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Context and Contact: Unifying the Study of Environmental Effects on Politics

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Abstract

A growing literature explores how local environments, or contexts, affect political behavior, especially by shaping interpersonal contact with social out-groups. While many studies still draw directly on long-standing hypotheses from contact theory, this research agenda increasingly focuses on new research questions, beyond the classic social psychology literature, and new empirical cases, including from across the lower- and middle-income world. We develop a typology of forms of context and contact to aid the aggregation of findings across disparate cases and demonstrate that the mechanisms that may account for the political effects of intergroup context and contact are broader than those typically explored in psychologically oriented research. We propose future directions for research in this area, including greater focus on the intersection of ethnic and class-based contact and greater attention to how built or computer-based environments may mediate or mirror the effects of demographic contexts.

INTRODUCTION

Your local environment—where you are and the types of people you encounter there—can affect your political behavior. A long-standing literature demonstrates that local contexts—the homes, streets, and neighborhoods through which citizens navigate their daily lives—shape individual-level attitudes and actions above and beyond individuals' own characteristics and preferences. Much of this research focuses on intergroup relations and builds from Allport's (1954) social psychological exploration of "contact theory," which considers how different cross-group interactions, produced by different contexts, either foment prejudice or instead facilitate cooperation in diverse polities (Pettigrew 1998, Levy Paluck et al. 2019).

In recent years, there has been a significant expansion in empirical research in political science exploring the effects of intergroup context and contact. By "context" we refer to features of the local environment in which someone lives or works. By "contact" we mean the interactions that a person has with those from other social groups in the course of their life, interactions that are often directly shaped by the features of an individual's local context. While many studies focus on the United States (e.g., Oliver & Wong 2003; Enos 2016, 2017)—the case on which much of the foundational literature on this topic was based (e.g., Key 1949, Allport 1954)—there has also been an explosion of interest in a much wider range of cases, including across the low- and middle-income world. This global shift has been facilitated by the growing availability of micro-level data sources (e.g., disaggregated census data) that allow for fine-grained measurement of local contexts in a wider range of countries, as well as by empirical innovations in the use of experimental methods that help address inherent selection challenges in studies of contact and neighborhood effects.

There has been little success, however, in aggregating findings from an ever wider range of stand-alone case studies into a more robust understanding of how contextual effects drive political behavior. Classic works from decades ago (especially Allport 1954) still serve as the most immediate point of departure for many new studies, rather than more recent research on similar questions in other cases, reflecting a failure by the field to update. We now have many variants of "Allport goes to [insert country name]"—papers that claim to test versions of Allport's original hypotheses in some new case. Meanwhile, efforts to learn across studies and recognize that the field is innovating beyond simply reevaluating Allport's long-standing claims remain limited.

In the first part of our review, we synthesize recent literature on the effects of context and contact on political behavior. We see two main challenges to the aggregation of recent findings. First, we observe "conceptual stretching" (Sartori 1970) in the application of contact theory. Some forms of context or contact being studied are distinct from the interactions on which Allport (1954) focused, even as scholars often still suggest they are testing Allport's hypotheses.

We develop a new typology to categorize the range of explanatory variables, or treatments, in recent research. We show that these treatments tend to vary along two dimensions: the depth and duration of intergroup interactions. Studies that explore some combinations of these two dimensions are in direct conversation with contact theory. Treatments composed of other combinations are not, and instead have entered different theoretical terrain. Our typology attempts to aid the aggregation of findings, and allow the literature to advance past treating contact theory as the only paradigm for understanding contextual effects, by more clearly articulating which studies speak to the same questions and which explore distinct phenomena under the broader umbrella of context research.

The second major challenge is that a shift in outcome variables between most recent political science studies and the social psychology literature presents an opportunity to explore a wider set of possible mechanisms linking context to behavior than are typically considered by standard accounts of contact theory. The psychology literature is primarily interested in explaining intergroup

prejudice (Allport 1954, Pettigrew & Tropp 2006, Levy Paluck et al. 2019). The political science literature is instead more focused on political behaviors that are either causally downstream from prejudice or potentially unrelated to it.

We identify multiple causal pathways—rooted in distributive politics, elite mobilization, and economic conditions—through which differences in contexts and intergroup contact can affect political behaviors even without any direct impact on the psychological processes most often claimed to explain intergroup prejudice. Some of the field's obstacles to aggregating across studies are rooted in not sufficiently recognizing both that different mechanisms may be more salient in different political systems and that the behavioral effects of context and contact can also be studied through frameworks other than those typically associated with social and political psychology. Better distinguishing between potential mechanisms and identifying their scope conditions will allow for richer theory building and enable scholars to more clearly explore external validity across cases.

The second part of our review then builds on these ideas to propose new directions for future research. We identify underexplored similarities between research on interethnic context and contact and studies of exposure to inequality and different socioeconomic classes. Broadening the scope of the social groups studied in research on contact to include class-based or intersectional identities, while still comparing treatments that are fundamentally similar along the dimensions of our typology, offers opportunities to show how theories of contact and context can help understand political behavior in new domains.

Moreover, we see benefits to incorporating a broader view of the contexts that shape political behavior. Contextual effects are a function not only of an individual's demographic environment (the people around them) but also of their built environments (the physical geographies and architectures that shape how they come to interact with other people). And in a world in which online forms of human interaction are increasingly salient, there are growing possibilities to consider how computer-based environments shape political behavior in ways potentially similar to physical exposures to out-groups.

SURVEYING THE LITERATURE

When members of two competing social groups meet, contact theory predicts that prejudice and animosity between them can be reduced if they have opportunities for interpersonal interactions in which they engage in cooperative tasks as equals in pursuit of common goals that allow them to get to know each other, develop trust, dispel stereotypes, and observe their "common humanity" (Allport 1954, p. 281; Pettigrew 1998). Allport (1954) suggests that these positive effects may be enhanced when interactions occur with the support of authority figures from each group. Moreover, while he does not list duration as a formal criterion for successful contact, virtually all the examples he provides of contact reducing prejudice involve sustained (i.e., more than one-off) interactions.

Not all intergroup contact is expected to be so rosy, however. When competing groups encounter each other, but do not have opportunities for cooperative interactions through which they can learn about each other, Allport (1954) predicts that intergroup contact instead feeds prejudice and mistrust. He terms these latter interactions "casual," rather than "cooperative," and highlights that they are a particular concern in segregated communities, in which social groups are proximate—and thus are exposed to each other—but have few closer interactions that could build knowledge and trust.[1]

[1] Enos (2017, pp. 47–49) flags that this distinction is often misunderstood by studies referencing contact theory.

In a world riven by intergroup conflicts, contact theory proposes an encouraging solution: Could seemingly intractable conflicts be reduced if we create spaces for people to get to know each other better through cooperative interactions? More importantly for the literature we review here, it also suggests a foundational theoretical insight: Intergroup attitudes and behavior are a function of how local environments condition interactions between people who are near each other in geographic space (Enos 2017). At its heart, contact theory is a claim that local context is crucial for understanding behavior.

Since the 1950s, a vast literature spanning disciplines has tested claims emerging from these predictions. We are not the first to review this body of work, but our scope diverges from prior reviews in several ways. First, to make our review more tractable, we focus on empirical research in political science and political economy focused on context or contact effects at a local level (i.e., neighborhood or lower) while we exclude work from other disciplines, especially social psychology, that others are in a better position to evaluate.[2] The psychology literature on contact is already extensively reviewed elsewhere (e.g., Pettigrew & Tropp 2006, Levy Paluck et al. 2019), and there remains ongoing debate about the strength of empirical support for Allport's (1954) predictions in that literature.

Second, Pettigrew & Tropp (2006) and Levy Paluck et al. (2019) are restricted to studies that directly observe personal interactions between social groups. This criterion "excludes research that uses rough proximity or group proportions to infer intergroup interaction" (Pettigrew & Tropp 2006, p. 755). However, in the spirit of Allport's (1954) original distinction between casual and cooperative interactions, we view explicit interpersonal contact as one among a broader category of interactions that could occur in one's local context; these include seeing, but not personally meeting, geographically proximate out-group members, which Enos (2014, 2017) suggests can be enough for politically meaningful contextual effects. Moreover, many recent political science studies engage claims from contact theory while deploying administrative data on local demographic conditions at small levels of geographic aggregation (e.g., urban neighborhoods) to examine contact without observing actual interactions. We view studies at this level of analysis, in which contact is left implied, as still potentially part of a shared research agenda.

Third, we do not exclude studies from our review based on their outcome variable(s). Dinesen et al.'s (2020) review similarly examines some context and contact treatments but focuses exclusively on the relationship between ethnic diversity and social trust, while Pettigrew & Tropp (2006) only include studies on intergroup prejudice. As described in more detail below, trust and prejudice remain the outcomes of interest in some recent political science research, but most studies instead examine effects on political behaviors such as voting and participation, or instead explore effects on policy attitudes.

Using these criteria, we have identified 67 articles examining the effects of interethnic context or contact published since 2000 in political science and economics journals, or published in other types of journals by political scientists.[3] Of these, 67% (45) focus on cases other than the United States, and 40% (27), including 52% (24) of studies in the past 10 years (2012–present), focus on the lower- and middle-income world, demonstrating the increasingly wide scope of this research agenda and highlighting the need to aggregate empirical findings across subfields.

These studies also range widely in methodological approach: 25% (17) employ an experimental intervention (field, lab-in-the-field, or lab) that artificially manipulates context or contact

[2] We do still include research by political scientists published in journals from other disciplines (e.g., Ditlmann & Samii 2016).

[3] This total also includes several recent working papers. We include them for completeness, but recognize we have no means of identifying all unpublished work in this space.

to sidestep concerns about endogenous selection in cross-group interactions. The remaining studies are purely observational, including several "natural experiments," estimating effects of contextually determined exposures that are already occurring in the world.

OPERATIONALIZING CONTEXT AND CONTACT

Within this literature, scholars have sought to operationalize context and contact in myriad ways, reflecting substantial ambiguity surrounding the concept that has helped prevent the coherent aggregation of findings across studies. **Figure 1** attempts to categorize the range of treatments utilized by this body of work. We envisage treatments, or explanatory variables, falling along two continuous dimensions: depth and duration. Along the horizontal axis is the depth of each interaction, ranging as defined above from casual interactions, in which members of two groups are exposed to each other but do not engage as peers, to cooperative interactions, which in the ideal type involve engaging as equals on a common task with authority support, as highlighted by Allport (1954).[4] Along the vertical axis is the duration of each interaction, ranging from brief, one-off encounters with a different social group to sustained exposures, such as those that occur daily in the course of one's normal life. As a rough heuristic for identifying different types of studies, we divide **Figure 1** into quadrants, although both axes are continuous and any exact boundary between quadrants would be arbitrary.

In the top-right quadrant of **Figure 1** are studies of interactions that are both sustained and cooperative, coming closest to the type of contact described by Allport (1954) as conducive to

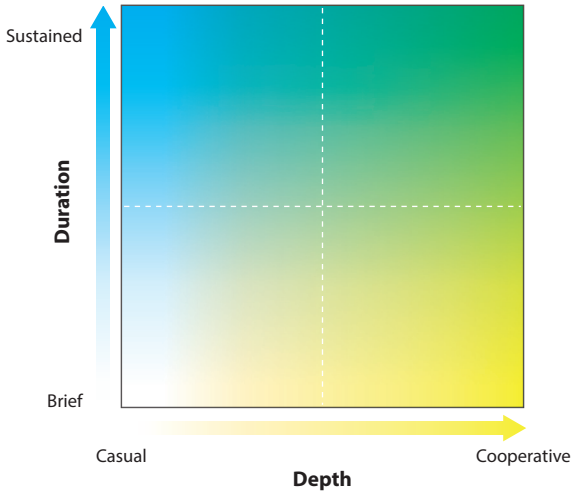

Figure 1

Continuum of treatments in intergroup contact research. Existing studies on the effects of context and contact employ treatments (explanatory variables) that vary in the depth (*horizontal axis*) and duration (*vertical axis*) of intergroup interactions. Quadrants are shown as a rough heuristic for identifying different types of studies, but in fact both axes are continuous. Studies reviewed include 67 articles on effects of interethnic context or contact published since 2000 in political science and economics journals, or published in other types of journals by political scientists.

[4]Allport (1954) defines cooperative contact as a combination of four criteria—working together, in interactions with equal status, in pursuit of common goals, with authority approval or support—which we collapse into one dimension here. The more of Allport's conditions are satisfied, the further to the right a treatment is found on the horizontal axis in **Figure 1**; the fewer, the further left.

prejudice reduction. These range from studies of prolonged, immersive exposures to out-groups, such as participants living together in a communal setting like a military base or school (Samii 2013, Rao 2019), to recurrent but less intense interactions, such as people who play on the same soccer team or attend a training course together across several weeks (Ditlmann & Samii 2016, Scacco & Warren 2018, Mousa 2020, Lowe 2021). With important caveats (e.g., Scacco & Warren 2018), studies testing treatments in this quadrant of **Figure 1** often find positive effects of sustained, cooperative contact on intergroup relations. Although important empirical debates about Allport's hypotheses remain active, we see the body of evidence from this quadrant as broadly consistent with Pettigrew & Tropp's (2006) meta-analysis of the related psychology literature.

The remaining three quadrants reflect deviations from Allport's ideal. Although Allport (1954) is often still a central reference, these treatments generally do not test core claims of contact theory but are instead investigating newer—and, we would argue, equally substantively important—claims about other possible relationships between context, contact, and behavior. We hope that, going forward, the field better recognizes that treatments in different quadrants of **Figure 1** are typically not exploring the same research questions as each other. Aggregating insights across multiple studies is more tractable within than across these quadrants. Moreover, increasing precision in how treatments are defined precipitates much-needed theory building about the effects of context.

The bottom-right quadrant contains studies in which the interaction is brief but cooperative in nature. Examples include isolated interactions between patients and doctors at medical clinics (Weiss 2021) or between experimental participants assigned to complete jigsaw puzzles together (Gu et al. 2019). These studies provide important insights about how cooperative single-shot interactions with an out-group member—such as those that could occur when one first enters a new local context—can shape attitudes and behavior, especially in the short run, but they may fail to generalize to the more sustained forms of cooperative interaction about which Allport (1954) originally theorized and in which there are more extended opportunities for learning across group lines. They also cannot speak to the potential "general equilibrium" effects of being in a local environment with a proximate out-group population, a point developed in more detail below.

Treatments in which exposures are brief and casual appear in the bottom-left quadrant. Examples include multiple experiments in which individuals were exposed to out-group members while accessing public transportation or in another public place and then were observed for immediate effects on attitudes or behavior (Enos 2014, Sands 2017, Choi et al. 2019, Condra & Linardi 2019, Sands & de Kadt 2020). These studies again address a distinct set of questions related to the possible behavioral effects of chance encounters with strangers in one's local environment. But they typically do not speak to Allport's (1954) claims about the potential benefits of sustained, cooperative contact with an out-group member and may not have external validity to the full set of possible effects of prolonged casual interaction, such as the repeated exposures that will occur when living in a neighborhood populated by an out-group or the possible general equilibrium effects of local diversity.

Sustained, casual interactions appear in the top-left quadrant. We see studies of casual interactions with the same person over time, or of casual but recurring interactions with an out-group—even if with different individuals each time—as both falling in this quadrant. For example, studies of repeated casual exposure to the same individual(s)—akin to Jacobs's (1961) "sidewalk contacts" or Milgram's (1977) "familiar strangers"—fit in the top-left quadrant. So do papers such as Dinas et al.'s (2019) and Hangartner et al's. (2019), which use the fact that Greek islands served as temporary transit destinations for large numbers of Syrian refugees over a period of several months to study electoral effects of prolonged exposure to an out-group. Because refugees tended to be housed in a separate part of the island and to stay for no more than 24–48 hours, exposure was necessarily superficial, and thus casual, even though it was recurrent.

This fourth quadrant includes the casual interactions that Allport (1954) predicted could increase prejudice, and consistent with his claims, some recent studies in this quadrant find negative effects of sustained, noncooperative interaction on intergroup relations (Dinas et al. 2019, Hangartner et al. 2019, Steinmayr 2021). But there is also evidence that repeated exposures to the same individual out-group members may instead diminish the possible negative effects of casual contact (Enos 2014, Bollen 2022).

Finally, our typology in **Figure 1** excludes a residual subset of studies that leaves the nature of intergroup interactions assumed and unobserved, even as many in this last category often still cite Allport (1954) and Pettigrew & Tropp (2006) and claim to study contact in some form. We argue that the way these remaining studies operationalize contact leaves substantial ambiguity because they refer only to how groups are organized in space relative to each other, utilizing neighborhood or community demographic composition as a proxy for contact, while not measuring the type and frequency of actual interactions in a way that could locate these studies within **Figure 1**. They typically have some theory for how context produces contact, which may be explicit or implicit and imply a particular quadrant, but this is rarely tested directly. To the extent possible, more of these types of studies should deploy data—whether quantitative or qualitative—to support claims about the nature of social interactions, which will allow them to better speak to mechanisms.

A further challenge presented by this final group of studies is that as they are, primarily, observational studies of real-world context that use aggregate-level data, they rest on ecological inferences about the degree to which individuals from different groups encounter one another as they move about their neighborhoods. These neighborhoods are variously defined, ranging from as small as a handful of nearest neighbors (Spater 2022) to much larger units. Most of these studies are reliant on existing administrative data, subject to data availability constraints, and thus must grapple with the modifiable areal unit problem (Openshaw 1983). Of course, an individual's lived experience is not dictated by those boundaries, and so arbitrary administrative units may serve as a poor proxy for what is functionally a person's range of local contacts (Wong et al. 2012). Especially without "on the ground" observation or deep knowledge of the area, it is often impossible to characterize the interactions that occur.

As a result, studies based on different units of aggregation are not fully comparable to each other, and generalizations across multiple studies become hindered. We know that features of physical and social space (e.g., segregation) and the type of contact (duration versus depth) matter for behavior. But when studies "black box" these attributes, treatments become fuzzy and difficult to link to classic claims in contact theory. Yet at the same time, we believe these types of studies can be extremely valuable for understanding central connections between context and behavior, such as those between local ethnic segregation and social trust (Kasara 2013, Robinson 2020) or vote choice (Ichino & Nathan 2013, Enos 2016, Nathan 2019, de Kadt & Sands 2021). Scholars using aggregate treatments like these, however, could benefit from greater clarity that they are not directly testing Allport's (1954) hypotheses even as they still explore contextual effects on behavior.

LINKING TREATMENTS TO OUTCOMES

In addition to being clearer about the treatments being tested, aggregating recent findings on context and contact also requires a more explicit discussion of the different causal mechanisms that link these treatments to outcomes of interest. Holding the nature of the treatment fixed, we can consider multiple ways a given type of context or contact can affect political behavior.

At the heart of contact theory is a focus on how the social psychological effects of contact produce changes in intergroup prejudice and discrimination. As its title suggests, Allport's (1954) *The Nature of Prejudice* focuses squarely on prejudice; he notes (pp. 63–64) that prejudice might

Figure 2

In classic accounts of contact theory, contact (T) affects prejudice (Y1) against out-groups via a set of individual-level psychological processes (M1).

manifest in downstream political behaviors like violence, but his core goal remains understanding the conditions under which interactions reduce (or increase) prejudicial attitudes and stereotyping. Subsequent psychological research on intergroup contact retains this focus (Pettigrew & Tropp 2006, Levy Paluck et al. 2019).

Figure 2 summarizes the general causal model that much of the canonical contact theory literature investigates. The treatment (T) is contact with an out-group, defined along the dimensions of **Figure 1**. The outcome (Y1) is prejudice or closely related discriminatory attitudes, including ethnocentrism. The mediating variables (M1), or mechanisms, linking them are the individual-level emotional and psychological factors theorized to result directly from interpersonal contact: reduced (or increased) fear, increased (or reduced) knowledge that affects beliefs in stereotypes, and so on.

But the recent political science literature departs from the psychology literature in two key ways that suggest other causal models may also explain the political effects of context and contact. First, while some recent studies still focus on prejudice or discrimination as their main outcomes and test predictions similar to those in **Figure 2** (Scacco & Warren 2018, Mousa 2020, Weiss 2021), much of the political science literature instead explores effects on political behaviors that are either causally downstream from prejudice or potentially unrelated to it. With this shift in outcome variables, the scope of **Figure 2** must be widened.

This new set of outcomes (Y2), which includes vote choice, various forms of political participation, and the policy preferences that inform these behaviors, is depicted in **Figure 3**. The canonical psychological model from **Figure 2** is reproduced as Path 1 in **Figure 3**. It still provides a useful explanation for the effects of context and contact (T) to the extent that intergroup prejudice and discriminatory attitudes (Y1) then have downstream effects on political behavior (Y2). For example, Enos (2016, 2017) suggests that reductions in proximity to Black neighbors among White voters in Chicago (T) reduced White voters' electoral turnout (Y2) by lowering their psychological sense of racial threat and hostility to this out-group (M1/Y1). Hangartner et al. (2019) similarly remain focused on Path 1, arguing that contact with passing Muslim refugees (T) causes Greek voters to feel greater hostility and prejudice toward them (Y1), in turn sparking greater political participation in support of antirefugee policies (Y2).

Yet once the outcome variable has shifted to political behavior (Y2), Path 1 becomes just one among multiple possible mechanisms, not the only, or necessarily even primary, framework available for understanding contextual effects. Many other variables point into political behavior beyond citizens' psychological states and attitudes about out-groups. To the extent that these additional variables are also affected by the demographic conditions that give rise to different forms of context and contact (T), there may be alternative paths to political behavior (Y2), visualized in **Figure 3**.

A second key consideration in the recent political science literature is methodological. Although some recent studies involve experiments that examine tightly controlled interactions, a much larger share are observational and focus on the effects of real-world demographic conditions. Although either experimental or observational studies could be used to examine any quadrant of

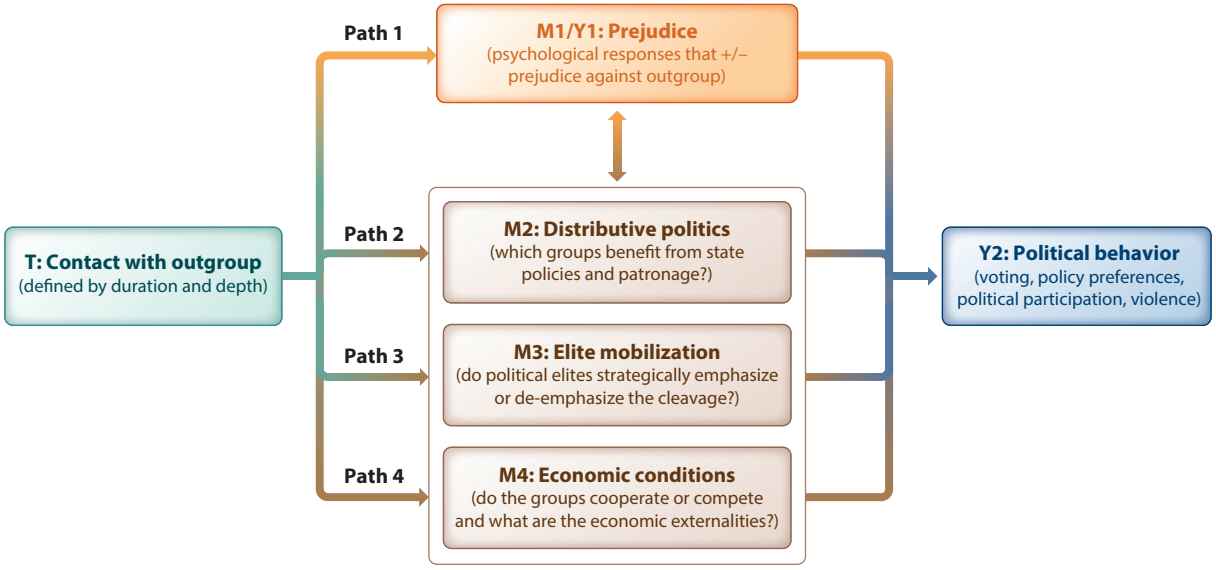

Figure 3

Other potential models expand **Figure 2**. Path 1 links context/contact (T) to political behavior (Y2) through the same causal model (via M1 and Y1) as in **Figure 2**. But with a shift in focus from the outcomes labeled Y1 to the political behaviors labeled Y2, a wider range of possible mechanisms (M2–M4; Paths 2–4) may also explain the relationship between intergroup contact/context (T) and behavior (Y2).

Figure 1,[5] these methods differ fundamentally in their ability to explore different classes of causal mechanisms.

To minimize interference and spillovers [SUTVA violations (Rubin 1980)], well-designed experiments explicitly attempt to ensure that their treatments only affect their intended subjects. By default, these experiments can then focus only on estimating direct (partial equilibrium) treatment effects on participants, holding conditions in the rest of the world fixed. But in observational studies of real-world contextual effects—especially studies in the top two (sustained) quadrants of **Figure 1**—general equilibrium effects are also possible, and are potentially equally or more important than partial equilibrium effects. How diverse and/or segregated different neighborhoods are in a city not only generates direct psychological responses among residents but also affects the strategic behavior of politicians and state officials, conditions in the local economy, and a series of other more macro-level variables that may then indirectly affect residents' subsequent behavior in important ways. Thinking about the general equilibrium effects of context also suggests a new set of mechanisms typically beyond the focus of the contact theory literature summarized by **Figure 2**.

Viewing these two key differences in the recent political science literature in combination, we categorize three alternative pathways from context (T) to political behavior (Y2) represented by Paths 2–4 in **Figure 3**. In these alternative pathways, treatment effects instead operate through mediators related to distributive politics (M2), the mobilization strategies of political elites (M3), or the economy (M4), respectively. These other mediators might still reinforce prejudice (Y1) or

[5]For example, the recent experimental literature tests both brief (e.g., Condra & Linardi 2019) and sustained (e.g., Mousa 2020) treatments, as well as cooperative (e.g., Scacco & Warren 2018) and casual (e.g., Enos 2014) interactions.

be affected by it, indicated by the bidirectional arrow collectively linking M2–M4 to Y1.[6] But there are also plausible causal paths that link T to Y2 through M2, M3, or M4 while bypassing prejudice (Y1) and the standard psychological mechanisms of contact theory (M1) altogether.

Path 2 in **Figure 3** focuses on the mediating role of distributive politics: who receives state resources and services from politicians, who does not, and the incentives for citizens and voters that politicians' targeting decisions create. The literature on new democracies demonstrates that neighborhood- and community-level diversity and segregation can affect politicians' incentives both to invest in local public goods and to participate in individual-level clientelism—the targeted distribution of patronage in return for votes (Ejdemyr et al. 2018, Harris & Posner 2019, Nathan 2019, Beiser-McGrath et al. 2021). In turn, to the extent that voters behave instrumentally by selecting candidates and parties that they expect are more likely to deliver highly valued resources to them (Chandra 2004, Posner 2005), differences in state resource provision induced by neighborhood diversity and segregation can produce differences in voter behavior.

Ichino & Nathan (2013) and Nathan (2019) find that Ghanaian voters living as local minorities in contexts dominated by another ethnic group become more likely to vote for the party affiliated with that other group rather than the party associated with their own group in anticipation that the cross-ethnic party will be more likely to distribute resources to their community. The resulting local-level variation in ethnic voting (Y2) in response to neighborhood exposure to out-groups (T) is mediated by voters' expectations about distributive politics (M2) independently of any variation in voters' prejudice or discriminatory attitudes about their out-group.[7]

The specific explanation of Ichino & Nathan (2013) and Nathan (2019) is best suited to ethnically polarized and clientelist political systems, especially those in which elections are sufficiently competitive for voters to have incentives to vote instrumentally in the first place (de Kadt & Sands 2021). However, the broader literature on distributive politics provides other examples, spanning different political systems, of how local demographic contexts affect state resource provision in ways that may then influence voters' behavior. For example, Trounstine (2016) finds that US cities that are more segregated at the neighborhood level receive lower investments in public goods, especially where ethnic-based political polarization incentivizes politicians to underinvest in providing goods to segregated neighborhoods populated by politically opposed ethnic groups.[8] Just as in Ghana, worse government performance in more segregated neighborhoods in the United States could reasonably be expected to affect voters' downstream behavior independently of any psychological impacts of living in a segregated context.

Path 3 in **Figure 3** represents related situations in which the relationship between context and political behavior is mediated by differences in politicians' mobilization efforts, not residents' own direct emotional or psychological responses to intergroup contact. Varshney (2002) argues that the nature of intergroup contact (T) between Hindus and Muslims in Indian cities affects how much interethnic violence occurs (Y2) by affecting intergroup prejudices and animosity (Y1),

[6] As examples of the possible interaction between M2–M4 and Y1, in separate studies of Kenya, Kasara (2013) explores whether local electoral incentives and levels of competition (M3) mediate the effects of ethnic segregation on interethnic prejudice and trust (Y1), while Hjort (2014) explores how discriminatory preferences (Y1) affect the economic productivity (M4) of workplace teams of different ethnic compositions.

[7] Nathan (2019) finds that urban voters' ethnic social identification does not vary based on neighborhood ethnic composition, that ethnic salience does not predict vote choice, and that neighborhood-level variation in ethnic voting persists regardless of voters' social ties (e.g., cohabitation) with ethnic out-groups. A contact theory model following Path 1 of **Figure 3** cannot account for these patterns.

[8] Similarly, Lee (2018) suggests that negative consequences of local ethnic diversity often attributed to discriminatory preferences may instead be more easily explained by politicians' strategic incentives to target fewer state resources to communities with more residents from groups that do not typically support them.

similar to Path 1. If groups are socially integrated, with cooperative interactions, then violence is muted; if groups are socially segregated, with only casual contact, then prejudice and, in turn, violence become more likely.

But drawing from the same data, Wilkinson (2004) suggests that variation in violence (Y2) is more a function of the electoral incentives that different local demographic contexts (T) create for state leaders to either intentionally incite intergroup violence (and order the police to stand aside and allow it to happen) as a tool of ethnic voter mobilization (M3), or instead use security forces to suppress it. Crucially, he suggests that when politicians have electoral incentives to prevent interethnic violence, they use levers of state power to ensure it does not occur regardless of underlying intergroup animosity or prejudice (Y1). Wilkinson's (2004) analysis suggests that the causal model linking context to intergroup violence in urban India follows Path 3, not Path 1.

In a different political system, Hopkins (2010) similarly suggests that casual contact with immigrants sparks anti-immigrant political behavior among US voters only when elite rhetoric activates immigration as a salient political issue. He argues that contact without elite mobilization has little effect. This is again more consistent with the effects of context working through Path 3 than Path 1. In general, it is particularly difficult to disentangle the possibility of Path 3 from Path 1 in observational studies if politicians serve as ethnic entrepreneurs, acting as the fuel that converts intergroup contact into discriminatory political preferences and behavior (Fearon & Laitin 2000). For example, survey experiments show that, across contexts, ethnocentric rhetoric by political elites can cause voters who were not otherwise prejudiced to begin to hold prejudiced and discriminatory attitudes (Gubler & Kalmoe 2015).[9] Unless scholars carefully observe the political rhetoric strategically deployed across local communities with different demographic compositions, they risk attributing effects of contact to Path 1 that may actually operate through Path 3.

Path 4 instead represents situations in which the effects of context on political behavior are mediated through economic outcomes and behavior. In lab-in-the-field experiments in Uganda, Habyarimana et al. (2007) suggest that ethnically diverse communities can be less effective than homogeneous communities at cooperatively self-providing economically valuable local public goods because of a reduced ability to locate and sanction free-riding members of an out-group. Importantly, they show that these negative effects of ethnic diversity on economic cooperation can occur entirely separately from any discriminatory preferences or prejudices.[10] This implies a path from diversity at the community level to the weaker economic outcomes associated with unsuccessful cooperation that does not have to move through M1 or Y1 in **Figure 3**. In turn, poorer economic outcomes, including due to community-level dynamics that directly impact voters' pocketbooks, have long been argued to affect voting behavior (Carlin & Singer 2013, Healy et al. 2017).

Greater levels of direct economic competition between ethnic groups in more diverse local contexts may also link context to political behavior through Path 4 if competition drives voters to rationally adopt more exclusionary policy preferences against out-groups. Allport (1954) himself recognized that economic competition provided a possible alternative mechanism through which

[9]However, Mason et al. (2021) suggest that ethnocentric rhetoric may be most politically successful among voters who already hold these attitudes, indicative of the arrow representing an interaction between M3 and Y1 in **Figure 3**.

[10]They find no evidence of lower cooperation due to reduced altruism towards out-group members (Habyarimana et al. 2007). Others instead do find that prejudiced attitudes block cross-ethnic cooperation in similar experiments in other settings (Enos & Gidron 2018). Our claim here is not that Path 1 never exists, but that Path 4 also plausibly exists separately from it.

intergroup contact could affect behavior separately from prejudice, but he intentionally set it aside because his substantive interest was in prejudice.[11]

Importantly, the plausibility of each of Paths 2–4 of **Figure 3** varies with features of the political system, including with the types of standard political and institutional variables that scholars of comparative politics think about regularly. We should not expect these mechanisms to be universally operative across cases, nor expect that findings about the effects of context on behavior from the American politics literature—where these questions have been examined most extensively to date—extend to other parts of the world.

For example, Path 2 is likely influenced by the degree of clientelism and nonprogrammatic distribution of state resources. Path 3 should depend on the degree of electoral competition and the broader political salience of different group cleavages in society, which combine to inform politicians' incentives to attempt to activate or downplay particular identity cleavages when confronted with different constellations of local demographics. Path 4 should depend on how prevailing economic institutions affect competition between groups, as well as the degree to which limits to state resource provision increase the importance of cooperative nonstate provision for local economic outcomes.

FUTURE DIRECTIONS

Armed with greater clarity about the treatments and mechanisms being studied, we believe the field of context and contact research is poised to make productive moves in several new directions that take this research agenda further afield from direct tests of contact theory. In the remainder of this review, we highlight three possible future directions: (*a*) work that expands the definition of "out-group" to other forms of identity; and work that expands the scope of what counts as one's context to include (*b*) physical, or built, environments and (*c*) digital, virtual, or online (computer-based) environments.

Other Dimensions and Intersections

In their meta-analysis, Pettigrew & Tropp (2006) argue that, although originally devised for racial and ethnic encounters, contact theory can be extended to other groups. Though the literature discussed thus far centers ethnicity as the key feature of context to be examined, an individual's environment is a complex fabric of social attributes that intersect and interact with ethnicity.[12] The same can be said of identities: The individual experiencing the context or contact brings their own set of identities and experiences. Yet, there is a paucity of intersectional or interactional work that speaks both to ethnic and nonethnic dimensions.[13]

A large literature on both the United States (Newman 2015, Johnston & Newman 2016, Sands 2017, Minkoff & Lyons 2019, van Holm 2019) and the rest of the world (e.g., Phillips 2017,

[11] "Clashes of [real economic] interests and values do occur. . . . [But] these conflicts are not in themselves instances of prejudice," notes Allport (1954, p. 229). He continues that it is "difficult to distinguish realistic conflict from prejudice proper" but that there is a need to "set off" the "inherently competitive elements in the situation" from the "accompanying prejudice" (p. 230).

[12] We use "ethnicity" as shorthand for "race and ethnicity," in line with the common practice in comparative politics to use "ethnicity" to refer to categories that include both race and ethnicity. Where we refer to race (e.g., in the context of "racial threat"), we typically do so because we are referencing a literature in American politics that employs that term.

[13] "Intersectional" refers to the joint effect of two or more identities (e.g., ethnicity and socioeconomic status), while "interactional" refers to the "bundle of sticks" approach, which aims to disaggregate ethnicity into constitutive elements (Sen & Wasow 2016).

McClendon 2018, Rao 2019, Sands & de Kadt 2020) studies effects of exposure to local inequality on political outcomes. At minimum, what this work shares with research on racial and ethnic contact is that the treatment entails exposure to an out-group. Often, similar outcomes are studied too, especially voting behavior and policy preferences.

Yet, efforts to unify these streams of research are rare. While there is some overlap, research focused on ethnic contact has largely developed in isolation from work on contextual inequality. Instead, studies of interethnic contact tend to treat socioeconomic dimensions as something to be controlled or assumed away. Meanwhile, with a few exceptions (e.g., Gay 2004, 2006), racial or ethnic dimensions of economic inequality are typically taken for granted, especially in research on wealthy, majority-White countries. Existing research tends to focus on inequality that is explicitly White, or, by focusing on averages that obscure the difference between groups, implicitly White.

This is puzzling given that economic inequality often falls along ethnic lines, and economic segregation goes hand in hand with ethnic segregation. The contact literature sometimes engages with economic threat or competition as a potential explanation for out-group discrimination, but less attention is paid to how socioeconomic divides may present barriers to cooperation, beyond the effects of ethnic divisions. For their part, inequality scholars tend to focus on measures of inequities that are agnostic to ethnicity, such as Gini coefficients applied to aggregate populations, and ignore the ethnic dimensions of economic inequality when studying the public's attitudes and policy preferences. Considering that the way groups are arranged in space affects the salience of ethnic differences (Enos 2017), it is plausible that economic inequality magnifies this effect; however, future research should explore how types of disparities interact with each other and with space.

Another area for potential growth is how other identities such as gender, age, and LGBTQ identity (Broockman & Kalla 2016) intersect with ethnicity and socioeconomic status to shape context effects. Work that aims to study direct contact with members of an ethnic or economic out-group tends to neglect these additional dimensions or sees them as secondary to the main effects of ethnicity or socioeconomic status. Meanwhile, we have reason to believe that, for example, a member of the White majority group's response to encountering a young Black man will differ from their response to encountering an elderly Black woman, and that women and men might have different responses to out-group members who share or do not share their gender identity. This is also important because public policies—which can reflect the attitudes of the mass public—have differential effects on members of these intersecting identity groups (e.g., Michener & Brower 2020), which can in turn generate policy feedback loops.

Built Environments

Your context is not just the people around you—your demographic environment. It is also the buildings, streets, and public spaces through which you navigate daily life—your built environment. Long traditions of research in sociology, psychology, criminology, urban planning, and architecture show that built environments—the physical and material geographies that surround us—have their own direct effects on attitudes and behavior.

Built and demographic environments likely interact: The effect of exposure to an out-group may depend on features of the built environment in which that exposure takes place. While a few political scientists have begun to investigate how built environments shape political participation and collective action (Hopkins & Williamson 2012, Gade 2020, LeVan 2020), and normative political theorists are now creatively turning their attention toward architecture (Bell & Zacka 2020), these are all still very nascent literatures. Exploring the intersection of built and demographic environments more closely seems to be fertile ground for future research on contextual effects.

Existing research outside political science suggests three broad ways in which built environments could alter the effects of demographic environments on political behavior. First, built environments affect how social networks form, potentially moderating the effects of context along Path 1 in **Figure 3**. Building from classic studies of urban design, most famously Jacobs (1961), sociologists have demonstrated that the design of neighborhood streets and the locations and features of public spaces affect the depth and breadth of social ties among neighbors (Browning et al. 2017, Small & Adler 2019).[14] Grannis (1998, 2009) shows, for example, that which neighbors one interacts with in a sustained and cooperative way can be a function of the street network, such as whether or not one has to cross a major road to walk between two homes. Using demographic data for a given administrative unit (e.g., census tract) to quantify residents' demographic environment—the dominant approach across the observational studies described previously—may significantly misstate whom residents are truly exposed to by failing to incorporate how the built environment shapes how they navigate that geographic area in the course of their daily lives.

The diversity in urban forms around the world—especially amid rapid, often unplanned urbanization in many low- and middle-income countries—presents rich opportunities for the comparative study of how different built environments moderate the effects of intergroup contact across a range of political systems. Existing literature on built environments also suggests important unanswered puzzles for contact scholars. For example, Jacobs (1961) and the long tradition of sociologists, urban planners, and architects building from her work argue that urban designs produce the most positive societal outcomes when they facilitate a wide range of casual, fleeting contacts among neighbors but do not force neighbors to develop deep relationships that intrude on privacy (Zacka 2020). Yet, the many political scientists of intergroup relations building from Allport (1954), such as Enos (2017), see casual contacts on the street without more sustained cooperative interaction as those most likely to feed prejudice and racial threat. While seemingly contradictory, these perspectives could become more compatible if scholars devote greater attention to the interaction of built and demographic contexts. Jacobs's (1961) positive effects may occur only under certain demographic conditions, while the casual contacts that Allport (1954) and Enos (2017) suggest heighten intergroup tension may become problematic only in particular built environments.

In an initial foray into this issue, Bollen (2022) studies the effect of "familiar strangerdom" across social divisions—the effect of repeated casual contact with the same set of immigrants—on support for anti-immigrant political parties in South Africa. She uses cellular phone mobility data to track the actual frequency of casual encounters between likely immigrants and nonimmigrants. By leveraging physical features of Johannesburg's city street network as an exogenous instrument for rates of copresence of immigrants and nonimmigrants at given intersections, her work takes into account the ability of the built environment to facilitate or discourage casual contact. Bollen (2022) demonstrates that while casual contact with greater numbers of immigrants results in larger vote shares for anti-immigrant parties, this tendency diminishes substantially when contact is repeated, producing interactions more in line with Jacobs's (1961) claims. More work of this sort, which explicitly incorporates information about physical features that affect contact, is needed.

Second, separate from any effects on social networks, built environments may also affect residents' psychological orientations and mental health. Physical signs of disorder in the built environment have been linked to differences in individual and collective efficacy (Sampson &

[14]The architecture of individual residential buildings is argued to have similar effects at a more micro scale (Newman 1972, Zhao 1998).

Raudenbush 1999), with potential implications for collective action and political participation. Moreover, stimuli from the built environment, including overcrowding, as well as noise, light, and air pollution, can cause stress that affects physical well-being (Halpern 1995, Evans 2003). Living in certain types of physical dwellings (e.g., in slums) can also cause residents to feel social stigma that both subjects them to external prejudices from neighbors and leads to changes in self-esteem and aspirations (Halpern 1995) that could, in turn, affect political behavior. To the extent that physical neighborhood conditions correlate with ethnicity—widely the case in settings with residential ethnic segregation—these psychological or mental health effects could interact with the demographic contextual effects that operate through Path 1 of **Figure 3**.

Third, built environments may also moderate the relationships between demographic context and political behavior that operate through the other mechanisms in **Figure 3** (Paths 2–4). A key constraint on the state's ability to interact with citizens, especially in countries with lower capacity states, is the legibility of communities to state officials. Politicians can only effectively tax, mobilize, deliver resources to, or even repress communities that they can see—that is, communities that they can find, reach, and know enough about to appropriately target (Scott 1998, Brambor et al. 2020). Scott (1998) vividly argues that this legibility is a function of the built environment, such as whether street layouts are orderly and grid-like or instead chaotic and inscrutable to outsiders. To the extent that a built form like the street grid affects the cost to politicians of distributing resources or mobilizing supporters in a given community, the built environment should alter Paths 2 and 3 of **Figure 3**. Similarly, built environments may affect the degree to which community members can successfully observe, locate, and sanction free riders to induce economic cooperation, which may also moderate any effects of demographic context that work through economic conditions, as in Path 4.

Moreover, even as built environments moderate the effects of demographic environments in these three ways, the built environment itself may be an endogenous outcome of the political effects of demographic context visualized across **Figure 3**. For example, the types of housing built in a given neighborhood are plausibly a direct outcome of that neighborhood's demographics. Politicians responding to voters' prejudice against a nearby ethnic out-group (Path 1) might block the construction of the very housing stock that would have created more cooperative intergroup contact and improved intergroup relations (Trounstine 2018). In another setting, state leaders withholding resources from a politically rival ethnic group (Path 2) might refuse to formalize property rights (Hassan & Klaus 2022), forcing residents to continue living in less legible housing that stymies future state resource provision and pushes voters further toward clientelism and ethnic voting (Paller 2019, Auerbach 2020).

Computer-Based Environments

Communications scholars have long shown interest in parasocial, or mass-mediated, interactions (Horton & Wohl 1956). More recently, the idea that intergroup contact might occur virtually has received increased attention. The parasocial contact hypothesis extends Allport's (1954) theory to media, positing that exposure to out-groups via mass media can reduce prejudice (Schiappa et al. 2005). While the tendency for television viewers to form parasocial relationships with celebrities and with fictional characters is well documented by communications scholars, the parasocial contact hypothesis takes the further step of arguing that the processes involved in positive intergroup contact described by Pettigrew (1998) can also occur via mediated contact. Political scientists have seized on this idea, examining the effects of exposure to out-groups in the media or through sports fandom, which occurs largely through mass-mediated channels (Alrababa'h et al. 2021, Rosenzweig & Zhou 2021).

We see mass media exposure as a fundamental departure from what Allport (1954) envisioned. The main conditions Allport identified for successful contact—equal status between groups, common goals, intergroup cooperation, and social sanction—are unlikely to hold. However, we think it plausible that some forms of contact might occur via social media or on other interactive platforms, and that seemingly apolitical content encountered on these media might constitute a form of context relevant to political behavior. That said, the interactions that occur naturally on social media platforms are more likely to be casual than cooperative, and more brief than sustained, deviating from Allport's ideal.

Given the amount of time individuals spend on social media, there is much that we still do not know about how politics are shaped by intergroup encounters on these platforms. In addition to social media, other platforms such as videoconferencing applications or even video games (Adachi et al. 2015) provide opportunities for researchers to test the limits and potential of contact that occurs outside the classical in-person paradigm. The work that has been done thus far—primarily by psychologists—represents just the tip of an unexplored iceberg. The earliest "E-contact" research focused primarily on text-based chatting (see White et al. 2015, 2020 for reviews), but with the acceleration and proliferation of communication technologies, the available platforms for E-contact increasingly approximate real-life experiences and encounters. An area for future growth is the use of virtual or augmented reality (O'Donnell et al. 2021). Evidence from psychological studies suggests that virtual reality can be employed to induce perspective-taking and empathy toward out-group members, which may improve intergroup relations (Herrera et al. 2018, Roswell et al. 2020). As this technology becomes more affordable and accessible, we anticipate its use to better understand difficult-to-study intergroup encounters.

CONCLUSION

Despite seemingly common themes, the literature surveyed here reflects a broad array of research questions and methodological approaches. We hope to encourage researchers to think carefully about what they mean when they claim to study context or contact effects. Researchers should consider closely where their proposed treatment sits along the dimensions of duration and depth; doing so will help them to be more precise about what it is they are studying, and where it fits within the broader body of knowledge. Likewise, rather than treat contact theory as the unifying theory of intergroup exposure, we urge the development of new theories that engage with a more extensive set of mechanisms.

Doing so will require developing a comparative politics of context and contact research that seeks to aggregate results across studies within political science rather than viewing each study as an isolated departure from classic psychology literature of the 1950s. Our discipline is well suited for this task. A key comparative advantage for political scientists studying the effects of context and contact will come from better exploring and developing our theoretical understanding of the other possible mechanisms described above, including how they interact with or offset the standard social psychological expectations of contact theory.

A researcher's choice of method, of course, should flow from the theory being tested, requiring careful consideration of the trade-offs implied by experimental versus observational approaches. Randomized experiments are powerful tools for isolating causal effects, but their tight focus often precludes the possibility of understanding more systemic dynamics. Meanwhile, observational studies in which interactions are not directly observed impede our ability to distinguish psychological from other types of mechanisms. We need both experimental and observational evidence, along with evidence from newly developing methodologies that bridge this divide, to fully grasp the political implications of context. With this diverse methodological toolkit, we believe the field

is poised to expand the theoretical reach of context and contact research into the new domains highlighted above.

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