it is also worthwhile to compare the entire cohort of domestic missionaries with those who went abroad and to examine broader cross-country variation in the mission environment. It is possible that even those who served in less immigrant-heavy communities in the United States did encounter immigrants—perhaps including the undocumented—and became sensitized to the issues they faced, in contrast to other members of their cohort who served abroad. In addition to interactions with immigrants themselves, it is possible that missionaries' attitudes are affected by living among immigrant-friendly natives. There is substantial cross-country heterogeneity in the openness to immigration among the countries to which the missionaries were sent, and the United States is among the countries in the sample that has been most open to large inflows of migrants.

The opposite relationship is also plausible, however. Perhaps serving a mission abroad provides a missionary with an experience living as an outsider, potential contact with immigrants newly arrived in the areas near the missions, and contact with local residents who are themselves making judgments about immigrants. These experiences could lead missionaries abroad to change their perspectives on immigration and immigrants generally, which could have an impact on issues facing undocumented immigrants in the United States.

We find that missionaries who served in the United States became about 6 percentage points more pro-immigrant on policy-relevant questions than those who went abroad, a difference of more than one-third of the standard deviation of the premission scale. These differences are robust to the inclusion of controls for demographic characteristics, premission health concerns and language experience, partisanship, and ideology.[21] The effect is similar but somewhat smaller—a little less than one-quarter of a standard deviation—on the stereotypes measure. More precisely, Cohen's D for the effect of service in the United States on the policy dimension is 0.40 and 0.23 on the stereotype measure. As with our previous analyses, these are substantial effect sizes in comparison with other studies of efforts to alter immigration attitudes (Kalla and Broockman 2020).

As a point of contrast, we conducted a placebo test using attitudes about abortion as the dependent variable. We have no reason to suspect that geographic location would have a meaningful effect on abortion attitudes, and we find a precisely estimated null effect of serving in the United States (see fig. A12), and among those who served in the United States, of being assigned to speak Spanish (fig. A13). Thus, geographic location and language affected immigration attitudes but not opinions that were less likely to be affected by immigration-related features of the social context.

Given the variety of mission locations in our sample, we are also able to examine how the context of different countries might shape attitudes toward immigration. We obtained data

exchanges of narratives on those being canvassed, not those doing the canvassing.

21. See table A18, which includes the full difference-in-difference specification, and figs. A10 and A11.

Table 4. Effects of Larger Immigrant Communities

	Policy		Stereotype	
	(1)	(2)	(3)	(4)
% International migrant	−.005***	−.005***	−.004***	−.004***
	(.001)	(.001)	(.001)	(.001)
Constant	.011	−.047	.032***	−.326
	(.008)	(.159)	(.012)	(.241)
Demographics	No	Yes	No	Yes
Year FE?	No	Yes	No	Yes
N	1,436	1,292	1,422	1,287

Note. This analysis includes all study participants, regardless of assigned location. We regressed the change of missionaries' immigration attitudes on the size of local immigrant communities in each host country. Policy and stereotype items are measured on a 0–1 scale. Percentage of international migrants is coded on a 0–100 scale. Because higher values of the dependent variable suggest increased anti-immigrant sentiments, we expected the sign of the coefficient to be negative. We present the full table with coefficients on covariates in table A19. FE = fixed effects. Standard errors in parentheses.
* $p < .1$.
** $p < .05$.
*** $p < .01$.

from the United Nations about the international migrant stock in each country where missionaries in our sample served, allowing us to measure the country-level size of the immigrant community. We also regressed the change in missionaries' immigration attitudes on international migrants as a percentage of total population (coded 0–100). The negative signs of the coefficients (table 4) suggest that missionaries' opinions moved in a liberal direction on both policy and stereotype measures when they served in places with larger immigrant communities. That is, missionaries who served in a country with higher levels of immigration became less likely to hold exclusionary views, and this effect holds even after controlling for other demographic and political factors.

The magnitude of the effect was again sizable, especially for policy attitudes. To illustrate, missionaries who served in countries with more than 20% foreign-born population (e.g., Australia) became 9 percentage points more liberal on our 0–1 policy scale than those who served in countries with few immigrants (e.g., South Korea with around 1.9%). While we do not know whether contact with migrants always occurred in the countries with larger foreign-born populations, we can safely assume that the missionaries had contact with the native-born population and were exposed to their attitudes.

Results both within the United States and for the full sample are robust to disaggregating by missionary gender, as detailed in the appendix. Effects are always in the same direction and nearly always of similar size among both men and women, although our statistical power is limited when analyzing men who served in the United States. In other words, both women and men who served among more immigrants—in the United States and abroad—became more pro-immigrant than fellow missionaries who had less contact with immigrants, irrespective of the fact that men served at a younger age and for slightly longer missions.

In addition, we find no consistent evidence of decay in effects over time. Because the exact date when returned missionaries completed the study varied, we interact our key variables of interest with the number of postmission months elapsed before the participant answered the postmission survey (see table A29). For missionaries serving in the United States, the interaction between this timing variable and serving in places with more Latino immigrants is tiny and not statistically significant. When interacting the postmission survey timing with the assignment to speak a foreign language, the effect on policy attitudes does appear to weaken slightly, but the effect is small and only marginally significant. The liberalizing effect of speaking a foreign language on stereotypes actually appears to increase with time and reaches conventional levels of statistical significance. In sum, we can conclude that the effects we find appear to be present for both men and women and to persist over time.

DISCUSSION AND CONCLUSION

In this study, we make use of a novel participant population—LDS missionaries, who do not choose the location of their mission service—to examine the effects of social context on political attitudes. The research design is more rigorous than any we are aware of in its ability to avoid vexing problems of

self-selection in assessing contextual effects. We show evidence that we can treat the assignment of missionaries to locations as quasi random: missionaries cannot choose their service location, and those in our sample were assigned to an astonishing variety of different social contexts, including the requirement to speak different languages. Location and language assignments were not correlated with premission immigration attitudes or with other demographic characteristics that might affect views about immigrant groups. Put simply, we find no evidence of bias in the assignment procedure or in the pattern of missionaries' premission opinions that could account for the large and consistent postmission results. In addition, the key tests we report here—difference in differences, with fixed effects for missionary cohort and controls for other premission characteristics—are demanding. These tests yield strong evidence that missionaries were influenced by the places where they were assigned to live and serve.

We cannot make causal claims about the impact of the overall mission experience on attitudes toward immigration. We did not follow an otherwise similar cohort of students who stayed home, and even if we had, the comparison would be plagued by potential selection effects. However, to put the observed overall pro-immigrant trend in context, it is useful to examine the 2012–14 CCES panel, which asked a battery of questions about immigration attitudes in both 2012 and 2014.[22] The study included over 4,000 Republicans and 145 respondents who identified as members of the LDS Church. Although the panel study does not perfectly overlap with ours, our sample includes missionaries who returned from their missions and completed the postmission survey in 2014. The CCES data show no evidence of a secular trend toward more immigrant-friendly attitudes among either Republicans or LDS respondents. If anything, opinions move in a slightly more hostile direction between 2012 and 2014, and among the large sample of Republicans, that movement is statistically significant. While the CCES data do not preclude the possibility of change in a more liberal direction after 2014, opinions in our relatively conservative and Republican sample of missionaries appear to be moving in the opposite direction from those of Republicans and of church members collected at similar points in time.

Although we have not tested the claim, it is plausible that the experience of living in a new location pushed all missionaries in a more liberal direction in their immigration-related policy views. As one missionary explained, "Serving in Italy was an eye-opening experience. There were thousands of illegal immigrants that I met and talked to every day. Hearing their stories made me feel compassionate toward them and really opened my eyes to how hard life is in other parts of the world."[23]

The main finding of our study is that these effects were concentrated among missionaries who served in places with more immigrants and in countries with more immigrant-friendly attitudes, especially the United States. And within the United States, effects were greatest among missionaries who lived in places with the largest Hispanic immigrant populations and who were assigned to speak a language other than English. A missionary who served in California described this transformation: "Serving Spanish-speaking [individuals] in northern Los Angeles County helped me appreciate humble and hard working legal and illegal immigrants. . . . Because of that, some of my political and social views changed, though I am still forming my opinion on lots of societal issues." Furthermore, the effects of interacting with Hispanic immigrants in the United States were larger than the effects of spending time in Latin America, suggesting that the effects of context on attitude change is tied to the contexts most directly relevant to the corresponding attitudes. One missionary who served in Mexico highlighted this contrast: "I loved my mission. Serving the people of Mexico has changed me. I have seen what good people many of them are. I am torn, however, on issues about immigration." In this case, sympathy toward Mexicans in Mexico did not automatically translate into greater support for Mexican immigrants in the United States.

While foreign-serving missionaries reported enjoying their service and feeling affinity for the people they served, our evidence shows that the general experience of a new environment is not what matters most for attitudes toward immigrants. Generalizing from an experience as an outsider to political beliefs about immigrant populations in one's home country may have been a difficult cognitive leap for many. Instead, direct contact with immigrants in the US context was most likely to provoke attitude change, although we cannot rule out the impact of immigrant-friendly natives. Our results are also consistent with those of Mo and Conn (2018), who emphasize the importance of a service-based context as a condition for intergroup contact to prompt attitude change.

Together, this set of findings reassures us that contextual effects of political attitudes go beyond issues of selection. The evidence from this first-of-its-kind data set shows that years-long contact with immigrants and perhaps immigrant-friendly

22. We employ this panel, collected at a similar point in time to our study, in order to capture potential secular trends nationally. The items and full results can be seen in fig. A6.

23. At the end of the postmission survey, respondents were allowed to add any additional comments that they wanted to make about any aspect of their experiences.

natives itself exerts a causal effect. The experience of living and working with immigrant communities, and in settings where others have positive attitudes about immigrants, induces measurably warmer attitudes toward immigrants that are sustained over time. In this way, the social environment in which people live—both in the past and in the present—can be politically consequential and long lasting.

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