How local partisan context conditions prosocial behaviors: Mask wearing during COVID-19

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Edited by Susan Fiske, Princeton University, Princeton, NJ; received September 3, 2021; accepted February 6, 2022

Does local partisan context influence the adoption of prosocial behavior? Using a nationwide survey of 60,000 adults and geographic data on over 180 million registered voters, we investigate whether neighborhood partisan composition affects a publicly observable and politicized behavior: wearing a mask. We find that Republicans are less likely to wear masks in public as the share of Republicans in their zip codes increases. Democratic mask wearing, however, is unaffected by local partisan context. Consequently, the partisan gap in mask wearing is largest in Republican neighborhoods, and less apparent in Democratic areas. These effects are distinct from other contextual effects such as variations in neighborhood race, income, or education. In contrast, partisan context has significantly reduced influence on unobservable public health recommendations like COVID-19 vaccination and no influence on nonpoliticized behaviors like flu vaccination, suggesting that differences in mask wearing reflect the publicly observable and politicized nature of the behavior instead of underlying differences in dispositions toward medical care.

COVID-19 | partisanship | social norms | vaccines | masks

Since the beginning of the COVID-19 crisis, public health experts urged a series of behaviors to slow the spread of the disease, including social distancing and wearing masks in public. Some politicians and citizens expressed skepticism about the effectiveness of such measures. Observers soon noticed persistent partisan and geographic divides in the adoption of these behaviors, with Republicans less likely to adopt the behaviors than Democrats, and Republican-leaning localities exhibiting lower rates of the behaviors than Democrat-leaning localities.

What is the source of these differences in mass behavior? The differences were accompanied by the politicization of the issues by elites, as Republican governors were generally slower to endorse mask mandates, business closures, and other public health measures relative to Democrats. Many prominent Republican politicians displayed reluctance or outright hostility toward mask wearing (1, 2), and some local Republican politicians openly defied statewide public health orders by stating their intentions not to enforce them. Over 1 y into the pandemic and before the Centers for Disease Control relaxed mask requirements, 17 US states were without mask mandates, all but one of them with Republican governors at the helm, and there was significant variation in mask wearing across red and blue states.

With the differences in messaging across partisanship by political leaders, the well-documented influence of political leaders on voters who share their partisan identity (3, 4) is an obvious potential source of these mass partisan differences. As such, geographic divides in partisan behavior might simply be a reflection of the partisan composition of a locality. But, in addition to influence by elites, citizens are also influenced by other citizens. Do individual-level partisan orientations interact with local political context to influence prosocial behavior when such behavior is publicly observable by neighbors? In other words, does the potential of a Republican or Democrat adopting prosocial public health behaviors depend on the presence of other Republicans or Democrats in their neighborhood? And is the influence of neighbors similar across both parties? If individual prosocial behaviors are influenced by the behavior of neighbors, then differences in behavior across place do not merely reflect the composition of a place but also the possibility that contextual effects are exacerbating geographic disparities in public health behaviors. Understanding these effects may be important for mitigating the spread of COVID-19 and other infectious disease, especially in communities where vaccination rates are low, and will also shed

Significance

Differences between Democrats and Republicans in rates of wearing a mask to stop the spread of COVID-19 are associated with the partisan balance of a neighborhood. The difference in rates grew larger as the share of Republicans in a neighborhood increased. This finding appears to be driven by decreased rates of mask wearing by Republicans who live among increasing numbers of Republicans (and not by Democrats in the same neighborhood). Theories about social pressure suggest these findings may be driven by the politicized and publicly observable nature of wearing a mask relative to other COVID-19 mitigation strategies, like vaccination. Neighborhood partisan composition was only weakly related to uptake of the COVID-19 vaccine and unrelated to uptake of flu vaccines.

Author contributions: R.B.-K., J.R.B., R.D.E., A.N., and L.V. designed research, performed research, analyzed data, and wrote the paper.

The authors declare no competing interest.

This article is a PNAS Direct Submission.

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This article contains supporting information online at https://www.pnas.org/lookup/suppl/doi:10.1073/pnas.2116311119/-/DCSupplemental. Published May 17, 2022.
light on the role of social influence in shaping the adoption of prosocial behaviors, especially when those behaviors have become politicized.

Using large-scale survey data and newly available low-level data on the partisan composition of geographic areas, we examine whether willingness to adopt COVID-19 mitigation behaviors is conditioned by respondents’ partisanship and their partisan context. We find that Republicans, but not Democrats, are influenced by partisan context when deciding whether to wear a mask when going out in public. As the share of Republicans in a zip code increases, Republicans become less likely to wear masks. Democrats, on the other hand, report high levels of mask wearing regardless of zip code party composition. Thus, the partisan gap in mask wearing is less apparent in Democratic areas, and largest in Republican places. This effect of neighborhood partisan composition is distinct from other contextual variables—particularly the racial, income, or education composition of an area—that may confound the relationship between mask wearing and partisan context. We find a significantly reduced relationship between partisan context and willingness to take the COVID-19 vaccine and no relationship with willingness to take the seasonal flu vaccine. Notably, while both mask wearing and vaccine uptake have been politicized, mask wearing is a visible behavior, subject to social pressure in a way that vaccine uptake is not, suggesting that the heterogeneity in wearing masks that is associated with local partisan context does not generalize to medical or public health behaviors not easily observed by others.

The influence of neighbors on a prosocial but politicized behavior follows from a long line of scholarship. Individual behavior can be influenced by social context (e.g., refs. 5 and 6), and people receive influential cues from others in their environment, including cues about behaviors that are specifically prosocial in nature, such as not littering (7) and preventing crime (8–10). This influence has been shown to extend to political behaviors and to be influenced by political contexts, including the partisanship of neighbors (11–13). For example, ref. 12 demonstrated that people are more likely to make political donations when they share the partisanship of their neighbors and know their neighbors have also donated. Others have used laboratory experiments to connect group-based context to explicitly prosocial behaviors, including sharing in public-goods games (14), extending the general proposition by ref. 15 and others (16) that homogeneous social contexts and shared identities enable high levels of social trust that are likely to transmit social norms.

The influence of homogeneous context on behavioral norms can be transmitted through several mechanisms, including common knowledge or social pressure. Recent research has shown that common knowledge beliefs about social norms (what a person believes others believe to be acceptable) influence individual behaviors about politicized topics and that the most influential beliefs are those arising from people with shared identities and close geographic proximity. For example, ref. 17 demonstrated that men in Saudi Arabia update their beliefs about gender norms when given information about the beliefs of other men in their neighborhood. Second, a large body of research demonstrates that people will change their behavior when they risk being seen as norm violators or when there is a threat of social pressure, especially from members of their in-group and when the behavior is public (12, 18–21). Notable for the outcomes examined in this paper, a wide variety of behaviors related to health, ranging from smoking cessation to HIV prevention, are also influenced by social norms (22–24), especially in networks structured by geography and common identity, such as ethnicity and occupation (25–29).

Of course, despite the widespread power of social networks to transmit social norms, social networks may be more or less influential across groups, and groups may have different norms. In the case of partisanship in the United States, this may mean that Democrats and Republicans will respond differently to social cues about COVID-19 prevention behaviors. For example, ref. 30 shows that differences in social distancing behavior between Democrats and Republicans can be explained by self-reported common knowledge beliefs about social norms, such as whether other people in their community are social distancing and whether people would disapprove if they did not social distance. It is also possible, perhaps because of elite signals, that Republicans and Democrats have different social expectations on prevention behaviors, so that Democrats feel social pressure to put on a mask and Republicans feel pressure to not put on a mask. Social pressure may operate differently across these opposite behaviors; for example, the social pressure to not wear a mask when surrounded by people not wearing masks may be greater than the social pressure to wear a mask when surrounded by people wearing masks, or vice versa. Furthermore, it could be that well-documented average personality differences between Democrats and Republicans (31) make Republicans more sensitive than Democrats to social cues from neighbors.

Data

For this investigation, we combine survey data from a 60,000-person project with geographically granular voter registration data from 180 million Americans and supplement this with data from the US Census and COVID-19 fatality counts. These data allow us to observe people’s mask wearing as a function of local partisan makeup of zip codes, while accounting for other individual-level attributes measured in the survey and other zip code–relevant attributes.

The survey data come from the University of California, Los Angeles (UCLA) COVID-19 Health and Politics Project, a nationwide cross-sectional survey representative of the US adult population consisting of five cross-sectional surveys of ~15,000 people each, collected from May 2020 to April 2021, and two additional cross-sectional surveys of ~30,000 people in July and October 2021. The survey was approved by the UCLA Institutional Review Board, and participants gave written consent to participate, after reading a description of the research. For the main analysis, we focus on the four waves ending in December 2020, which keeps the nonavailability of vaccines constant throughout our period of analysis (results are substantively similar when analyzed over all seven waves). All interviews were conducted online with a sample provided by the market research firm LUCID. Quotas across nine categories were set and managed by project staff at UCLA, who also constructed the poststratification weights to make the data representative of the US adult population. The two outcomes of interest are the frequency with which respondents report “always” wearing masks when going outside and reported willingness to get a COVID-19 vaccine when one is made available to them. In the later waves analyzed...
in SI Appendix, section A, we also include whether the respondent had actually received a vaccine dose. We also examine respondents’ reports of whether they were vaccinated for the 2019–2020 flu season (prior to COVID-19) and whether they intend to vaccinate against the flu in the 2020–2021 season (during COVID-19). See SI Appendix, section E for question wordings for all outcome variables. The survey data are also used for individual-level controls that may influence mitigation uptake, including age, race, gender, income, ideology, and education.

Data on the local political context of people’s neighborhoods come in the form of individual measures of the partisan composition of each respondent’s zip code. The measure is derived by using data from the complete list of registered voters, including their exact residential address and registration information, in the United States as of summer 2018 and geocoding voters to place them in a locality (33). To construct local measures of partisan context, the partisanship of each voter is measured through party registration where available, and, for voters without party registration, partisanship is imputed based on the voter’s characteristics and precinct-level presidential vote data. This allows for the measure to capture the partisanship of all voters in a given geographic area, which is important when trying to describe the presence of in- or out-party neighbors in a respondent’s daily environment and is difficult to do when relying on aggregate vote outcomes that do not include counts of episodic nonvoters. We calculate the proportions of Democrats and Republican in each zip code, the smallest geographic unit available in our survey data, and a unit similar in size to, or even a little smaller than, a census tract, the unit commonly used to represent a neighborhood in social science research. SI Appendix, Fig. S1 shows the distribution of partisan exposure by zip code for the survey sample, which is similar to the distribution for the nationwide voting population.

Lastly, we add to these data the zip code–level covariates from the US Census, in addition to data on county COVID-19 deaths (using data reported by state and local governments and aggregated by The New York Times). We restrict our sample to self-reported Democrats and Republicans so that in our models the interpretation of coefficients on being a Republican indicate the effects of being a Republican compared to being a Democrat. We operationalize local partisan context as the share of Republicans in the respondent’s zip code as measured by the percent Republican of all registered voters. First, we look at the data to establish whether we see partisan variation in the uptake of prosocial mitigation behaviors and whether the partisan uptake varies by partisan context. Fig. 1 displays variation in mask wearing and vaccine uptake by partisanship and other covariates that we might expect to be related to these behaviors. The columns display the share of the population reporting that they always wear a mask when going outside (Fig. 1, Left), the share planning to get a COVID-19 vaccine (Fig. 1, Center), and the share reporting they got a flu vaccine in 2020 (Fig. 1, Right). The rows display the incidence of these by party

The association between partisanship, local partisan context, and mask wearing is dramatic—particularly for Republicans. In the neighborhoods with very few Republicans, the behavior of Republicans and Democrats are nearly indistinguishable. As the percent of Republicans in a neighborhood increases, however, Republicans and Democrats diverge—a Republican in a 75% Republican zip code is half as likely to wear a mask as a Republican in a 25% Republican zip code. This Republican in a largely Republican zip code is also half as likely to wear a mask as a Democrat in a zip code that has 75% Republicans—potentially illustrating the difference in responsiveness to rising levels of Republicans in a neighborhood for Democrats who live there as compared to Republicans who live there.

Empirical Strategy and Results

An obvious potential explanation for the relationship displayed in Fig. 2 is that partisans with certain attitudes select into areas with like partisans. This would mean that the pattern derives not because of the influence of neighbors but rather because of individual-level selection on geography. To separate the influence of neighbors in a specific place from selection by people in that place, we employ two estimation strategies. First, we estimate regression models with public health behavior as a function of zip code partisan composition, using county fixed effects and controls for individual and zip code characteristics. Comparing
Always worn a mask outdoors in the last two weeks

COVID Vaccine Intention

2020 Flu Vaccine

Political Party

May Jun Jul Aug Sep Oct Nov Dec

Cumulative County COVID-19 Deaths

May Jun Jul Aug Sep Oct Nov Dec

Health Diagnoses

May Jun Jul Aug Sep Oct Nov Dec

Fig. 1. Percent engaging in preventative health behaviors by party, county COVID-19 deaths, and individual health diagnoses. Figure plots the rates of mask wearing (Left), COVID vaccination intention (Center) and 2020 flu vaccination (Right) across survey waves. (Top) Rates of public health behaviors separately by political party, (Middle) plotted separately by quartiles of cumulative county COVID-19 fatalities, and (Bottom) broken out by respondents’ self-reported at-risk health conditions.

voters living in the same county but in different zip codes allows us to account for the confounding influence of other observable characteristics and all unobservable differences across counties. With these models, we estimate the effect of partisan context for both Democrats and Republicans. Second, we conduct an even more robust test of partisan differences by using zip code fixed effects to test for differences between Democrats and Republicans living in the same zip code.

Crucially, we also apply the same empirical tests to the vaccine outcome variables: self-reported flu vaccinations in both the 2019 flu season and the 2020 season, and the COVID-19 vaccine. Previous research has demonstrated that medical decisions, even those made by medical doctors, are handled differently by Democrats and Republicans depending on whether they involve a decision that has become politicized (36). The flu vaccine has not been politicized in the same manner as COVID-19–related behaviors, so these outcomes serve as a test of whether all medical decisions differ in response to local partisan context or whether there is something particular about the responses to COVID-19. Inclusion of the COVID-19 vaccine also tests whether public and private behaviors, even when politicized, are affected differently by neighborhood context.

In all models, we also control for individual-level factors that may confound the relationship between partisanship, partisan context, and prosocial behaviors—these are age, race, gender, education, recent health diagnoses, and household income—along with survey wave fixed effects to account for any differences across time. $\S\S$

Models with county fixed effects account for any unobservable differences across counties, so we are essentially comparing

$\S\S$Age is entered in years; race is entered as binary indicators for White, Hispanic, Asian/Pacific Islander, and other race, with Black as the excluded category; household income is entered as thousands of dollars, with an indicator for missing data; gender is entered as female, with male as the missing category; and education is entered as high school or less, some college, or college and above, with high school or less as the omitted category. Ideology was only recorded starting in wave four of the survey, so it is included in models without wave fixed effects and is entered as indicators for very liberal to very conservative (five points), libertarian, or unsure of ideology; moderate is the excluded category. Comorbidities is the number from zero to six of self-reported diagnoses with conditions related to death from COVID-19.
vaccination means included in model. For rates of mask wearing (mask wearing and vaccine uptake, by partisanship. Lines show the LOESS fit for rates of mask wearing (Top Left), COVID-19 vaccination (Top Right), and flu vaccination (Bottom), separately for Democrat (blue lines) and Republican (red lines) survey respondents, across the percent of registered Republicans in a zip code.

voters of the same partisanship, who live in the same county, and are similar along other individual and contextual variables, but who live in zip codes with different partisanship compositions. In this approach, we interact voter partisanship with zip code party composition as a test of whether the effect of zip code partisanship differs for Democrats and Republicans. To better isolate this interactive effect, we also interact partisanship with each of the other zip code contextual variables—percent White, percent college graduates, and median household income—to ensure any differential effects by partisanship are not actually differential responses to other contextual factors that covary with zip code partisanship (37). These models include controls for zip code–level percent college educated, median household income, population density, and percent White.**

For each of the four outcomes (mask wearing, COVID-19 vaccine uptake, 2020 flu vaccine uptake, and 2019 flu vaccine reports), we estimate regressions of the form

\[
Y_i = \alpha + \eta_{iw} + \gamma \text{Republican}_i + \theta [\text{Share GOP}]_z + \\
\tau (\text{Republican}_i \ast [\text{Share GOP}]_z) + \delta \mathbf{W}_z + \\
\lambda (\text{Republican}_i \ast \mathbf{W}_z) + \omega \text{Deaths}_{\text{ce}} + \beta \mathbf{X}_i + \epsilon_{iz},
\]

where \(\alpha\) is the county fixed effect, \(\eta_{iw}\) is the survey wave fixed effect, \(\mathbf{W}_z\) are the contextual covariates for zip code \(z\), \(\mathbf{X}_i\) are the individual covariates for voter \(i\), and \(\epsilon_{iz}\) is the error term. \(\theta\) represents the effect of zip code proportion Republican on mask wearing for Democrats, and \(\tau\) represents the difference in the effect of zip code partisanship for Republicans compared to Democrats. SEs are clustered at the zip code level. In SI Appendix, section C, we also estimate models including a variable for whether counties have a mask mandate in place, using policy data from ref. 38. We find that the relationship between contextual partisanship and mask wearing is substantively similar in counties with and without mask mandates.

Table 1 presents the coefficients of interest from each of these models, across all four public health outcomes. The coefficient for zip code share GOP is not statistically distinguishable from zero, meaning that Democrats, accounting for other variables and comparing voters living in the same county, do not change their rate of mask wearing in response to zip code partisan composition. The disparity between Democrats and Republicans is reflected in the negative and significant coefficient on Republican and in the interaction coefficient between Republican partisanship and zip code share GOP in the model, which is negative and significant. So, while Republicans, net of other factors, wear masks less frequently than Democrats overall, this partisan gap is greater in more-Republican areas, because, in these areas, Republicans decrease their mask wearing, while Democrats continue to wear masks. Fig. 3 plots the marginal effect of share GOP separately for Democrats and Republicans.

The models for COVID-19 and flu vaccination do not return significant coefficients for share GOP or Republican partisanship and share GOP interaction, meaning that these outcomes are not responsive to partisan context for voters of either party. Even though the COVID-19 vaccine was politicized, intentions to vaccinate against COVID-19 are similarly responsive to local partisan context as decisions about vaccination for the flu. For the vaccines, there is a partisan gap for these behaviors, as evidenced by the positive and statistically significant Republican partisanship

** County COVID-19 deaths are included as the log of the 2 wk change in COVID-19 deaths per 1,000 people prior to the respondent taking the survey.

For the COVID-19 vaccine, the coefficient is significant. The coefficient for the interaction of Republican partisanship and share GOP is also significant. These results suggest that the effect of Republican partisanship on COVID-19 vaccination rates is greater in areas with higher share GOP, compared to areas with lower share GOP.

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### Table 1. Within-county models assessing neighborhood partisanship

|                          | Always wear mask | COVID vaccine | Flu vaccine 2020 | Flu vaccine 2019 |
|--------------------------|------------------|---------------|------------------|------------------|
| Share GOP                | 0.072(0.062)     | −0.114(0.094) | −0.079(0.094)    | −0.057(0.095)    |
| Republican               | −0.060(0.028)*   | −0.099(0.038) | −0.075(0.038)*   | −0.040(0.039)    |
| Republican × share GOP   | −0.240(0.064)∗   | 0.007(0.097)  | 0.047(0.091)     | −0.021(0.095)    |
| Republican × share White (2018 Zip) | 0.027(0.043) | −0.161(0.069)∗ | −0.097(0.063) | −0.077(0.066) |
| Republican × share college and above (2018 Zip) | 0.138(0.074)+ | −0.029(0.110) | −0.077(0.107) | −0.105(0.111) |
| Republican × median HH income, (2018 Zip) | −0.001(0.000)+ | 0.001(0.001) | 0.000(0.001) | 0.001(0.001) |
| Individual controls      | ✓                | ✓             | ✓                | ✓                |
| Zip code controls        | ✓                | ✓             | ✓                | ✓                |
| Survey wave fixed effect | ✓                | ✓             | ✓                | ✓                |
| County fixed effect      | ✓                | ✓             | ✓                | ✓                |
| N                        | 49,629           | 25,116        | 25,134           | 25,152           |
| R-squared                | 0.208            | 0.257         | 0.257            | 0.246            |
| Adjusted R-squared       | 0.164            | 0.182         | 0.181            | 0.170            |

See SI Appendix, Table S7 for individual controls and wave fixed effects. HH income, household income, thousands of dollars. P-value thresholds: 0.1 *, 0.05 *, 0.01 **, 0.001 *** Checkmark means included in model.
coefficients, but this difference in uptake between partisans is not as context dependent, perhaps because the behavior is largely private and not subject to easily observable social pressure. Notably, the statistical significance of the interaction of partisanship and percent GOP, even with the inclusion of partisanship interacted with other zip code attributes, indicates the patterns are not being driven by heterogeneous party responses to other contextual factors in the neighborhood. Additionally, to account for the possibility that ideology is correlated with mask wearing and partisan context and is, therefore, confounding the relationship between context and mask wearing, we control for individual-level ideology (very liberal to very conservative as well as libertarian) in the one wave of the survey from 2020 where ideology was measured. The patterns we present survive this control (SI Appendix, Tables S12 and S13).

Partisan Differences in Mask Wearing within Zip Codes. Next, we compare Democrats and Republicans living in the same zip code, using regression models with zip code–level fixed effects. This allows us to more robustly test for differences in the effect of local partisan context by estimating whether out-partisans who have settled in the same area respond to partisan context at different rates. This approach accounts for any unobservable differences across the zip codes in our dataset.

In the first estimation strategy, including fixed effects for counties rather than zip codes allowed us to estimate the effect of partisan composition on public health behaviors for both Democrats and Republicans. In this second estimation strategy, we continue to interact the share of Republicans in a zip code with each individual’s party identification. However, as our measure of partisan context is at the zip code level, the independent association between percent Republican and the public health behavior is subsumed by the zip code–level fixed effects. Thus, in these within–zip code models, we can only estimate whether Democrats and Republicans in the same zip code respond differently to the share of Republicans in that zip code. As with the within-county models, we interact individual partisanship with other zip code–level contextual factors. This design offers a rigorous test of how Democrats and Republicans respond to the same local partisan context, by modeling the differential response to the share of Republicans in a zip code for Democrats and Republicans living in the same zip code, net of other individual and neighborhood-level factors.

We estimate a regression of the form

$$Y_{i} = \alpha + \gamma \text{Republican}_i + \tau (\text{Republican}_i \times \text{Share GOP}_i) + \lambda (\text{Republican}_i \times \text{W}_z) + \omega \text{Death}_z + \beta \text{X}_i + \epsilon_{iz},$$

[3]

where \(\alpha\) is the zip code fixed effect, and \(\tau\) is the quantity of interest, the extent to which Republicans alter their mask wearing in response to zip code partisanship in comparison to Democrats. If we cannot estimate a coefficient on this interaction that is statistically separable from zero, it suggests partisans are responding at similar rates to partisan context—that is, there is no difference beyond the average partisan difference. If, however, the coefficient on the interaction is negative, Republicans are increasingly less likely to engage in the reported behavior as the neighborhood becomes more Republican, relative to Democrats living in the same place. If the coefficient on the interaction is positive, Republicans are increasingly more likely to engage in the reported behavior as the neighborhood becomes more Republican relative to Democrats in the same neighborhoods. SEs are clustered at the zip code level. In SI Appendix, section C, we also estimate models including a variable for whether counties have a mask mandate in place at the time of a respondent’s interview, and find that the relationship between contextual partisanship and mask wearing is substantively the same in counties with and without mask mandates.

In Table 2, we display the results of the within–zip code model represented in Eq. 2. The coefficient on the interaction of party

Table 2. Within–zip code models assessing neighborhood partisanship

|                      | Always wear mask | COVID vaccine | Flu vaccine 2020 | Flu vaccine 2019 |
|----------------------|------------------|---------------|------------------|------------------|
| Republican           | −0.066(0.032)*   | −0.052(0.044) | −0.053(0.045)    | −0.071(0.047)    |
| Republican × share GOP | −0.191(0.075)*  | −0.008(0.120) | −0.144(0.111)    | −0.009(0.120)    |
| Republican × share White (2018 Zip) | −0.009(0.049)  | −0.188(0.088)* | 0.019(0.076)    | −0.018(0.083)    |
| Republican × share college and above (2018 Zip) | 0.194(0.088)*   | −0.157(0.141) | −0.269(0.134)*   | −0.068(0.143)    |
| Republican × median HH income, thousands of dollars (2018 Zip) | −0.001(0.000)*+ | 0.001(0.001)+ | 0.001(0.001)+ | 0.001(0.001)+ |
| Individual controls  | ✓                | ✓             | ✓                | ✓                |
| Survey wave fixed effect | ✓               | ✓             | ✓                | ✓                |
| Zip code fixed effect | ✓                | ✓             | ✓                | ✓                |
| **N**                | 49,629           | 25,116        | 25,134           | 25,152           |
| R-squared            | 0.508            | 0.650         | 0.641            | 0.640            |
| Adjusted R-squared   | 0.318            | 0.396         | 0.381            | 0.379            |

See SI Appendix, Table S8 for individual controls and wave fixed effects. P-value thresholds: 0.1, * 0.05 * Checkmark means included in model.
Identification and the share of Republicans in the respondent's zip code is significant and negative, meaning that the gap between the likelihood of a Democrat or a Republican wearing a mask grows as the share of Republicans in the neighborhood increases. These estimates are displayed graphically in Fig. 4. For every 10-percentage-point increase in the share of Republicans in a zip code, the difference between Republicans' and Democrats' willingness to always wear a mask grows by 1.91 percentage points. Moving from a zip code with 25% Republicans to one with 75% Republicans would increase the average difference between Democrats and Republicans in mask wearing by almost 10 points. These results are consistent with the coefficients from the within-county model, which showed that Republican mask wearing is responsive to context, but Democratic mask wearing is not influenced by partisan composition. Note that the coefficient on the interaction in the within–zip code model does not allow us to say anything about the absolute slopes of the lines for Democrats and Republicans, just that the Republican line decreases more dramatically than the line for Democrats.

Once again, the statistical significance of the interaction of partisanship and percent GOP, even with the inclusion of partisanship interacted with other zip code attributes, indicates the patterns are not being driven by heterogeneous party responses to other contextual factors in the neighborhood. In SI Appendix, Tables S9–S11, we further explore the relative power of local partisan networks by comparing the influence of local partisan demographics on mask wearing to other demographic factors: percent White, percent college educated, and percent wealthy. Substituting each of these variables for percent GOP in Eq. 2, we find that none of these other contextual factors are as strongly related to mask wearing as is local partisanship. In other words, while Republicans' mask wearing is strongly related to the percent Republican in their neighborhood, Whites' mask wearing is not related to the percent White in their neighborhood, college graduates' mask wearing is not related the percent college graduate in their neighborhood, and high-income people's mask wearing is not related to the percent high income in their neighborhood. This suggests that, when a behavior is politicized, local partisanship is a uniquely powerful influence on adoption of that individual behavior.

### Conclusion

In this paper, we have demonstrated the effects of partisanship and partisan neighborhood context on an easily observable politicized behavior. The use of low-level data on partisan composition along with same-level fixed effects allows us to compare Democrats and Republicans living in the same county and even the same zip codes. We cannot determine whether the different responses to partisan context between Democrats and Republicans are a result of the influence of partisan norms (i.e., Republicans respond to neighbors, but Democrats do not), to asymmetric social costs associated with defying local norms, or to other drivers of neighborhood selection for which we have not controlled. Still, that the relationship between partisan composition and mask wearing is present even when making low-level comparisons, that it is not driven by differences in local mandates, and that it is not as present for less visible or less politicized public health behaviors demonstrates a compelling relationship between local partisan context and public prosocial behavior.

Why are these effects limited to Republicans? Our data do not allow us to unpack the mechanism behind this difference, but, as noted in the Introduction, social pressure in this prosocial, public health context may operate differently with respect to putting on a mask (the pressure Democrats were under) relative to not putting on a mask (the pressure Republicans were under). Or, average personality differences between Democrats and Republicans (31) could make Republicans more sensitive to social cues from their neighbors relative to Democrats. These possibilities and others should be investigated in future research.

Contemporary research increasingly shows the influence of partisanship on nonpolitical domains, and a flood of evidence in the past year has shown associations between partisanship and attitudes relating to COVID-19. Here we show that consequential decisions, indeed, even ones that can affect life and death, appear to be influenced by party-based social norms. Our results suggest that partisanship may be the basis for powerful social pressure that can influence behavior in consequential ways. With pronounced partisan sorting across geographies meaning many partisans live in political isolation, our findings raise the possibility that geographic-based partisan neighborhoods canpowerfully shape the spread—or retreat—of prosocial behaviors. Our evidence suggests that researchers and policy makers, when considering how best to shape behavior for the common good, may also consider the influence of partisan local contexts and the importance of behavioral cascades.

Such contextual influences on prosocial public health behaviors generally and COVID-19 protection in particular are important in their own right, but the phenomenon of visible displays of politicized behavior being amplified through homogeneous geographic context may extend to other behaviors as well. For example, recent political events have been accompanied by the widespread presence of political signage in certain areas, even during nonelection periods, such as those supporting Black Lives Matter or Donald Trump. The willingness to display such signs may be a feature of whether others nearby are doing the same.

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Fig. 4. Partisan gap in mask wearing by zip code partisanship. Points plot the binned scatterplot of within-zip code differences in Republican and Democratic mask wearing by share GOP in the zip code. Light gray line plots the LOESS fit from the binned scatter plot. Black dotted line plots the fit from the estimated within-zip code regressions. Zip codes with no variation in party registration in the survey data are not plotted.

**Note:** This text is a transcription of the document and may contain some formatting or typographical errors. For the most accurate and complete information, please refer to the original source.
Furthermore, other politicized behavior, such as the public display of firearms, has potential consequences for not only public safety but the exercise of free speech, and may be encouraged or discouraged depending on local norms (e.g., ref. 39). Further research should consider whether these and other behaviors are susceptible to local social influence and how best to shape norms to protect health, safety, and well-being.

Data Availability. Survey and geographic data have been deposited in Harvard Dataverse (https://doi.org/10.7910/DVN/LXBDQN).

ACKNOWLEDGMENTS. We are grateful for feedback on this paper from Anthony Fowler, Seth Hill, Jeff Lewis, Dan Thompson, and Chris Warshaw. This study was funded with support from the UCLA Marvin Hoffenberg Chair of American Politics, UCLA David Geffen School of Medicine–El and Edythe Broad Center of Regenerative Medicine and Stem Cell Research Award Program, Patient-Centered Outcomes Research Institute COVID Enforcement, "WISDOM in the age of COVID," and NIH/National Center for Advancing Translation Sciences Grant U1TR001881. This study was also supported by the UCLA Center for SMART Health.

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