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Abstract: Recent scholarship from political science, urban studies, and sociology conceptualizes the city as a space of decentralized democracy – a view emphasizing localization, participation, difference, and anti-hierarchical organizational form. Instead of conceiving the city as a place of atomized individuals and a locale for market exchange, this alternative framework recognizes the city’s role as “civitas” – a “space of active democratic citizenship” and “full human realization” based on open and free encounter and exchange with difference. The current research emerges from and fills a need within this perspective by examining how local urban contexts undergird and bolster new movement organizations (NMOs). Theory elaborates how urban density, land-use mix, and connectivity generate and enable interaction with the social diversity fundamental to decentralized and anti-hierarchical movements. In addition, theory also examines how urban walking mediates the relationships between these urban contextual traits and NMOs. Linear regression is used to assess the direct effects of density, connectivity, land-use mix, and urban walking on NMO activity (measured as human rights, environmental, and social advocacy groups), and the Sobel and Freedman-Schatzkin tests are employed to assess mediation.
1. Introduction

This dissertation addresses several interrelated research questions. Foremost, it explores the relationships between cities and innovative political activity. Specifically, it probes whether city contexts activate and undergird new movement organizations, defined as decentralized, anti-hierarchical organizations pursuing liberty, egalitarianism, and solidarity. It also elucidates how one’s unique experiences in cities—the ways in which an individual interacts with and makes use of urban environments and spaces—relates to this particular type of political phenomena. The thesis identifies the precise urban contextual traits that pertain to these effects, postulates how these traits interact with the ways in which individuals experience cities, and shows the subsequent implications for political outcomes. In other words, this research looks at the ways in which cities act as agentic forces in the political realm by exploring the intricate inter-relations between the distinct traits and qualities of cities, our individual experiences of them, and new movement organizations. We contend that the physical accessibility characteristic of dense, diverse, walkable cities enables a social accessibility to a variety of ideas, actions, and happenings. Encounter with difference is fundamental to the orientation of decentralized, anti-hierarchical new movement organizations. As such, through their capacity to generate and facilitate encounter with difference, cities serve as a primary social setting for these new organizations. Furthermore, we propose that pedestrian activity—i.e. walking—bridges between the physical accessibility of urban context and the social accessibility central to new movement organizations. Through walking, people experience both the physical and social diversity of their city in an engaged manner. Therefore, we contend that walking mediates the relationships between urban context and new movement organizations. This thesis develops these ideas, formulates them into testable hypotheses, and submits them to empirical test for U.S. cities.

Examining the links between urban context, walkability, and new movement organizations contributes to and extends the prominent work on Political Opportunity Structures (POS). As McCright and Clark (2006) explain, research should employ the POS conceptualization to probe the factors that cause “variation in the mobilization of social movements across U.S. communities.” Describing the POS as the “structure and dynamics of the political environment”, they note that much past research has sought to connect the emergence and mobilization of social movements to specific characteristics of the external political environment, such as institutional,
state-based variables. Yet, McCright and Clark contend that existing accounts of political opportunity structures too rigidly define the concept as equivalent to institutional factors, and argue that it remains for future work to expand POS boundaries to include additional aspects of political, social, and cultural contexts that assist in the mobilization of social movements.\(^1\) By looking at the relationships between urban contexts, walkability, and social movement organizations, our work extends the concept of POS by examining a number of other factors that help explain the emergence and mobilization of movement organizations. We agree with McCright and Clark that state-based institutions are not the only external environmental factors contributing to the formation of movement organizations. However, we extend their definition\(^2\) of non-institutional factors to study the ways in which urban spatial contexts undergird new movement organizations. By doing so, we add to and expand upon past research into the “contextual structures” for social movements.

There are several additional motivations for this research. First, by postulating the city as a context for new movement organizations, we hope to add to the growing scholarship revealing the ways in which modern cities enable important social processes. Jennings (2001) suggests that in the Western tradition, cities have been conceptualized as venues for two different forms of social activity. First, some portray the city as an “urbs”: the city as economic market, place of commercial transaction and exchange, social individualism, and self-interest. Much recent social scientific research [Acs and Arrington 2004; Currid 2007; Florida 2002, 2005; Glaeser 1994, 2003, 2007ab; Glaeser, Kallal, Scheinkman, and Schleifer 1992; Glaeser, Scheinkman, and Schleifer 1995] explores the city as the setting for economic accumulation, market exchange, and the force behind growth. This research has been influential in portraying the ways in which current-day economic processes – centered on human knowledge, skills, creative capacities, and innovation – are supported and facilitated by the proximity, diversity, and cultural offerings

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\(^1\) Referring to their study of the U.S. environmental movement, McCright and Clark (2006) write: “Our emphasis in this chapter was the local political milieu in which the environmental movement operates. Yet, other elements of this movement’s external environment are crucial to understanding its emergence, trajectory, and outcomes. We adopt Dieter Rucht’s tripartite distinction of the political, social, and cultural dimensions of the overall contextual structure. Not only is each an important part of the environmental movement’s external environment, but their key causal influences come from their dynamic interactions.”

\(^2\) McCright and Clark study the role of several non-institutional factors – including interest groups, other social movement organizations, and individual citizens – in the emergence, mobilization, and outcomes of the environmental movement in 257 U.S. cities.
afforded by the modern city. Yet, this economism is not the only conceptual framework through which to understand cities and their importance for social relations. Nor is it the perspective that this thesis takes. This study is instead situated within a different tradition, described by Jennings as “the city as ‘civitas’”: the city as a “space of active democratic citizenship, equality under the law, and civic virtue”, as well as “full human self-realization”. Instead of a city based upon individualistic “instrumental relationships of economic transaction”, the city as civitas is organized around the “active pursuit of shared purpose”, and the “sharing of a common moral space, common commitment to each other, and a common political identity”. Likewise, Young (1990) presents the city as an example of decentralized democracy – “diversity without exclusion”, as she calls it – instead of as a model of either atomized individualistic utilitarianism or exclusionary communitarianism.

Given the predominant focus – academic and popular – on the city as context for economic processes, this research adds to and further develops the second category, the city as civitas. By hypothesizing cities as spaces for new movement organizations, this thesis presents a specific characterization of the city as civitas. There are a number of reasons for focusing on this particular account. One primary reason is that although current research has looked at other important overlaps between politics and the city, there is a distinct lack of scholarship concerning this intersection of new movement organizations and cities. For instance, a number of studies [Cox 1968; Gainsborough 2001, 2005; Ley 1994; McGirr 2001; Oliver 2001; Sauerzopf and Swanstrom 1999; Walks 2004, 2006; Williamson 2008; Wolman and Marckini 1998, 2000] have pointed to differences in voting behavior, party preferences, and political attitudes between people living in and out of cities and urban contexts. Other important work [Ferman 1996; Logan and Molotch 1987; Mollenkopf 1996; Molotch 1976, 1993; Peterson 1981; Stoker 1996; Stone 1993; Weir, Wolman, and Swanstrom 2005] has focused on urban governance and the characteristics of the coalitions that influence municipal government and policy formation. Castells’ (1983) study on historical urban movements remains an important contribution. By contrast, little analysis probes the ways in which current-day movements relate to cities. Nicholls and Beaumont (2004, p.107) claim that scholarship devotes insufficient attention to the “urban arena as a site for contentious politics.” More specifically, Nicholls (2008, p.841) points out that “…few have actually opened up the urban ‘black box’ to identify
the processes and mechanisms that allow cities to play specific roles in broad social movements.” We contend that the “processes and mechanisms” linking new movement organizations and cities stem from the centrality of diversity to them and the role that cities play as spaces of difference. To date, these relationships have been neither conceptually nor empirically probed. Therefore, it remains to further develop the city as civitas through investigations of the role played by cities in the formation of new movement organizations. This research contributes to filling that space by hypothesizing and testing specific mechanisms and processes by which cities enable these organizations.

Another motivation for exploring new movement organizations is to emphasize and elucidate the important distinction between “strong” and “thin” democracy, and to give that distinction a current-day instantiation by showing that cities are locales for strong democracy. Standard liberal democratic pluralism – or thin democracy as it is colloquially called – is understood to denote a governmental system of the sort currently found in most modern constitutional republics, including the United States. A centralized system of representative delegates, it regards the individual as sovereign and atomized with fixed, inherent preferences. As such, to the thin democrat, politics is merely an instrumental process, meant to aggregate and choose from these individual preferences3. Because actual governing is delegated to representatives, proper functioning of this model relies on individual passivity and acceptance of authority. By contrast, “strong democracy” (Barber 1984), “expansive democracy” (Warren 1992), or “decentralized democracy” (Sennett 1999) is participatory in nature. It rejects the standard liberal precept that the self is atomized with fixed preferences, instead holding that individuals are socially constituted. As Barber (1984, p.188) writes, whereas thin democracy presents “politics as nothing more than the chambermaid of private interests”, strong democracy is an alternative politics – a participatory one – satisfying the need for both sociality and individuality. Furthermore, given its understanding of individuals and politics as social and interactive, strong democracy emphasizes self-transformation through participation and encounter with difference. Strong democracy is “decentralized” since it regards individuals as social and open to change, in

3 As Warren (1992, p.8) writes, thin democracy is based on a view that the “self is defined by interests that are formed prepolitically”, that these interests “reflect fixed desires”, so that democracy “is primarily a means for aggregating prepolitical interests...and not a good in itself.” Politics becomes merely an (p.9) “allocative or economic kind of activity, operating in a world of scarce values.”
contrast to thin democracy’s reliance on centralized institutions to aggregate fixed individual preferences. We argue that new movement organizations are modern forms of strong democracy, and that by studying them we gain concrete insight into an alternative to standard liberal representative systems. Also, the aims and structures of these groups are suited to cities. Because new movement organizations are devoted to self-determination, accessibility to diversity, and freedom from impositions, they thrive in dense, diverse, walkable cities, since such locales are where encounters with diverse views and people occur, and where open, free, and equal access to a broad array of experiences, ideas, and views is possible. Therefore, in this thesis we explore the idea that cities are a primary locale for strong democracy, thus enabling more precise statements concerning the city as civitas.

Probing these links between cities and new movement organizations is especially important in light of the increasing scholarly attention to decentralized social relations in general. As Cumbers et al (2008, p.185) describe, recent commentary on “globalization” and the “network society” posits a “new set of social relations”, marked by “flatter, dynamic and more fluid forms of economic and social organization.” In much of this commentary, these new social relations also become unbound from geography such that (Cumbers et al 2008) “…locationally defined communities are being replaced by delocalized networks of association.” In essence, some analysts suggest that new social forms – impermanent, decentralized, anti-hierarchical relationships and organizational forms – are accompanied by decentralized spatial forms or even complete deterritorialization. By contrast, this thesis contests this increasingly prevalent idea, especially as it relates to politics. Instead, we argue here that the decentralized, anti-hierarchical social relations of strong democracy and new movement organizations increasingly rely on and are bolstered by the spatial concentration and centralization provided by cities. Thus, this thesis is partly devoted to explicating the ways in which the centralization of space undergirds the decentralization of key political relationships.

The distinction between strong and thin democracy is also important because there have been numerous critics – both academic and activist – of thin democratic systems, many of whom suggest that they insufficiently meet the needs of the citizenry. Strong democracy – and specifically new movement organizations – is often offered as a potential alternative. In
addition, Barber (1984, p.118) contends that strong democracy’s sociality is important because the “history of the twentieth century should have taught us that when democracy cannot respond to the need for community with anything more than a pusillanimous privatism, other, more oppressive political ideologies will step in.” Lastly, with the recognition that intolerance stems from isolation, Warren (1992, p.8) suggests that strong democracy’s sociality and interactivity results in individuals that are “more public-spirited, more tolerant, more knowledgeable, more attentive to the interests of others, and more probing of their own interests.” Thus, there are a number of compelling reasons to pursue a study of strong democracy, and this thesis does so through a focus on new movement organizations.

This dissertation discusses and expands upon these issues, as well as others. It is structured as follows. Part 2 presents relevant concepts. It begins by defining new movement organizations, looking specifically at their differences from past historical movements, the reasons for their recent formation, their values and aims, and their unique organizational forms. We then describe the ways in which these qualities make new movement organizations suited to urban contexts. Urban scholarship from a variety of fields clarifies these links. Finally, we explore the role of pedestrian activity in these processes, demonstrating the important relationships of walking both to urban contexts and new movement organizations. These ideas are translated into formal hypotheses, which are also presented in this section. Part 3 discusses empirical methods, specifically covering the nature of the data to be employed, the primary and control variables, and our analytical approach. Part 4 presents our formal analyses. Part 5 discusses the results in the context of the concepts developed earlier. In part 6 we conclude, draw final implications, and discuss ways in which this research suggests future paths.

2. Concepts
This concepts section develops arguments and specifies hypotheses regarding the relationships between new movement organizations and cities. We begin by defining and characterizing new movement organizations. We then explain their relationships to urban contexts.
2.1 New Movement Organizations

New movement organizations are diverse, decentralized, anti-hierarchical political organizations pursuing expanded democracy and enhanced liberty, equality, and solidarity. Our concept of “new movement organizations” is unique, but draws upon several different literatures and reflects their intersection. Specifically, new movement organizations share characteristics with the “anti-systemic movements” described by Wallerstein and the “new social movement” organizations described by Offe and others. This section briefly explores those literatures, and develops our notion of new movement organizations from them.

Sociologist Immanuel Wallerstein has long analyzed “anti-systemic movements”. In a recent account he notes that (Amin, Arrighi, Frank, Wallerstein 1990, p.9-10) “for at least 150 years, if not longer, there have existed multiple movements throughout the world-system that have protested and organized against the multiple injustices of the existing system and have offered alternatives which they believed would bring about a fundamental change in and/or improvement of the situation.” These “multiple movements” are typically referred to as “anti-systemic”, and seek “greater democracy and greater equality in the world…. ” Furthermore, “to be antisystemic”, writes Wallerstein (1990, p.36), “is to argue that neither liberty nor equality is possible under the existing system and that both are possible only in a transformed world.” In past and current work, Wallerstein provides a description of both historical and new “anti-systemic movements”, providing examples and focusing on the values and principles that motivate them.

Wallerstein (2002) explains that historical anti-systemic movements were of two types: social – which were primarily socialist parties and trade unions waging a class struggle against the bourgeoisie or employers; or national – fighting for the creation of a national state, often against the imperial power to which they were colonized. Both emerged in the latter half of the nineteenth century and remained the dominant movements for close to one hundred years. These historical movements utilized a two-step strategy to achieve “fundamental transformations in social relations”: gain power through the state, and then change the world. Historical anti-

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4 “Anti-systemic” movements are a specific kind of social movement. Nicholls (2007, p.607) defines social movements in general as “collective forms of contentious politics activated for the purposes of achieving political goals through non-traditional means (e.g. protest, boycotts, public campaigns versus strictly electoral politics).”
systemic movements intended to make society more egalitarian and democratic from conditions prevailing under existing economic, governmental, cultural, and social systems and sources of authority. Specifically, historical movements were often motivated by the French Revolution’s slogan, “liberty, equality, fraternity”\(^5\). These movements argued for the universality of these concepts, but ultimately did not extend liberty, equality, and fraternity as far as promised, and in many cases made situations worse. Although social and nationalist movements had by the 1960s come to power over much of the world, they found that transforming society through the state was more difficult than envisioned. Under the leadership of labor or nationalist governments (Wallerstein 2002, p.33), “Alienating wage labor had not disappeared; on the contrary, it had increased as a percentage of work activity. There was little or no expansion of real democratic participation, either at the governmental level or in the workplace; often it was the reverse. On the international scale, these countries tended to play a very similar role in the world-system to that which they had played before. Thus, Cuba had been a sugar-exporting economy before the revolution and remained one after it, at least until the demise of the Soviet Union. In short, not enough had changed.” Frank and Fuentes (1990) contend that historical movements in power across the world “failed to address or resolve problems of economic exploitation and deprivation; political oppression; peace threatening or disturbing insecurity (1987 witnessed the highest level of third-world wars ever); environmental degradation; ethnic, religious, gender, age, and class discrimination, marginalization, and injustice; regional, sectoral, and community (mal)integration or segregation; and individual and other crises of identity, which are more or less rampant everywhere….\(^6\)” Wallerstein (1990, p.38-9) concludes that “despite initial advances in social equality, political liberty, and international solidarity, in the longer run, the movements disappointed, and disappointed greatly, in all three domains.” New movement organizations thus emerged to address those issues that the historical movements had neglected or made worse.\(^6\)

\(^5\) Wallerstein (1990, p.14) writes that “liberty” for the labor movement often meant “full rights of political participation, access to a secure economic base to make possible political and social choice, social control over the workplace and living space”, whereas for the nationalist movements it meant “political, economic, and cultural autonomy as a collective group”. “Equality” for the labor movement often meant “elimination of political, economic, and social differentials”, whereas for the nationalist movement it was “embodied in the concept of formal sovereignty”. Finally, “fraternity” for the labor movement meant “mutual aid and solidarity of the working classes which would thereby make possible the fraternity of all humanity”, whereas for the nationalist movement it pointed to “solidarity of the people as a people rising above internal differences”.

\(^6\) Offe (1985, p.836) writes that “…struggles and successes that were won on behalf of people as workers, employees, and recipients of social security transfers [the welfare state] were accompanied by a cumulative de-
Historical movements failed to address important social problems and fulfill their motivating values, thus leading to the rise of new movement organizations. The emergence of new movement organizations did not signal a value change, but instead a recognition that old institutions and organizational forms could not fulfill extant values (liberty, equality, and solidarity) and solve pressing social problems.\(^7\) For instance, Offe writes that (1985, p.849-50) “personal autonomy is by no means a ‘new’ value; what is new is the doubt that this value will be furthered as a more or less automatic by-product or covariant of dominant institutions such as property and market mechanisms, democratic mass politics, the nuclear family, or the institutions of mass culture and mass communications. What is at issue is not the values but the mode of implementation of values…..” New movement organizations arose to fulfill these classic values – liberty, egalitarianism, and solidarity (LES) – while rejecting many of the precepts (statist orientation, centralization, hierarchical organizational form) of the older movements. In addition, with increasing societal complexity come demands that LES extend to more aspects of civil society than the narrower set with which older historical movements were concerned (i.e. industrial, class, labor matters). New movement organizations develop around these expanded priorities and create new institutions and organizational forms outside of party politics, the state, and the market, which are now regarded as insufficiently able to fulfill society’s needs.

The new institutions and organizational forms that characterize new movement organizations merit attention. Drawing upon literature on the “new social movements”, we contend that new

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\(^7\) Offe (1985, p.849) suggests that “there is certainly nothing new in moral principles and demands such as the dignity and autonomy of the individual [liberty], the integrity of the physical conditions of life, equality and participation [equality], and peaceful and solidaristic forms of social organization [fraternity]. All these values and moral norms advocated by the proponents of the new political paradigm are firmly rooted in modern political philosophies (as well as aesthetic theories) of the last two centuries....”

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movement organizations are (Offe 1985, p.826) “neither ‘private’ (in the sense of being of no legitimate concern to others) nor ‘public’ (in the sense of being recognized as the legitimate object of official political institutions and actors)…. As is also the case for new social movements, new movement organizations are instead a form of “non-institutional politics which is not provided for in the doctrines and practices of liberal democracy and the welfare state.” Offe (1985, p.826-7) further explicates these organizational forms by comparing non-institutional politics to other forms of non-institutional action. He notes that a “minimum requirement for using the word ‘political’ for some mode of action is that the actor makes some explicit claim that the means of action can be recognized as legitimate and the ends of action can become binding for the wider community. Only those social movements that share these two characteristics have a political quality and will therefore interest us here.” New movement organizations are the kind of non-institutional action – i.e. political action – where the means are legitimate and the ends are taken to be binding for the wider community, as in cell 4 of Figure 1. They exist in an “intermediate”, non-institutional sphere that is neither state-oriented nor fully private. By contrast, cell 3 is an example of a non-political retreat into private concerns. In this kind of non-institutional action, a religious group uses legitimate means, but its ends are not intended to apply to the wider community (i.e. they are private). New movement organizations pursue LES, have non-institutional, decentralized organizational forms, and practice legitimate and binding political activity.

Figure 1: Schema of Forms of Noninstitutional Actors

<table>
<thead>
<tr>
<th>means/actors</th>
<th>ends</th>
<th>binding</th>
</tr>
</thead>
<tbody>
<tr>
<td>not recognized by political community as legitimate</td>
<td>not binding for wider community if accomplished</td>
<td>“private crime”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>recognized as legitimate</td>
<td>sociocultural movements advocating religious practices</td>
<td>“terrorism”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>“sociopolitical movements”</td>
<td>3</td>
</tr>
</tbody>
</table>

(reproduced from Offe 1985, p.827)

Also, recent scholarship (Wallerstein 1990, 2002, 2004; Graeber 2003; Offe 1985; Johnston, Laraña, Gusfield 1994) distinguishes them from the previous historical movements that focused on class or nationalist issues, and were statist, centralized, and hierarchical organizations. These new movement organizations are still committed to pursuing LES but have issue concerns
extending beyond economic demands, and include environmental and ecology organizations, feminists, campaigns of racial or ethnic minorities, organizations for human rights, gay/lesbian organizations, antiwar organizations, and “alternative globalization” organizations. They regard their decentralized organizational forms as consistent with their ends. For instance, Graeber notes that these new movement organizations have (Graeber 2003, p.327) no “organized structure”, “central head or decision maker”, or “central command or hierarchies”, and are highly committed to diversity. Wallerstein (2002) underscores this diversity by noting that the Seattle alternative globalization protests included environmentalists and other “single issue groups” of the sort listed above, as well as “anarchist” groups, and trade unions. The new movement organizations contend that hierarchical, centralized structures – whether state or capital – impede the spread of LES, limit self-determination, and lead to a relatively less democratic world. Importantly, the decentralized, anti-hierarchical organizational forms are actually very recent innovations. From the 1970s to early 1990s, many of these new movements mimicked political parties and retained many hierarchical elements, official membership, voting for officers, and bureaucratic domination. Some were even dominated by unions or political parties or other actors, such as the Tuscany environmental movements that were supported by mayors and their parties (Della Porta and Andretta 2002). Eventually there was a reaction against such hierarchy within the new movement organizations⁸ themselves.

Finally, the relationships among liberty, equality, decentralization, and diversity are important to our study of new movement organizations and urban contexts. For new movement organizations, liberty means being free from constraints on self-management. To them, the major constraint to liberty is social inequality – the hierarchy and centralization that limits freedom by subordinating some individuals to others. Thus, as McKay, Elkin, Neal, and Boraas (2008, p.9) point out, new movement organizations regard liberty and equality as “mutually self-supporting” such that centralized and hierarchical institutions inhibit freedom and self-management. An illustration of the links between the ends of liberty, the means of social equality and decentralization, and diversity comes from the anti-statist, anti-capitalist German

⁸ As noted, the earliest instances of these movements sometimes mimicked the hierarchy of political parties and states, or aligned themselves with parties and states. More recently, these movements have emphasized decentralization and anti-hierarchical forms. As such, the more recent anti-hierarchical instances of these movements are sometimes referred to as “new new social movements”.

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“autonomist” organization (also known as the Autonomen). Katsiaficas (2006, p.187) writes that: “the Autonomen are relatively unencumbered with rigid ideologies. The absence of any central organization (or even primary organizations) helps keep theory and practice in continual interplay. Indeed actions speak for most Autonomen, not words, and the sheer volume of decentralized happenings generated by small groups acting on their own initiative prohibits systematic understanding of the totality of the movement, a first step in the dismantling of any system. No single organization can control the direction of actions undertaken from the grassroots…. [The Autonomen] want self-determination and ‘the abolition of politics’, not leadership by a party.” There is no imposed, constraining “ideology” and no centralized organization to enforce it, which would limit the ideas and actions accessible by individuals. Cumbers et al (2008) point out that centralized, “verticalist” politics is exclusionary, since this form of politics is more effective if diverse people, ideas, and approaches are excluded, leaving the centralized organization to efficiently enforce the ideological program⁹. Instead of the impositions of a central organization, the non-institutional, decentralized approach favored by new movement organizations is supposed to allow for encounter with diverse viewpoints and happenings, making possible self-governed and self-determined individuals and societies. These organizations contend that without social equality, some individuals will impose their views and tendencies on others. Those imposed upon will not encounter diverse experiences, people, and ideas, and thus will be hindered in their ability to self-manage. As Warren (1992, p.12) writes, “autonomy is an inherently social capacity that individuals develop through their interactions with others, by coming to know others both as separate human beings with their own unique capacities, problems, and interests, and as beings with whom one shares at least some experiences, problems, and interests.” The socially equal, decentralized organizational forms of these groups permit the flourishing of and encounter with diverse ideas, actions, and happenings which are necessary for self-management and autonomous action.

Along these lines, Routledge (2003, p.335) writes that underpinning the new movement organizations “is a conceptualization of protest and struggle that respects difference, rather than attempting to develop universalistic and centralizing solutions”, adding that out of this diversity

⁹ “Verticalist” politics include political parties, unions, and representative governments. As Cumbers et al (2008, p.186) note, these institutions are characterized by “conventional hierarchical structures, vertical social relations based on delegation, and formal organizational processes.”
has emerged a “coalition of difference”. These coalitions of difference retain (Nicholls 2008, p.848) the “distinctive organizational, political, and ideological traditions” of their participants while also recognizing “their dependence on diverse and inclusive networks to address complex issues.” This coordination with diversity is often founded upon a devotion to “loosely articulated concepts like [‘justice’, ‘liberty’, and ‘equality’] that provide diverse actors with a common objective that can be applied to a wide variety of issue areas”, while still permitting freedom for diverse approaches. Nicholls (2008, p.848-9) adds that as these coalitions of diversity take shape, participants learn about other issues, discover that “these issues are equally responsible for determining the livelihood conditions of their constituent groups”, and thus “begin to perceive their particular issues in complementary ways”. These discoveries eventually reorient movement organizations to broader campaigns for “justice”, “liberty”, or “equality”, as opposed to narrower struggles for parochial concerns. The range of issues that can be effectively addressed is widened such that “the same cluster of insurgents from a city can play a major role in municipal living wage campaigns, metropolitan-based environmental justice campaigns, and national immigrant rights campaigns.”

Therefore, new movement organizations are based upon the links between decentralization and encounter with diversity. These links – and especially the importance of diversity to these organizations – are central to our explanation of the relationship between new movement organizations and cities. Routledge (2003, p.334, emphasis added) alludes to this relationship when he writes that “grassroots globalization networks forge an associational politics that constitute a diverse, contested coalition of place-specific social movements.” Cumbers et al (2008, p. 187, emphasis added) write that these horizontalist, decentralized, diverse political relationships need “spaces in which people can interact to mutual benefit, as opposed to the annual congress mechanism of traditional parties, designed to create a line to which members will adhere.” The diversity that is a fundamental aspect of these decentralized political entities requires a social setting, and we propose that walkable urban contexts fulfill this role. Cities are spaces of difference, generating and enabling interaction with new social insights, influences, and activities, and thus bolstering and undergirding the formation of these new movement organizations. Therefore, having defined and characterized new movement organizations, the remainder of Part 2 is devoted to detailing how cities act as social settings for them.
Specifically, we hypothesize relationships between urban contexts, pedestrian behavior, and this unique form of decentralized democracy – new movement organizations.

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2.2 Urban contexts, walkable cities, and new movement organizations

As noted, new movement organizations are instances of decentralized democracy. This decentralization emphasizes diverse encounters and social accessibility, evoking familiar concepts of the city and linking these organizations to walkable urban contexts. We explicate these ideas throughout the remainder of this thesis, but they have a longstanding conceptual basis in established democratic theory. For instance, Sennett (1999) explores the relationships between democracy and cities, and concludes that democracy thrives on features that are found in urban areas. Looking back to the agora of ancient Greece, he writes that (p.276) a democracy “supposes that people can consider views other than their own. This was Aristotle’s notion in the Politics. He thought that the awareness of difference occurs only in cities because every city is formed by synoikismos, a drawing together of different families and tribes, of competing economic interests, of natives with foreigners.” If authoritarianism implies the forced conformity to a single viewpoint, democracy is an opposing condition where one has access to and may be influenced by a diverse variety of views and modes of action. Early theorists felt democracy should thrive in cities, given urban diversity and the wide variety of choices available in cities. Likewise, Young (1990, p.226-7) offers the city as “an appropriate alternative vision of a democratic polity” based upon “an ideal of city life as a vision of social relations affirming group difference…without exclusion.” Similar to Sennett, city life is (p.237) “a form of social relations” which Young defines as “the being together of strangers”, a condition of being with those that are unfamiliar and likely different. She continues by explaining that (p.238) the “urban ideal expresses difference [and thus also democracy] as…a side-by-side particularity, neither reducible to identity nor completely other. In this ideal groups do not stand in relations of inclusion and exclusion, but overlap and intermingle without becoming homogeneous…."

More recently, Glaeser (2008) associates democracy with cities, noting that the atomized private spaces of “dispersed rural societies” historically led to monarchical rule, whereas the diverse, interactive public spaces of cities powered by urban density “connects citizens and enables them
to meet and plan and talk” thus supporting “the coordinated action that creates and defends democracies.”

These perspectives establish a connection between democracy and urban locales by contending that cities provide the encounters with difference that democracy demands. However, this thesis makes a more specific contention by arguing that it is decentralized democracy that finds a social setting in cities. This claim is of primary concern, since we regard new movement organizations as a form of decentralized democracy. Decentralized democracy rejects the unified, fixed, centralized character of representative states and political parties. As previously explained, it instead regards individuals as social beings capable of self-management from encounter with difference, holds that difference and self-management is limited by centralization, and contends that new institutions should incorporate such diversity. Thus, given the relationship between decentralization and diversity, Sennett (1999, p.283) notes that “decentralized democracy has a particular affinity to the modern city.” As instances of decentralized democracy, new movement organizations emphasize diversity and social accessibility and are thus undergirded by the ability of cities to generate and facilitate access to diverse people and ideas.\(^\text{10}\) Nicholls (2008, p.841) writes that cities contribute to the formation of movement groups by acting as “relational incubators” that generate diverse social forms possessing high-grade specialized resources available for use by organizations. In addition, “the rich and diverse resources found in complex cities can only yield their advantages” through interactions and encounters between diverse social forms. Since location “in a common urban system facilitates bridging opportunities”, cities both generate and enable the encounters with diverse social forms upon which new movement organizations are based. We now translate these general concepts into more concrete considerations of the precise mechanisms linking urban contexts and new movement organizations. As such, we first discuss the role of spatial context – sometimes denoted as “place” – in explanations of social outcomes. This leads us to characterize the components of “urban context”, and to look at their links to social outcomes in general and new movement organizations.

\(^{10}\) We have chosen to situate our analysis of new movement organizations and their relationship to cities within precise boundary conditions and cultural contexts, namely modern Western societies. We argue that comparatively, cities in the Western world are less rigid, have relatively more open governments, and are under relatively less social stress. As such, the nature of the choice sets in such societies and cities is broader and more conducive to new movement organizations.
organizations in particular. These links mirror the above discussion of cities and democracy, and lead to several testable hypotheses. Finally, we explain how the value of urban context is fulfilled by pedestrian activity, and present an argument that the effects of urban context on new movement organizations are mediated by walking. These relationships are also subsequently hypothesized.

2.2.1 Urban context

The influence of “place”\textsuperscript{11} on social and behavioral outcomes is a topic of relevance to the current work, as well as one of debate. A recent exchange between Gans (2002) and Gieryn (2002) reveals the contours of this important conversation. Gans (2002) rejects the idea that place has independent and direct causal impacts on social processes and outcomes. To Gans, either place has direct effects on social outcomes, or it enters causal relations only as acted upon by its social users. He definitively argues for the latter, saying that (2002, p.330) “the direct effects of [place] on society are limited”. Gans (1968a,b,c) critiques “the fallacy of physical determinism”, contesting the notion that the physical environment affects social phenomena. He (1968a) contends that there is no direct effect of physical form on social outcomes, arguing instead that individuals select into locations that enable them to fulfill existing predispositions and sought social behaviors. The social behaviors and outcomes present in certain places are not due to place-specific traits, but instead to the characteristics and predispositions of the persons who live in and sort into those places. Gans argues (1968b) that the working-class culture and demographics of neighborhood inhabitants explain the “urban vitality” and “abundant street life” in places like Greenwich Village, as opposed to the urban design characteristics that Jacobs (1961) singles out. Elsewhere (1968c), he counters Wirth’s (1938) famous ideas regarding the social effects of urban density, diversity, and size by writing that most urban residents are isolated into homogenous ethnic, occupational, or cultural groups that shield them from the supposed effects of physical form. Conversely, Gieryn (2000, 2002) adopts an opposing perspective, arguing instead that the “agentic” properties of place should be recognized. Gieryn (2000) suggests that place has three necessary and sufficient conditions: geographic location, material form, and investment with meaning and value. He writes that a “spot in the universe, with a gathering of physical stuff there, becomes a place only when it ensconces history or

\textsuperscript{11} Place refers to spatial context, built and physical form, or natural or constructed environments.
utopia, danger or security, identity or memory” (p. 464-5). Contrary to Gans, place is neither background nor an intermediary variable in social processes, but instead is “an agentic player in the game – a force with detectable and independent effects on social life” (p. 466). Gieryn (2002, 342) indicates that he “respects the agentic capacity of material realities (natural or built, volcanoes or street-grids) and acknowledges that outcomes (beliefs about nature, behavior patterns, social change) are substantially and autonomously caused by this ‘stuff’.”

This thesis focuses on the effects that a specific kind of place – cities – has on political outcomes. We agree with Gieryn that place is not merely a background to social processes, and will explore how cities act as contexts for new movement organizations. Scholars have written about cities and the social effects of urban environments for close to a century, focusing on the outcomes arising from the physical and social forms that cities take. In this vein, Park (1915) argues that the city has both a physical and a moral order which interact to shape and mold one another. Commenting on Park’s influence on later urban sociology, Sennett (1969, p.13) suggests that Park “believed that the city could be described in such a way that its functional, tangible character would ultimately reveal the cultural and ethical possibilities for life in it.” For Sennett (1969, p.6), the tangible character of the city centers on cosmopolitanism, diversity, and the coexistence of a variety of people and functions in one location. Urban cosmopolitanism makes the city “the set of social structures that encourage social individuality and innovation” and “the instrument of historical change.” Similarly, Talen (2006a, p.237) notes that “Lewis Mumford wrote about the importance of social and economic mix often, citing the ‘many-sided urban environment’ as one with more possibilities for ‘the higher forms of human development’”. Jacobs (1961) depicts the ways in which urban size, density, diversity, and the intricate movements and interactions of city residents on streets and sidewalks contribute to a vibrant urban vitality, an active and fulfilling street life, and the tolerance for difference12. Jacobs and Appleyard (1987) identify five characteristics that they regard as central for creating

12 Jacobs writes, “The tolerance, the room for great differences among neighbors—differences that often go far deeper than differences in color—which are possible and normal in intensely urban life, but which are so foreign to suburbs and pseudosuburbs, are possible and normal only when streets of great cities have built in equipment allowing strangers to dwell in peace together on civilized but essentially dignified and reserved terms. Lowly, unpurposeful and random as they may appear, sidewalk contacts are the small change from which a city’s wealth of public life may grow” (p.72).
livable urban environments that also “invite and encourage public life” (p.170). These traits are density\textsuperscript{13}, integration of activities (living, working, and shopping) in close proximity to each other, appropriate arrangement of buildings to enclose public space, many different buildings with complex relationships to each other, and livable streets and neighborhoods. They argue that the “good urban life” is only fully available when all five of these physical characteristics are present, and also argue that places lacking these traits are also more likely to lack the community that they consider to be important to social life.

Fischer’s seminal “subcultural theory of urbanism” (1975) is a central sociological argument regarding the impact that cities have on their residents. Fischer contends that “differing levels of urbanization” result in “cultural and behavioral differences”, or in other words, that there are “social effects of urbanism” (p. 1319). Fischer looks at the ways in which and reasons why urban size and density account for “urban unconventionality”. Fischer’s hypothesis is that the larger or denser a city is, the more varied and intense its subcultures will be. Big, dense cities create subcultures that often stand outside of society’s predominant norms and which create ideas and innovations which are unconventional, like avant-garde art, organized criminal communities, and radical political organizations\textsuperscript{14}. Jacobs (1969) famously portrayed how urban form – density especially – eliminates distance between diverse people holding varying ideas, while also fostering the combinations of these ideas into economic innovations. Building on Jacobs, Knudsen et al (2008) demonstrate empirically the direct effects of urban population density on technological innovation as measured by patents. Reflecting both Jacobs and Fischer, Glaeser (2000) uses data from the GSS to examine how city size and density shape ethical systems. First, Glaeser finds that density-enabled mobility and exit to other communities weakens the enforceability of social sanctions, and therefore results in unconventional ethical.

\textsuperscript{13} Dense, pedestrian-friendly design seems especially important to them. They write: “Some minimum number of people living and using a given area of land is required if there is to be human exchange, public life and action, diversity and community” (p. 172).

\textsuperscript{14} Fischer also elaborates the mechanisms by which urban size and density contribute to the variety and intensity of subcultures. These mechanisms draw upon: (i) Durkheim’s concept of ‘dynamic density’ and the associated diversity through specialization; (ii) the ways in which urban size and density enable critical mass – i.e. that larger subcultural populations enables a subculture to construct the institutions needed to maintain and foster itself; (iii) subcultural intensity is higher when there is greater contrast and conflict among them – i.e. in cities.
He also finds that ethical “change” occurs more easily and quickly in cities. For instance, he finds that people in big cities are more likely to approve of gays, pre-marital sex, the provision of birth control information to teenagers, and women working.

This literature associates urban form with “accessibility”. Furthermore, it relates spatial accessibility with social accessibility. Handy (1996, p.184) defines accessibility as the “intensity of the possibility of interaction.” In other words, accessibility is “a way of describing the opportunities for participating in activities…available to residents of a given place.” In a later article, Handy and Niemeier (1997, p.1175) write that accessibility “is determined by the spatial distribution of potential destinations, the ease of reaching each destination, and the magnitude, quality, and character of the activities found there.” Urban contexts offer greater accessibility: they concentrate destinations, ease transportation to them, and offer a greater quantity, quality, and variety of activities. The enhanced choices and possibilities to which individuals have access are shaped by urban density, size, land-use mix, and design. Handy describes a kind of spatial accessibility – easy access to a variety of physical destinations in an urban context. But the above research concludes that there is (Talen 2006a, p.234) a “complex encounter between the physical world and the social world”, between urban context and social diversity. Specifically, spatial accessibility enables social accessibility – i.e. encountering, interacting with, and accessing diverse social influences, insights, and activities. Solnit (2000, p.176) reflects this view when she writes: ““What distinguishes the city,’ writes Franco Moretti, ‘is that its spatial structure (basically its concentration) is functional to the intensification of mobility: spatial mobility, naturally enough, but mainly social mobility.’” As land-use mix, design, urban size and density enable encounters with a greater number and variety of physical destinations and activities, one also encounters a greater variety of social influences, ideas, and people. Opportunities for diverse social interaction increase with increasing spatial interaction. We

15 Or, as Glaeser puts it, “there is a regular pattern of people in cities being more likely to have transgressed our society’s most extreme ethical standards” (p. 484).

16 He concludes that “urban residents are likely to hold ethical attitudes that are more gradually being adopted elsewhere….Cities appear to be genuinely more progressive on a wide range of ethical topics” (p. 488).

17 Talen (2006b) finds a positive statistical relationship between measures of urban form and social diversity in Chicago neighborhoods.
contend that this relationship between spatial and social accessibility has clear implications for new movement organizations.

However, scholarship has not reached consensus regarding the relationships between urban context, diversity, and social processes. Other theories contend that city context creates atomized individuals and undermines interactions, trust, and societal engagement. Like many early twentieth century sociologists, Louis Wirth was interested in how urbanization changed the nature of social relations, suggesting that (Smith 1980, p.1) “the large size, high population density, and heterogeneous population mix resulting from urbanization produced numerous social and social-psychological consequences.” Wirth (1938) posits specific relationships between increasing urban size, density, and diversity, a society’s declining capacity to maintain moral “consensus”, and resulting difficulty in achieving society-wide collective action. He suggests that urban size and density impels contact with diverse and conflicting social influences, thus subjecting an individual to friction, disorientation, and stress. Wirth concludes that individuals withdraw into an atomized private life in order to minimize one’s exposure to conflict and disorientation, thus disengaging from public life, leading to loneliness and anomie, as well as threatening (Smith 1980, p.5) “social harmony and consensual integration” and society-wide collective action. In general, Wirth contends that urban density, size, and diversity undermine the (Smith 1980, p.15) “morale and sense of direct participation and involvement in common concerns that derive from living in an integrated society”, instead inducing retreat into atomization. Reflecting Wirth’s thesis, Glaeser and Gottlieb (2006) and Brueckner and Largey (2008) find that some aspects of “civic engagement” such as church attendance, volunteering, and socializing associate negatively with density. Putnam (2007) finds negative correlations between ethnic diversity and traditionalistic social capital18. Alesina and La Ferrara (2000) find negative relationships between participation in associational groups and racial and ethnic fragmentation and income inequality. Costa and Kahn (2003a, 2003b) find negative relationships between volunteering and organizational membership and income inequality. Conversely, Senior (2008) quotes Harvard criminologist Robert Sampson as saying that “this idea that cities are bastions of lonely, despairing people is a myth”. Senior surveys recent studies

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18 However, Putnam (2007) finds a positive relationship between diversity and participation in protest politics and social reform groups, a finding in line with our concepts.
suggesting instead that urban contexts mitigate loneliness and encourage connection by increasing the size of social networks and encouraging “weak ties”.

Despite this lack of consensus, our work proceeds from the standpoint that urban context engenders diversity as well as enables encounter with it, and these encounters undergird the formation of new movement organizations. As previously elaborated, these organizations are examples of decentralized democracy and are based upon the encounter with diverse ideas and influences. Unlike more centralized institutions, their decentralized organizational forms permit these encounters with social diversity. Although permitted by decentralization, we argue that social diversity requires a social setting to develop and flourish, and that spatially accessible urban contexts provide this setting. Therefore, new movement organizations emerge from and are bolstered by urban contexts, since it is there where social access to diverse views, people, experiences, and ideas is most prevalent. As such, we propose a number of specific hypotheses pertaining to the relationships between the components of urban context and these movements. Several aspects of urban context are particularly important in terms of their ability to generate encounters with social diversity – density, mixed urban uses, and connectivity.

Density – the concentration of people, dwelling units, and activity in a location – both generates diversity and facilitates encounter with it. As noted above, Fischer (1975) explains the ways in which urban density generates and supports diverse subcultures. He argues that densely concentrated cities possess large numbers of people at close proximity to each other, and therefore can sustain unique commercial enterprises, minority ethnic communities, divergent cultural movements, and dissenting ideas. Whereas places with thinly spread populations are homogenizing and can typically only support mainstream enterprises and views, dense cities construct the infrastructure needed to support diverse social forms by concentrating many people together in close range. Jacobs (1961, p.147) explicates this threshold effect of urban density when she writes that the diversity “that is generated by cities rests on the fact that in cities so many people are so close together, and among them contain so many different tastes, skills, needs, supplies, and bees in their bonnets.” In addition, Glaeser (2000) links diversity to urban density, the absence of physical space between actors, low transport costs, and the resultant easy mobility to other urban districts. Density undergirds diversity because low transport costs in
dense cities facilitate exit to nearby urban districts to avoid social sanction. City density supports diversity by providing opportunities for anonymity. In addition to generating diversity, density facilitates encounter with it. The facility to encounter diverse physical locales in a dense context also brings one in contact with diverse social influences. Density creates low transport costs for both people and ideas, enabling encounters with diverse people, ideas, social influences, and physical destinations. Glaeser (2000, p.484) writes that dense “cities excel in permitting combinations [of diverse ideas] because of the absence of physical distance.” Jacobs, Glaeser, and others add that new ideas emerge from the interaction with and combination of diverse perspectives, making dense cities conducive to innovativeness. The presence of and encounter with diverse social forms is a central characteristic of new movement organizations. Since dense urban contexts generate such diversity and facilitate interaction with it, we conclude that density is a key component of a social setting for these organizations. Therefore, we offer the following hypothesis: H1: In urban locales with higher density, there is a higher incidence of new movement organizations.

Another aspect of urban context – mixed land use – is also related to social diversity in important ways. Mixed use refers to (Saelens, et al 2003, p.81) the “level of integration within a given area of different types of uses for physical space, including residential, office, retail/commercial, and public space.” Like density, urban contexts characterized by mixed use generate diversity and enable encounter with it. As Jacobs (1961) explains, mixed land uses helps to generate diversity by drawing more people to a district at different times, and for different reasons. Multiple uses draw greater numbers and varieties of people to a district, enabling the support of more establishments, services, cultural enterprises, and unique ideas. As Jacobs (1961, p.162) explains, the “more intricately mixed [i.e. from different uses]…the pool of users are, the more services and shops there can be that need to sift their clientele from all sorts of populations.” By drawing different people to an urban district, mixed use generates diversity. Encounter with diversity also occurs, because the intermixing of different uses in an urban district means that the

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19 Glaeser (2000, p.476) writes: “One of the great strengths of urban areas is that these areas give their residents a large number of potential neighborhoods in which to reside. However, this strength also means that punishment becomes much more difficult. In a small town, joining a new social group means leaving the city entirely. In a big city, joining a new social group may just mean hanging out in a different tavern. Low transport costs in cities and the many urban neighborhoods generally will mean that exit is easier and non-legal punishments will be less severe.”
diverse individuals drawn to them would also intermix as they passed between the various destinations. Once again, spatial accessibility (possibility for interaction with various spatial locales) undergirds social accessibility (encounter with diverse social influences). On this, Jacobs (1961, p.163) writes that the “effectiveness” of mixed use comes from interactions that take place as diverse people are drawn to use the same streets for different reasons. She notes that “[i]f their paths are separated from one another, or buffered from one another”, as in single-use districts, “there is no mixture in reality.” Thus, mixed use urbanism contributes to interaction with the diverse social influences that are critical to new movement organizations. As such, we offer a second hypothesis: H2: In urban locales with more mixed land uses, there is a higher incidence of new movement organizations.

Mixed building age is a third component of urban context that generates and enables encounter with diversity. A variant on mixed urban uses, mixed building age (Jacobs 1961, p.212) “has a direct, explicit connection with diversity of population, diversity of enterprises, and diversity of scenes.” As was the case for mixed urban uses, mixed building age draws different types of people into a district, where they then interact and mix. The relationship between diversity and mixed building age assumes an association between the age of a building and the nature of the activity held in it. Only well-established, standardized establishments can be inhabitants of new buildings, because they can support the high costs of construction. By contrast, less established, experimental, and higher risk enterprises often seek older and less expensive buildings to inhabit. To achieve social diversity, districts need a mix of old and new buildings. Jacobs (1961, p.188) further explains the relationship between diversity and mixed building age by writing that “[a]s for really new ideas of any kind…there is no leeway for such chancy trial, error and experimentation in the high-overhead economy of new construction. Old ideas can sometimes use new buildings. New ideas must use old buildings.” Furthermore, Merrifield (2002, p.45) provides a lucid contemporary example of these relationships in a description of the financial constraints faced by developers in Baltimore. Writing about the transformation of a deserted factory site in the Canton neighborhood into a retail shopping area, he explains that “provision for small-scale businesses incur high-risks: those catering exclusively to a Canton catchment area would be unlikely to have extensive monetary turnover. Here small businesses would be hard-pressed to pay any market rent, especially one
that would give the developer an adequate return for their initial investment.” Small less-established, locally oriented enterprises cannot easily inhabit new or extensively reconstructed buildings. For diversity, there must be a mix of new and old buildings. Finally, the intermixing of different aged buildings means that the diverse people drawn to the district and diverse ideas also intermix. As such, this third aspect of urban context also generates and facilitates encounter with diversity. Therefore, a third hypothesis is: 

\[ H3: \text{In urban locales with more mixed building ages, there is a higher incidence of new movement organizations.} \]

Connectivity is the final component of urban context that we consider in terms of its relevance to social diversity. Saelens et al (2003, p.82) explain that “…connectivity characterizes the ease of moving between origins (e.g., households) and destinations (e.g., stores and employment) within the existing street and sidewalk-pathway structure.” Connectivity is directly related to street design, and is higher when streets are arranged in a grid pattern with short blocks. Urban areas with high connectivity provide direct routes as well as alternative routes to a destination. By contrast “low connectivity is found in the layout of modern suburbs and is characterized by a low density of intersections (e.g., long block sizes), barriers to direct travel (e.g. cul de sacs), and few route choices.” Connectivity decreases travel costs in the city, increases alternatives and choices, and creates opportunities for interactions with diversity. Whereas streets with long blocks are (Jacobs 1961, p.179) “self-isolating”, short blocks enlarge the situation of one’s everyday life by removing impediments to movement and interaction. Given the limited alternatives to travel, too few people are drawn to districts with long blocks to support diverse establishments, enterprises, or ideas. By contrast, districts with short blocks do not have (Jacobs 1961, p.180) “mutual isolation of paths”, but instead have streets that are “mixed and mingled with each other.” Instead of the mutual isolation of people, the possibility for alternative routes also increases the possibility for interaction and encounter. These streets support diversity by drawing more people to use them, and enable encounter with diversity as people intermix when using the same streets for different reasons. As noted earlier, spatial accessibility undergirds social accessibility – short blocks make accessible a wider range of destinations and resultantly open up possibilities for social exchange. Whereas long blocks (Jacobs 1961, p.183) “…thwart the potential advantages that cities offer to incubation, experimentation, and many small or special enterprises”, by contrast “…frequent streets and short blocks are valuable because of the fabric of intricate cross-
use that they generate among the users of a city neighborhood.” The connectivity provided by short city blocks bolsters the diversity that is central to new movement organizations. Therefore, we offer this hypothesis: \textit{H4: In urban locales with higher connectivity (in the form of short city blocks), there is a higher incidence of new movement organizations.}

2.2.2 \textit{Walkable cities}

The above hypotheses link aspects of urban context to new movement organizations, by positing ways in which cities generate and enable access to diverse social influences and ideas. Since encounter with diversity is a primary component of new movement organizations, urban contexts that enable such encounters act as amenable social settings for this kind of political activity. In this section, we contend that it possible to add further specificity to our description of the links between urban context, encounter with diversity, and new movement organizations. We add this specificity by exploring how pedestrian activity – walking – mediates between urban context and the encounters with diverse social forms that undergird new movement organizations. Walking is the means by which individuals make use of density, connectivity, and mixed-use, and through which the value inhering in these urban qualities is fully enacted. Accessibility – both spatial and social – is latent in urban context, but not automatically realized. Because walking is an engaged way of experiencing and interacting with the physical and social forms of one’s city, it is a primary means by which both spatial and social accessibility are realized. For instance, du Toit et al (2007, p.1679) suggest that walking “is expected to link [urban form] and sociability by increasing opportunities for local social interaction and the development of a sense of connection between people and the places where they live.”\textsuperscript{20} This section elaborates the connections between urban context, walking, and diversity in two parts. First, we describe the relationships between walking and urban context, showing how walking is facilitated by urban environments and is therefore the primary means by which the diverse resources of the city are accessed. Second, we contend that it is through walking that social diversity is fully activated and its benefits realized. Finally, we offer several hypotheses depicting the relationships between walking, urban contexts, and new movement organizations.

\textsuperscript{20} Similarly, Lund (2002, p.303) hypothesizes that “the built environment will increase the likelihood of community-oriented behaviors, such as walking, and these behaviors will in turn enhance community-oriented attitudes, such as neighborhood attachment.”
2.2.2.1 Walkable Cities – Background: Recent surveys and historical accounts provide insight into the reasons people walked in the past, why they walk now, and the attitudes and behaviors of pedestrians. For instance, the U.S. Department of Transportation’s (DOT) National Household Travel Survey indicates that 8.6% of all daily trips in 2001 were walks, while 86.6% of daily trips were taken in personal vehicles. The NHTS also finds that walking is more prevalent in cities, where 11% of all trips are on foot. DOT’s 2002 National Survey of Pedestrian and Bicyclist Attitudes and Behaviors asked respondents a variety of questions regarding their walking behavior, including if, how much, and why they walk. The survey found that 72% of people 16 or older walked on average at least once a week in the summer months. Their average walk was found to be 1.3 miles, with 50% of walks less than 1 mile. Respondents found walking desirable, with 77% reporting that they would like to walk more than they do now, 88% stating that walking is enjoyable as a group activity, and 79% saying it is enjoyable alone. In addition, of those who walk for non-recreational purposes, 75% reported that other transportation alternatives were available. The survey also found that 38% of walking trips were for personal errands, 28% for exercise or health, 21% for recreation and leisure, 5% to get to work or school, and 4% because it is required for their job.

2.2.2.2 Walkable Cities – Walking and Urban Context: Previously, we looked at the ways in which certain aspects of urban context – density, mixed-use, and connectivity – generate diversity and enable encounter with it. To demonstrate how pedestrian activity bridges urban context, diversity, and new movement organizations, we first must reveal links between urban context and walkability, specifically showing that density, mixed-use, and high-connectivity enable pedestrian activity. For instance, Saelens et al (2003, p.80) suggest ties between urban form and walking. Since walking “can be done for multiple purposes” – such as exercise, recreation, occupation, basic transportation, and getting to work – it is “more susceptible to environmental influence”. Jacobs (1961, p.230) writes that in “dense, diversified city areas, people still walk, an activity that is impractical in suburbs and most gray areas”. For Handy et al (2002, p.66), neighborhoods are “pedestrian-oriented” if “they have relatively high densities of development, a mix of land uses, a street network with high connectivity, human-scale streets, and desirable aesthetic qualities in that they make walking both more viable and more appealing. Areas with opposite characteristics are labeled ‘automobile-oriented’ in that they make walking,
transit, and other alternatives to the car a practical impossibility or at least a significant challenge.”

As Saelens et al (2003) note, these urban traits enable walking because they promote proximity and directness of travel. Saelens et al (2003, p.81) define proximity as “the distance between trip origins (i.e. where one is) and destinations (i.e. where one is going).” Density – of people, housing, retail, etc. – leads to walking by increasing the number and variety of destinations in an area, and thus increasing the proximity to any one destination. Land-use mix enables walking by increasing proximity to different uses in a district. When land uses are sufficiently co-located, distance between uses decreases and walking becomes feasible and attractive (Smith et al 2008, Boarnet and Sarmiento 1998). As Saelens explains, in many cities residences are often above or nearby street-level shops or offices, drastically decreasing distance between uses and facilitating walking. By contrast, in suburbs land uses are often purposely separated, increasing distance between them, and rendering walking difficult, if not impossible.

Directness of travel – i.e. connectivity – is the second factor enabling walking. As noted previously, connectivity reflects the ease of moving between origins and destinations. Connectivity and directness is achieved when (Saelens et al 2003, p.82) “route distance is similar to straight-line distance.” This is understood to occur when streets are laid out in grid patterns with shorter blocks. As Smith notes (2008, p.238) directness is “expected to enhance walkability by making walking trips relatively short, direct, and convenient”, by “slowing car traffic via multiple stopping points”, and by providing alternative routes to one’s destination. Demerath and Levinger (2003, p.218) suggest that connectivity enhances walkability by placing few “constraints on a person’s chosen route between two destinations”, thus enabling freedom of movement and freeing people to take part in as full a range of encounters as possible.

21 Similarly, Smith et al (2008, p. 237) contend that walkable neighborhoods “are those designed to include the 3Ds: population density, pedestrian-friendly design, and a diversity of destinations.” Freeman (2001, p.70) suggests that high urban densities and mixed uses combine to facilitate walking, while Talen (2002) explicitly ties walking to the concept of “access” by contending that in urban districts with density, mixed-use, and high connectivity, pedestrianism provides access to proximate locations by linking them together.

22 Saelens et al note that travel cost, environmental considerations, and other aspects of convenience (like availability of parking) may also influence travel mode choice.
Finally, a growing empirical body of work explores the relationship between these urban environmental traits and pedestrian activity. For example, in a study of the ten largest consolidated metropolitan statistical areas in the U.S., Boer et al (2007) find that people are more likely to walk when their neighborhoods have higher levels of business diversity as well as higher percentages of four-way intersections. In their examination of 27 Canadian neighborhoods, Craig et al (2002) find a positive association between walking to work and a composite urban form index which includes measures of the number and variety of neighborhood destinations. In an analysis of a survey of U.S. adults, Berrigan and Troiano (2002, p.75) find that walking is significantly more prevalent among adults who live in older homes and traditional urban neighborhoods with “sidewalks”, “denser interconnected networks of streets”, and “a mix of business and residential uses”. Greenwald and Boarnet (2002) find that the distance of one’s walking trips negatively correlates with walking, while density and connectivity positively relates to walking. Frank and Pivo (1994) find that employment and population density and mixed-use relate positively to walking and negatively to single-occupancy-vehicle use. Also, Ewing (1997, p.113) notes that “every shred of evidence points to a strong link between [density and vehicle miles traveled]. As densities rise, trips get shorter, transit and walk mode shares increase, and vehicle trip rates drop. All of this translates into lower [vehicle miles traveled].” Recent empirical research (Handy et al 2006) considers the possibility that individuals who prefer to walk “self-select” into locations conducive to walking, finding instead that urban context still directly impacts walking behavior after controlling for attitudes and preferences for walking. In combination, these papers demonstrate a link between walking and city characteristics. Walking is more prevalent in urban environments characterized by density, connectivity, and mixed use. Therefore, we contend that it is the ability to walk that distinguishes cities, whereas driving is not unique to cities and as noted above is often found to negatively relate to urban contextual characteristics.

23 Their results held even after controlling for university education, income, and poverty.

24 Their results held even after controlling for gender, race/ethnicity, education, income, and health level.

25 Their results held even after controlling for age, gender, income, race, and the number of children in the household.

26 Their results held even after controlling for income, gender, and age.
2.2.2.3 Walkable Cities – Walking and Encounters with Diversity: Since walking is enabled by urban context and is the primary means by which individuals directly experience their city, we contend that it is walking that links urban context with the generation of and encounter with the diverse resources of the city that serve as a factor encouraging new movement organizations. For instance, Leyden (2003) writes that “some neighborhood designs enable or encourage social ties or community connections”, specifically “those that are mixed use and pedestrian oriented.” Walkable cities enhance these social ties because “they enable residents to interact” with diverse social forms. By contrast, car-dependent suburbs are not walkable, and “are not places designed to encourage social interaction.” Jacobs and Appleyard (1987, p.174) note that “the central value of urban life is that of publicness, of people from different groups meeting each other and of people acting in concert, albeit with debate. The most important public places must be for pedestrians, for no public life can take place between people in automobiles.” In empirical analysis, Leyden finds that social interaction and social capital is higher in pedestrian neighborhoods.28 Likewise, Freeman (2001) claims that high urban density facilitates walking, and that walking then enables diverse encounters. Conversely, low density sprawl “reduces opportunities for spontaneous social interaction. By eliminating the feasibility of other modes of transit, sprawl forces residents to rely solely on the automobile. Compared to walking or taking the bus or the subway, there is obviously much less chance for spontaneous interaction with neighbors while driving.” Using data from the Atlanta, Los Angeles, and Boston samples of the Multi City Survey of Urban Inequality, Freeman (2001, p.74) finds that a “1% increase in the proportion of individuals driving to work is associated with a 73% decrease in the odds of an individual having a neighborhood social tie.”29

27 We also find correlations between automobile use and urban contextual traits. For instance, with our data (described below) summarized to zip code tabulation areas we find that population density, employment density, retail density, housing density, and a measure of connectivity – Census blocks per square miles – all negatively correlate to the percentage of the workforce that drove to work.

28 Leyden finds that residents in walkable neighborhoods: feel more connected to the community, are more likely to know their neighbors, are more likely to have trust in other people, are more likely to contact elected officials and participate in politics, and are more likely to socialize with friends.

29 This result holds even after controlling for a variety of demographic and socio-economic variables, such as age, gender, race, marital status, education, employment status, and income.
We can further elucidate and emphasize this latter point – the link between walking and the encounter with difference – by appealing to specific qualities of walking to demonstrate that pedestrian activity is especially responsible for maximally extracting value latent in the diverse social forms in the city. We suggest that it is through walking that the value held in diverse social forms is most meaningfully activated and realized. We further suggest that in order to benefit from the value inhering in diversity, simply encountering it is insufficient. Rather, to obtain the full utility available in these diverse social forms, one must actively and directly engage with them. Walking, by enabling face-to-face contact, provides opportunity for such engagement. For instance, Storper and Venables (2004, p.351) contend that “existing models of urban concentration are incomplete unless grounded in the most fundamental aspect of proximity; face-to-face contact.” Since walking is facilitated by the proximity and connectivity provided by urban context, we can conclude that face-to-face contact is a fundamental aspect of walkable cities. In walkable urban contexts, individuals have enhanced opportunity to be physically proximate and collocated with one another as they move about city streets, sidewalks, and parks. In such locales, walking permits individuals to have (du Toit et al 2007, p.1679) “frequent casual [face-to-face] contact, whether intentional or spontaneous”, which enables a deeper engagement and familiarity with difference, thus permitting a fuller realization of the value inhering in that diversity. In general, face-to-face contact enables individuals to effectively utilize diverse information when they encounter it. Since face-to-face contact is enabled by walking, we claim that walking makes diverse encounters more useful as well as more probable. This enhanced capacity to utilize diverse social forms is not as easily achieved in private spaces, as when people access information online or experience their city in ways that do not allow for face-to-face encounters, such as in automobiles.

Recent scholarship provides insight into face-to-face contact, its relationship to urban contexts, and its importance in terms of interactions with diversity. In general, this scholarship centers on the idea that (Storper and Venables 2004, p.353) “[face-to-face contact] has unique behavioural and communicational properties which give it specific advantages as a technology of communication, coordination, and motivation.” Routledge (2003, p.339) writes that “[t]rust, friendship, reputation, predictability…are elements of political ability that certainly cannot be reduced to technologies of communication. There are features of face-to-face interaction
(gestures, tone, pitch, indexicality)…that are highly informative; these features are concealed in computer-based interactions.” He adds that “it is unlikely that trust between individuals who have not met can be fully developed over the Internet. The depth of trust required to plan, and conduct, political action together is place- and face-based.” Similarly, Cumbers et al (2008, p.194) write that new movement organizations require interactions among diverse social influences and participants, and these “connections are grounded in place- and face-to-face [encounters]” which “facilitate mutual solidarity” necessary for collective action. Furthermore, Storper and Venables (2004, p.355) point out that face-to-face interaction “allows visual ‘contact’ and ‘emotional closeness’, the basis for building human relationships.” Encounters among diverse individuals are the basis of new movement organizations, but these encounters should be face-to-face. In order for encounters between diverse individuals to be meaningful and to permit emergence of collective political action, traits like trust, solidarity, friendship, and predictability must be present. These traits are a function of the face-to-face contact that walking provides.

In addition to providing traits necessary to effectively utilize diversity and engage in collective action, face-to-face contact improves communication between diverse social elements, especially when uncodified knowledge is involved. We contend that much of the information held by diverse social forms in cities is uncodified. Uncodified information, explain Storper and Venables (2004, p.354) is “only loosely related to the symbol system in which it is expressed.” For instance, one can learn a formal symbol system (i.e. the “syntax” and “grammar” of a language), but fail to decipher certain information, subtleties, and idiosyncrasies in the system (i.e. “metaphors” of a language). We contend that much of the information inhering in the diverse social forms in the city is of this uncodified, “metaphorical” variety, in that it “includes much linguistic, words-based expression”, as well as reflecting the different experiences, dispositions, and backgrounds of urban inhabitants. In order to successfully transmit the “metaphors” of diverse groups to each other, face-to-face contact is necessary; acquiring and mastering the formal “syntax” is not sufficient. As Storper and Venables (2004, p.354) write, uncodified information requires communication enabling “parallel processing of the complexities of an issue.” As such, “[face-to-face] encounters provide an efficient technology of transaction under these circumstances by permitting a depth and speed of feedback that is
impossible in other forms of communication.” Storper and Venables also argue that since face-to-face contact “occurs on many levels at the same time – verbal, physical, contextual, intentional, and non-intentional”, it is especially suited to facilitating communication of uncodified knowledge. They conclude that “the full benefits of diversity and serendipity are only realized through these multiple levels of communication”, in other words, through face-to-face communication. Given the uncodified nature of the information inhering in the diverse social forms of the city, face-to-face contact – enabled by walking – is needed to ensure effective transmission of this information across groups. New movement organizations arise from such effective transmission.

In summary, by enabling face-to-face encounters with diverse social influences, walking enables individuals to utilize diverse information. As just described, face-to-face does so by engendering trust, solidarity, predictability, and emotional intensity, as well as by improving communication of uncodified knowledge. In other words, walking empowers individuals to utilize the diversity to which they have access. Solnit (2006) writes that the “exercise of democracy begins as exercise, as walking around, becoming familiar with the streets, comfortable with strangers, able to imagine your own body as powerful and expressive rather than a pawn. People who are at home in their civic space preserve the power to protest and revolt, whereas those who have been sequestered into private space do not.” Walking enables one to “become familiar with the streets” and comfortable with strangers, thus creating agents who obtain the capacity to act. Experiencing urban contexts through walking produces emboldened, empowered individuals, who can then be forces for change. As such, several additional hypotheses emerge:

\[H5: \text{In urban locales with more walking, there is a higher incidence of new movement organizations.}\]

\[H6: \text{In urban locales, walking mediates the relationships between elements of urban context and new movement organizations.}\]

\[H6a: \text{In urban locales, walking mediates the relationship between density and new movement organizations.}\]

\[H6b: \text{In urban locales, walking mediates the relationship between mixed land uses and new movement organizations.}\]
H6c: In urban locales, walking mediates the relationship between mixed building ages and new movement organizations.

H6d: In urban locales, walking mediates the relationship between connectivity and new movement organizations.

We now subject these concepts and hypotheses to empirical test. Our analyses make novel use of several familiar data sources. Part 3 introduces these sources, describes both the nature of the data and the particular variables used in the course of the analyses, and where necessary provides a rationale for the utilization of certain variables. Part 3 concludes by elucidating the analyses to be carried out, the results of which are subsequently presented in Part 4.

3. Data and Methods

3.1 Data

As noted, this research examines relationships between urban contextual factors, pedestrianism, and new movement organizations. As such, this requires measures of urban context, walking, and movement organizations. These measures are described in depth below. The Zip Code Tabulation Area (ZCTA) is the unit of analysis for this study. Developed as a “new statistical entity” for the 2000 Census, ZCTAs “are generalized area representations of U.S. Postal Service (USPS) ZIP Code service areas” created to “overcome the difficulties in precisely defining the land area covered by each ZIP Code”\(^\text{30}\). The Census Bureau created ZCTAs “to meet requests by data users for Census data by ZIP Code area”\(^\text{31}\). ZCTAs are constructed “using ZIP Codes associated with addresses collected during Census operations and stored in the Census 2000 Master Address File (MAF).” The majority USPS ZIP Code is identified for MAF addresses within a Census 2000 tabulation block, which is the smallest geography for which Census provides data. Once majority ZIP Codes are identified, Census tabulation blocks with the same majority ZIP code are aggregated into a ZCTA which gets the majority ZIP Code assigned as its ZCTA code. There is a nationwide total of 33,322 ZCTAs. ZCTAs differ from other Census statistical areas primarily because they are computer delineated using addresses rather than

\(^{30}\) See www.census.gov/geo/ZCTA/zcta.html.

formally delineated before the Census is carried out. We use ZCTAs primarily because it is the smallest geography for which our dependent variables are available. As Rousseau (1985) points out, the level of analysis of a dataset is determined by the level of the dependent variable. In addition, ZCTAs are appropriate for our analyses considering that urban contextual traits differ across areas within cities, and there are typically numerous ZCTAs within cities. ZCTAs therefore allow for more fine-grained measurement of urban contextual elements.

We now detail the dependent variables (i.e. measures of new movement organizations) and independent variables (i.e. measures of urban context, demographic traits, and other controls) used in our analyses. We draw our data from two sources: (1) Zip Code Business Patterns, and (2) the U.S. Census.

3.1.1 Dependent Variables – New movement organizations

The data used to construct measures of new movement organizations are drawn from the ZIP Code Business Patterns. ZIP Code Business Patterns (ZBP) is the ZIP Code version of the County Business Patterns (CBP), “an annual series that provides subnational economic data by industry.” Like CBP, ZBP data include “the number of establishments, number of employees, and payroll data.” Establishments in both CBP and ZBP are classified according to the 2002 North American Industrial Classification System (NAICS). An establishment is defined as “a single physical location at which business is conducted or services or industrial operations are performed…Establishment counts represent the number of locations with paid employees any time during the year.” We use ZBP to attain the number of new movement organization

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33 In fact, our dependent variables use data from the Zip Code Business Patterns (ZBP), described below in 3.1.1. ZBP data use ZIP Codes, not ZCTAs. The ZIP Codes used by ZBP are those reported by the businesses or establishments, or on administrative address lists (www.census.gov/epcd/www/zipstats.html). The Census Bureau built ZCTAs in 2000 based on both residential and commercial addresses, but prioritized residential addresses because they were verified during the decennial Census operations. The Census Bureau did not have the same level of verification for commercial address locations, and as such the resulting ZCTAs may not match commercial addresses quite as well as residential address locations. This may be a small source of measurement error in our analyses, since ZBP uses ZIP Codes for business and other non-residential address locations. However, most of the 30,000+ ZIP Codes should sufficiently match the Census ZCTAs.

34 See www.census.gov/econ/cbp/intro.htm.
establishments in all ZIP Codes for a given year. To the best of our knowledge, we are the first social scientists to analyze these data for research into new movement organizations. Located deep in electronic files of the US Census of Business, they were unearthed by researchers at the University of Chicago, and are a rich data source that permit the sort of contextual analysis social movements scholarship needs to sharpen its theory.

ZBP includes three NAICS categories we utilize as measures of new movement organizations: (1) Environment, Conservation, and Wildlife Organizations; (2) Human Rights Organizations; and (3) Other Social Advocacy Organizations. Environment, Conservation, and Wildlife Organizations (NAICS code 813312) are establishments promoting the preservation and protection of the environment. They address issues such as clean air and water, global warming, conserving and developing natural resources (including land, planet, water, and energy resources), and protecting and preserving wildlife and endangered species. Human Rights Organizations (NAICS code 813311) are establishments promoting human rights either for a broad or specific constituency. They address issues such as protecting and promoting the broad constitutional rights and civil liberties of individuals suffering from neglect, abuse, or exploitation; promoting the interests of specific groups, such as children, women, senior citizens, or persons with disabilities; improving relations between racial, ethnic, and cultural groups; and promoting voter education and registration. Other Social Advocacy Organizations (NAICS code 813319) are establishments engaged in social advocacy (except human rights and environment, conservation, and wildlife preservation). They address issues such as peace and international understanding; community action (excluding civic organizations); or advancing

35 See www.census.gov/econ/cbp/definitions.htm.


37 See www.census.gov/cgi-bin/sssd/naics/naicsrch?code=813311&search=2002 NAICS Search. Human Rights Organizations (NAICS code 813311) include: Advocacy organizations for retired persons, Civil liberties organizations, Developmentally disabled advocacy organizations, Human rights advocacy organizations, Mentally retarded advocacy organizations, Senior citizens advocacy organizations, Veterans rights organizations.
social causes such as firearms safety, drunk driving prevention, or drug abuse awareness.\(^{38}\) We have these three measures for all ZIP Codes, for all years from 2001 to 2006.\(^{39}\)

These three variables have several important strengths as measures of new movement organizations. First, the ZBP data cover the entire US, thus enabling full national analyses or analyses of specific sub-areas (such as the ZIP Codes from cities of various size classes). Second, ZBP provides data summarized to ZIP codes, which are small geographies that offer desirable granularity in analyses of urban context as well as making available sufficient observations for both national and sub-national analyses. Third, ZBP data are available for a number of recent years (2001-2006), enabling examinations of changes over time. Fourth, we suggest that these three variables – Environmental, conservation, and wildlife organizations; Human Rights organizations; and Other Social Advocacy organizations – achieve the majority of important traits characterizing new movement organizations. For instance, the establishments captured by these three measures are committed to pursuing liberty, equality, and solidarity (LES), which as previously discussed are the primary concerns of new movement organizations. However, as also noted before, new movement organizations arose in part to extend LES demands to previously neglected aspects of civil society, given the predominant focus by historical movements on industrial, class-based, and labor concerns. These measures of human rights, environmental, and other diverse social advocacy establishments reflect both the commitment of new movement organizations to the pursuit of LES and the expansion of priorities to domains beyond industrial and class-based matters. Also, we suggest that our measures are indicative of the non-institutional politics characterizing new movement organizations. These three measures portray groups engaging in political action in that they employ legitimate means in pursuit of ends that are societally binding. They reflect non-

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\(^{38}\) See www.census.gov/cgi-bin/sssd/naics/naicsrch?code=813319&search=2002 NAICS Search. Other social advocacy organizations include: Accident prevention associations, Antipoverty advocacy organizations, Aviation advocacy organizations, Community action advocacy organizations, Drug abuse prevention advocacy organizations, Drunk driving prevention advocacy organizations, Firearms advocacy organizations, Gun control organizations, Neighborhood development advocacy organizations, Peace advocacy organizations, Public safety advocacy organizations, Social change advocacy organizations, Social service advocacy organizations, Substance abuse prevention advocacy organizations, Taxpayers advocacy organizations, Temperance organizations, Tenants advocacy associations, World peace and understanding advocacy organizations.

\(^{39}\) The Establishment data are contained in the Complete ZIP Code Industry Detail File for each year. The website for the 2006 data is: www.census.gov/econ/cbp/download/index.htm.
institutional politics in that they pursue this political action in a realm alternative to purely private or public realms. Our variables depict groups operating outside of recognized political institutions like parties and representative governments, as well as pursuing concerns beyond parochial, private matters. In addition to conveying non-institutional politics, our measures are also reflective of social movements, in that they pursue political goals through non-traditional means. In lieu of electoral politics, Environmental organizations, Human Rights organizations, and other Social Advocacy groups likely utilize methods common to movements such as protest, boycotts, and public campaigns. Finally, as noted in section 2.1, new movement organizations reject the statist and hierarchical orientation of the historical movements, instead pursuing LES claims through new decentralized, anti-hierarchical institutions. The groups represented in our measures are generally consistent with these latter traits, in that they are not rigidly verticalist and hierarchical, and are more decentralized and participatory than institutionalized forms of politics like political parties or representative governments. Yet, to the extent that our measures include groups with paid employees, they do not measure up to the idealized conception of new movement organizations as having (Graeber 2003) “no organized structure” and no “central head or decisionmaker”. Ideally, we would have data on political entities that were more grassroots and ad hoc and less formalized than the establishments included in our ZBP measures. At present, we contend that such data are not available in a format that provides the other important qualities that ZBP does offer – wide geographic coverage, fine-grained units of observation, and temporal range. However, surveys of Sierra Club members reveal that the average member also belongs to local and ad hoc environmental organizations.\footnote{Personal communication from Sierra Club staff via Terry Clark.} Thus, by measuring membership in these more formalized advocacy organizations we are also capturing – with error – membership in more localized ad hoc organizations more reflective of new movement organizations. Our measures are largely, though imperfectly indicative of new movement organizations.

3.1.2 Independent Variables
We have two categories of independent variables to describe: (i) urban contextual variables, and (ii) other demographic and socio-economic controls.
3.1.2.1 Urban contextual variables

As described above in section 2.2.1, we have three categories of urban context – density, connectivity, and land use mix. As such, we also have variables for each of these three categories, described below. We also measure pedestrian activity, the importance of which was described in section 2.2.2. Unless otherwise indicated, the data for these various measures are taken from the U.S. Census. The variables are measured at the ZCTA level of analysis.

3.1.2.1.1 Density Measures

We calculate four different density measures: Population density, Housing Density, Retail Density, and Employment Density. These are described below.

Population Density: Population Density is calculated as the quotient of population divided by land area. The Census 2000 Gazetteer ZCTA file\(^{41}\) provides land area per square mile for all ZCTAs in the U.S., as well as 2000 ZCTA population\(^{42}\). We calculate 2000 population density by dividing 2000 ZCTA population by land area per square mile for ZCTAs. We also calculate population density for 1990. ZCTAs were only introduced by the Census Bureau for the 2000 Census, and thus variables are not available at the ZCTA level for the 1990 Census. Geolytics, Inc. provides 1990 Long Form Census data normalized to 2000 Census geographical boundaries, including ZCTAs\(^{43}\). From Geolytics, we access 1990 100% Count of the Population\(^{44}\). 1990 Population Density is the quotient calculated by dividing 1990 100% Count of the Population by land area per square mile for ZCTAs.

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41 See [www.census.gov/geo/gazetteer/places2k.html](http://www.census.gov/geo/gazetteer/places2k.html).

42 The specific Census 2000 population variable provided in the Gazetteer file is 100% Count of the Population, which is table P3 from Census 2000 Summary File 3.


44 Table P003, from Summary Tape File 3.
Housing Density: Housing density is calculated as the quotient of housing counts in a ZCTA divided by land area per square mile. Along with population and land area, the Census 2000 Gazetteer ZCTA file provides housing units\(^45\) at the ZCTA level. We calculate 2000 housing density by dividing ZCTA housing units by land area in square miles. We also calculate 1990 housing density. From Geolytics, we access 1990 100% Count of Housing Units\(^46\). 1990 Housing Density is the quotient calculated by dividing 1990 100% Count of Housing Units by land area per square mile for ZCTAs.

Retail Density: Retail Density is the quotient calculated by dividing total retail establishments in a ZIP Code by land area in square miles\(^47\). The data to calculate retail establishments per square mile come from ZBP. We download the “Complete ZIP Code Industry Detail File” for 1998, 1999, and 2000\(^48\), which contains the establishment data for those years. Therefore, we are able

\(^{45}\) The specific variable provided in the Gazetteer is 100% Count of the Housing Units, table H3 from Summary File 3.

\(^{46}\) Table H003, from Summary Tape File 3.

\(^{47}\) We calculate total retail establishments in ZIP Codes by adding together the number of establishments in each ZIP Code in the following NAICS categories: Retail bakeries (NAICS code 311811), Furniture stores (NAICS code 442110), Floor covering stores (NAICS code 442210), Window treatment stores (NAICS code 442291), All other home furnishing stores (NAICS code 442299), Household appliance stores (NAICS code 443111), Computer and software stores (NAICS code 443120), Camera and Photographic Supplies Stores (NAICS code 443130), Home centers (NAICS code 444110), Paint and wallpaper stores (NAICS code 444120), Hardware stores (NAICS code 444130), Other building material dealers (NAICS code 444190), Outdoor power equipment dealers (NAICS code 444210), Nursery and garden centers (NAICS code 444220), Grocery (except convenience) stores (NAICS code 445110), Convenience stores (NAICS code 445120), Meat markets (NAICS code 445210), Fish and seafood markets (NAICS code 445220), Fruit and vegetable markets (NAICS code 445230), Baked goods stores (NAICS code 445291), All other specialty food stores (NAICS code 445299), Beer, wine and liquor stores (NAICS code 445310), Pharmacies and drug stores (NAICS code 446110), Cosmetics, beauty supplies, and perfume stores (NAICS code 446120), Optical goods stores (NAICS code 446130), Food (health) supplement stores (NAICS code 446191), All other health and personal care stores (NAICS code 446199), Men’s clothing stores (NAICS code 448110), Women’s clothing stores (NAICS code 448120), Children’s and infant’s clothing stores (NAICS code 448130), Family clothing stores (NAICS code 448140), Clothing accessories stores (NAICS code 448150), Other clothing stores (NAICS code 448190), Shoe stores (NAICS code 448210), Jewelry stores (NAICS code 448310), Luggage and leather goods stores (NAICS code 448320), Sporting goods stores (NAICS code 451110), Hobby, toy, and game stores (NAICS code 451120), Sewing, needlework, and piece good stores (NAICS code 451130), Musical instrument and supplies stores (NAICS code 451140), Book stores (NAICS code 451211), News dealers and newsstands (NAICS code 451212), Prerecorded tape, CD, and record stores (NAICS code 451220), Department stores (NAICS code 452110), Warehouse clubs and superstores (NAICS code 452910), All other general merchandise stores (NAICS code 452990), Florists (NAICS code 453110), Office supplies and stationary stores (NAICS code 453210), Gift, novelty, and souvenir stores (NAICS code 453220), Used merchandise stores (NAICS code 453310), Pet and pet supply stores (NAICS code 453910), Art dealers (NAICS code 453920), Tobacco stores (NAICS code 453991), All other miscellaneous store retailers (NAICS code 453998).

**Employment Density:**
Employment density is calculated as total mid-March employment\(^49\) in a ZIP Code divided by land area per square mile. The data to calculate employment density come from ZBP. We download the “Complete ZIP Code Totals File” for 1994-2000, which contains the employment data for those seven years. Therefore, we calculate Employment Density for 1994-2000.

### 3.1.2.1.2 Connectivity Measures
As explained in section 2.2, connectivity refers to the ease of moving between origins and destinations in the existing street structure, and is typically considered to be enhanced when streets follow a grid pattern with short blocks. Short blocks enable connectivity by providing direct and alternative routes, making movement easier and more convenient, especially on foot. Short city blocks imply a high density of city blocks – there will be more blocks per land area than in a location with longer city blocks. We therefore seek a measure of connectivity that reflects the density of city blocks in an area. Our measure of connectivity is the quotient calculated by dividing the number of Census blocks in a ZCTA by the land area in square miles of the ZCTA. Therefore, we calculate the density of Census blocks in a ZCTA\(^50\). The evident assumption with this measure is that a Census block can be used to approximate a city block. Census blocks are the smallest geography for which the Census Bureau tabulates data. The Census Bureau’s geographic glossary\(^51\) explains that “Census blocks are areas bounded on all

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\(^48\) We did not download the 1994, 1995, 1996, or 1997 Complete ZIP Code Industry Detail File, because in those years industry categories were classified using the old Standard Industrial Classification (SIC), and not the current North American Industrial Classification System (NAICS).

\(^49\) Mid-March employment is defined as follows (www.census.gov/econ/cbp/definitions.htm): “Paid employment consists of full- and part-time employees, including salaried officers and executives of corporations, who are on the payroll in the pay period including March 12. Included are employees on paid sick leave, holidays, and vacations; not included are proprietors and partners of unincorporated businesses.”

\(^50\) We thank Marlon Boarnet for suggesting this measure. Handy et al (2002) suggest a similar measure for street connectivity – the number of street intersections per square mile. Places with short city blocks and high block density will also likely have high intersection density.

\(^51\) See www.census.gov/geo/www/tiger/glossry2.pdf.
sides by visible features, such as streets, roads, streams, and railroad tracks, and by invisible boundaries, such as city, town, township, and county limits, property lines, and short, imaginary extensions of streets and roads. Generally, census blocks are small in area; for example, a block bounded by city streets.” In cities, Census blocks are small geographical units typically bounded by city streets. As such, we utilize Census blocks as approximations of square city blocks. This approximation enables us to use the density of Census blocks as a measure for the density of city blocks, such that parcels of land exhibiting high Census block density are considered parcels with high connectivity. To calculate Census blocks per land area in square miles, we obtained from the Census Bureau the number of Census blocks contained in each ZCTA in the U.S. We divide the number of Census blocks per ZCTA by the ZCTA land area in square miles to calculate our measure of urban connectivity, Census block density.

3.1.2.1.3 Land Use Mix Measures

Land Use Mix Entropy
As described in section 2.2, land use mix – the simultaneous presence of numerous land uses (such as residential, employment, recreational, commercial) in a place – is an important aspect of urban context. As such, we need to construct a measure of land use mix for ZCTAs, our unit of analysis. A frequently used measure of land use mix – as well as other varieties of regional diversity – is the “entropy” measure. Entropy is one of several metrics available to measure diversity for a categorical scale variable. In a study of industrial employment, Attaran (1986, p.45) provides an excellent introduction to entropy as a measure of regional diversification: “In the academic literature, the subject of diversification has been hindered by the problem of defining regional diversity in a theoretically meaningful way and then of measuring and expressing relative diversity quantitatively. Diversity has been defined as ‘the presence in an area of a great number of different types of industries’, or as ‘the extent to which the economic activity of a region is distributed among a number of categories’. This study [i.e. Attaran’s] has approached industrial diversification in terms of balanced employment across industry classes. In the present study [i.e. Attaran’s] Shannon’s entropy is used as a measure of industrial diversity…. The entropy method measures diversity of a region against a uniform distribution of

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52 We obtained the number of Census blocks per ZCTA from Andrew H. Flora, a geographer in the Linear Features Branch of the Geography Division in the U.S. Census Bureau. This was from the 2000 Census.
employment where the norm is equiproportional employment in all industrial sectors.\textsuperscript{53} Whereas Attaran uses entropy to capture regional industrial employment diversity, we use it to measure land use diversity in ZCTAs. Building from Attaran, our use of entropy follows Frank et al (2004), who use it to assess the “evenness of distribution of square footage” across a number of land use categories. As with Attaran, an even distribution of square footage between different uses in a geographic region – as compared to a concentration of square footage in one or two uses – is indicative of land use diversity. Land use mix entropy is calculated by Mobley\textsuperscript{54}, and is downloaded from the GeoDa Center for Geospatial Analysis and Computation website\textsuperscript{55}. Mobley (following Frank et al) computes entropy as follows: \[ -\sum_{i=1}^{n} p_i \ln p_i \], where \(n\) is the number of land use categories, and \(p_i\) is the proportion of square footage in the ZCTA devoted to land use \(i\). The resulting land use mix entropy measure ranges from 0 to 1, with 0 representing a homogeneous, single land-use environment such as a purely residential environment, and 1 representing maximal land use diversity (as in a diverse city center) where there is a (Frank et al 2004, p. 90) “perfectly even distribution of square footage across all…land uses”. To calculate land use mix entropy, Mobley uses the 2001 National Land Cover Data (NLCD), which is produced by the EPA\textsuperscript{56}. She explains that “The NLCD classifies all areas in 50 states plus Puerto Rico into 16 categories….Although most of the categories give detailed information on the natural environment, four categories classify developed land.\textsuperscript{57}” The developed land categories are: developed open space, developed low intensity, developed medium intensity, and developed high intensity. Mobley further explains that “Developed areas fall into one of the four categories based on the percent of the area covered by impervious surfaces. The open space areas generally include large-lot single-family housing, parks, and golf courses. The low and medium intensity developed areas are generally made up of single-family

\textsuperscript{53} Attaran (1986, p.45) also writes that “Entropy as a measure of disorder, uncertainty, or homogeneity has been used to measure many different phenomena. In the physical sciences, it has been used to measure the irreversible increase of ‘unavailable energy’. In the biological and behavioral sciences, entropy has been used as a measure of organization. In communication theory, it quantifies the degree of uncertainty in a system.”

\textsuperscript{54} Lee Mobley. RTI Spatial Impact Factor Data – beta version 2.

\textsuperscript{55} See geodacenter.asu.edu/node/134.

\textsuperscript{56} See www.epa.gov/mrlc/nlcd-2001.html.

\textsuperscript{57} See geodacenter.asu.edu/node/134.
housing units, and the high intensity developed areas include apartment complexes and commercial/industrial developments. We used GIS software to calculate the amount of land in each use category for counties, PCSAs, and ZCTAs. We subtracted the open water/perennial ice and snow areas from the total amount of land in the county to generate the area we would use in our land-use-mix index. From this area we then subtracted the land used in the four developed categories to obtain the measurement of non-developed land. This non-developed land area and the four developed areas were the five land use types for the land mix calculation. The land use mix [entropy index] has been calculated for all continental United States at the ZCTA, PCSA, and county levels of geography.

**Housing Age Diversity**

As explained in section 2.2, mixed building ages is a variant of land use mix, and we measure it by using Census data to compute housing age diversity. We calculate housing age diversity in two different ways: (1) housing age entropy, and (2) Simpson’s reciprocal diversity index. We calculate both measures for 1990 and 2000 Census data. Census 2000 table H34 from Summary File 3 provides the number of housing units built in nine different year ranges. Census 1990 table H025 from Summary Tape File 3 – which we downloaded from Geolytics – provides the number of housing units built in 8 different year ranges. As with land use mix entropy, housing age entropy ranges from 0 to 1, where 0 represents housing age homogeneity in a

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58 For specific definitions of the four developed land categories used to calculate land use mix entropy, see www.epa.gov/mrlc/definitions.html. Developed land refers to areas “characterized by a high percentage (30 percent or greater) of constructed materials (e.g. asphalt, concrete, buildings, etc).” Developed open space includes “areas with a mixture of some constructed materials, but mostly vegetation in the form of lawn grasses. Impervious surfaces account for less than 20 percent of total cover.” These areas most commonly include large-lot single-family housing units, parks, golf courses, and vegetation planted in developed settings for recreation, erosion control, or aesthetic purposes.” Developed low intensity includes “areas with a mixture of constructed materials and vegetation. Impervious surfaces account for 20-49 percent of total cover. These areas most commonly include single-family housing units.” Developed medium intensity includes “areas with a mixture of constructed materials and vegetation. Impervious surfaces account for 50-79 percent of the total cover. These areas most commonly include single-family housing units.” Developed high intensity includes “highly developed areas where people reside or work in high numbers. Examples include apartment complexes, row houses and commercial/industrial. Impervious surfaces account for 80 to 100 percent of the total cover.”


ZCTA, with all housing units built in a single year range, and 1 represents maximal diversity, with a perfectly even distribution of housing units built across the various age ranges. Simpson’s reciprocal diversity index is constructed from the following formula: 
\[ D = 1 - \sum_{i=1}^{n} p_i^2 \], where \( i \) denotes the year categories in which housing units can be built, and \( p_i \) denotes the proportion of housing units built in a year range. The index measures the probability that two randomly chosen housing units in a ZCTA were built in different year ranges. Higher values of the index thus represent greater housing age mix\(^{61}\).

3.1.2.1.4 Walking measures

We measure walking in a ZCTA by using the Census measure “Percentage of workers 16 years and older who walked to work”. We calculate this measure for both 2000 Census data and 1990 Census data\(^{62}\). Although not all walking trips are to and from work, ZCTAs where residents can walk to work are likely places where they can also walk for other purposes (Freeman 2001, p.72). As such, we use this as our measure of walkability.

3.1.2.2 Demographic and socioeconomic control variables

In addition to urban context variables, there are a number of other factors that potentially explain our dependent variables, and that therefore need to be included in analyses. We describe these variables in turn.

Population

We employ measures of ZCTA population as independent variables. For 2000, we obtain the Census variable “100% Count of the Population”\(^{63}\) from the Census 2000 ZCTA Gazetteer file. For 1990, we obtain the Census variable “100% Count of the Population”\(^{64}\) from Geolytics.

\(^{61}\) In 2000, the entropy measure correlates with Simpson’s reciprocal diversity index at \( r=0.961 \). In 1990, the entropy measure correlates with Simpson’s reciprocal diversity index at \( r=0.967 \).

\(^{62}\) For Census 2000, this measure can be calculated by downloading table P30 from Summary File 3, and dividing the total workers 16 years and older who walk to work by the total workers 16 and older. For 1990, we download table P049 of Summary Tape File 3 from Geolytics. Again, divide total workers 16 years and older who walk to work by the total workers 16 and older.

\(^{63}\) Census 2000 table P3 from Summary File 3.

\(^{64}\) Census 1990 table P003 from Summary Tape File 3.
From Fischer (1975), one might hypothesize a threshold effect whereby populous places would achieve sufficient numbers of people to support greater and more varied political participation.

**Age**

From Census 2000, we obtain the variable “Median Age” for ZCTAs. There is no “median age” variable available from Census 1990. One might hypothesize a negative relationship between age and participation in political activity like new movement organizations. Individuals may possess less physical energy to participate as they age. Also, older people may have more responsibilities (such as children) that may prevent them from participating, or may have more invested in preserving status quo societal relationships.

**Marital Status**

From Census 2000, we compute the variable “Percent of ZCTA population 15 years and older that is married”. From Geolytics, we compute the Census 1990 variable “Percent of ZCTA population 15 years and older that is married”. One might hypothesize a negative relationship between the percentage of the population that is married and participation in new movement organizations. Additional marital obligations and responsibilities may constrain participation in political action.

**Children in Household**

From Census 2000, we compute the variable “Percent of ZCTA households with children under 18”. From Geolytics, we compute the Census 1990 variable “Percent of ZCTA households with children under 18”. One might hypothesize a negative relationship between the presence of children and participation in new movement organizations. Time and attention that could be devoted to political action must instead be expended on one’s children.

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65 Census 2000 table P13 from Summary File 1.


67 Census 1990 table P027 from Summary Tape File 3.

68 Census 2000 table P10 from Summary File 3.

69 Census 1990 table P008 from Summary Tape File 3.
Travel Time to Work
From Census 2000, we compute the variable “Mean ZCTA travel time to work in minutes for workers 16 years and older.70” From Geolytics, we compute the Census 1990 variable “Mean ZCTA travel time to work in minutes for workers 16 years and older.71” We anticipate that participation in political action like new movement organizations will relate negatively to mean travel time to work. Brady, Verba, and Schlozman (1995) conceive of a “resource” model of political participation, suggesting that possession of key “resources” explains engagement in political action. One primary resource necessary for political participation is time. They note that (p.273) individuals “use time in the service of political action in many ways (e.g. working in a campaign, writing a letter to a public official, attending a community meeting)”, or participating in a movement organization. In a number of empirical specifications, they find a positive relationship between “free time” and participation in politics. Therefore, to the extent that travel decreases available “free time”, time spent in travel should relate negatively to participation in new movement organizations.

Educational Attainment
From Census 2000, we calculate the variable “Percent of ZCTA population 25 years and older with a bachelor’s degree or above.72” From Geolytics, we calculate the Census 1990 variable “Percent of ZCTA population 25 years and older with a bachelor’s degree or above.73” We anticipate that education and participation in new movement organizations should positively relate. Recent research links education both to democratization and to political participation more generally. For instance, recent work by Glaeser, Ponzetto, and Shleifer (2007) describes how education leads to democratization at the national level. They find a positive empirical

70 Census 2000 tables P31 and P33. From P31 we retain the total number of workers 16 years and older who did not work at home. From P33 we retain aggregate ZCTA travel time to work in minutes for workers 16 years and older who did not work at home. We calculate “2000 mean travel time to work in minutes for workers 16 years and older” by dividing aggregate travel time by total number of workers.

71 Census 1990 tables P050 and P051. From P050 we retain the total number of workers 16 and over who did not work at home. From P051 we retain the aggregate travel time to work in minutes for workers 16 years and older who did not work at home. We calculate “1990 mean travel time to work in minutes for workers 16 years and older” by dividing aggregate travel time by total number of workers.

72 Census 2000 table P37 from Summary File 3.

73 Census 1990 table P057 from Summary Tape File 3.
relationship between the Jaggers and Marshall democracy score in 1960 and years of education in 1960, as well as finding a positive correlation between the 1960-2000 change in the democracy score and years of schooling in 1960. They conclude that higher initial national rates of schooling predict later transitions from dictatorship to democracy. Brady, Verba, and Schlozman (1995, p.284-5) suggest two reasons that education is conducive to political participation: (1) “it instills political interest and participatory motivations, and (2) it “leads to [civic] skills that facilitate [political] activity.” Civic skills are (p.273) “those communications and organizational capacities that are so essential to political activity”, possessed by citizens “who can speak or write well or who are comfortable organizing and taking part in meetings” and who thus “are likely to be more effective when they get involved in politics.” Education enhances these important “communications and organizational capacities.” Similarly, Glaeser, Ponzetto, and Shleifer (2007, p.82) contend that education facilitates political participation by “teaching people how to interact successfully and productively with others.” They note that education “raises the benefit from social participation because it facilitates seamless information exchange. Educated people are better able to express what they know, to inform, and to persuade. They are also better able to acquire new information, to understand, and to learn. Schooling also teaches rules of behavior that make a discussion between educated people both more informative and less likely to degenerate into a quarrel.” In short, education enables political participation through the improvement of social interactions. In empirical analyses, both authors find positive relationships between education and civic and political activity.

**Percentage in Same House**

From Census 2000, we compute the variable “Percent of ZCTA population 5 years and older living in the same house for five or more years”\(^\text{74}\). From Geolytics, we compute the Census 1990 variable “Percent of ZCTA population 5 years and older living in the same house for five or more years”\(^\text{75}\). One might hypothesize a positive relationship between the ZCTA percentage living in the same house for five or more years and political participation. Social and political connections can be built when a high percentage of a location’s residents have lived there for an

\(^{74}\) Census 2000 table P24, from Summary File 3.

\(^{75}\) Census 1990 table P043, from Summary Tape File 3.
extended period. Also, one becomes committed to a place the longer they live there, and as such may feel more compelled to participate politically.

**Renter Occupied**

From Census 2000, we compute the variable “Percent of ZCTA housing units that are renter occupied.” From Geolytics, we compute the Census 1990 variable “Percent of ZCTA housing units that are renter occupied.” One might hypothesize a negative relationship between renting and political participation. High percentages of renters could indicate a transient population and less political participation. Conversely, if there is a class basis to participation in new movement organizations, we might observe a positive relationship between participation and renting. Also, renters may be less socially attached, and thus more ready to join new movement organizations.

**Income**

From Census 2000, we obtain the variable “Median household income in 1999 for ZCTAs.” From Geolytics, we obtain the Census 1990 variable “Median household income in 1989 for ZCTAs.” One might hypothesize a positive relationship between household income and political participation. Brady, Verba, and Schlozman (1995) consider income to be another “resource” for political participation. They point out that (p.273) money “can be donated to candidates, parties, or innumerable political organizations or causes.” They contend that higher income people are typically more likely to participate in politics than lower income people. Conversely, to the extent that new movement organizations concern themselves with issues of equality, liberty, and solidarity, one could hypothesize that higher income individuals would prefer to maintain status quo social arrangements, and would therefore be less likely to participate in this specific form of political action. Therefore, we could observe a negative relationship between income and new movement organizations. Finally, there also could be a

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76 Census 2000 table H7, from Summary File 3.

77 Census 1990 table P008, from Summary Tape File 3.

78 Census 2000 table P53, from Summary File 3.

79 Census 1990 table P080A, from Summary Tape File 3.
curvilinear relationship, with participation increasing with income, but with the most affluent less participatory.

**Median Gross Rent**

From Census 2000, we obtain the variable “Median gross rent for specified renter-occupied housing units, in ZCTAs”\(^{80}\). From Geolytics, we obtain the Census 1990 variable “Median gross rent for specified renter-occupied housing units, in ZCTAs”\(^{81}\). One might hypothesize a negative relationship between median gross rent and participation in new movement organizations. Living in a low-rent ZCTA might predispose one towards participating in groups that concern themselves primarily with equality, liberty, and solidarity. Therefore, as median ZCTA rent increases, participation in such organizations would decrease. Conversely, if money is a resource for political participation generally, then the ability to pay high rents would indicate possession of this resource. If true, then median ZCTA rent would relate positively to political participation.

**Racial Diversity**

We calculate racial diversity for ZCTAs in two ways: (1) a racial entropy measure, and (2) using Simpson’s reciprocal diversity index (both previously defined). We calculate both measures for 2000 and 1990 Census data. Census 2000 table P7 from Summary File 3 provides the population in 14 different racial categories\(^{82}\). Census 1990 table P012 from Summary Tape File 3 provides the population in 10 different racial categories\(^{83}\). Racial entropy ranges from 0 to 1, where 0 represents complete racial homogeneity in a ZCTA, with the entire ZCTA population of a single race, and 1 represents maximal diversity, with a perfectly even distribution of individuals across

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\(^{80}\) Census 2000 table H63, from Summary File 3. Gross rent “is the contract rent plus the estimated average monthly cost of utilities (electricity, gas, water and sewer) and fuels (oil, coal, kerosene, wood, etc.) if these are paid by the renter (or paid for the renter by someone else). Gross rent is intended to eliminate differentials that result from varying practices with respect to the inclusion of utilities and fuels as part of the rental payment.” See www.census.gov/prod/cen2000/doc/sf3.pdf.

\(^{81}\) Census 1990 table H043A, from Summary Tape File 3.

\(^{82}\) The 14 racial categories are: White, Black, Native American, Asian, Hawaiian, Other, Mixed, Hispanic White, Hispanic Black, Hispanic Native American, Hispanic Asian, Hispanic Hawaiian, Hispanic Other, Hispanic Mixed.

\(^{83}\) The 10 racial categories are: White, Black, Native American, Asian or Pacific Islander, Other, Hispanic White, Hispanic Black, Hispanic Native American, Hispanic Asian or Pacific Islander, Hispanic Other.
the various racial categories. The Simpson’s reciprocal diversity index in constructed from the following formula: \( D = 1 - \sum_{i=1}^{n} p_i^2 \), where \( i \) denotes the racial categories, and \( p_i \) denotes the proportion of ZCTA population in racial category \( i \). The index measures the probability that two randomly chosen individuals are from different races. Higher values of the index thus represent greater racial diversity\(^{84}\). One might hypothesize a positive relationship between racial diversity and participation in new movement organizations. Matters of equality, liberty and solidarity could be more salient in places characterized by racial heterogeneity. Groups concerned with such issues thus may concentrate in racially diverse places. Conversely, if racial diversity makes cooperation on political matters more difficult, it may relate negatively to political participation.

**Foreign Born Diversity**

We calculate diversity of the places of birth for the foreign born population for ZCTAs in two ways: (1) a foreign born entropy measure, and (2) using Simpson’s reciprocal diversity index (both previously defined). We do this for 2000 Census data\(^{85}\). We utilize Census 2000 table PCT19 from Summary File 3 to calculate the percent of the foreign born population born in six categories\(^{86}\). We use these percentages to calculate the two measures. As above, Foreign born entropy ranges from 0 to 1, where 0 represents complete foreign born homogeneity in a ZCTA, with the entire ZCTA foreign born population from a single foreign category, and 1 represents maximal diversity, with a perfectly even distribution of the foreign born from the various foreign categories. The Simpson’s reciprocal diversity index in constructed from the following formula: \( D = 1 - \sum_{i=1}^{n} p_i^2 \), where \( i \) denotes the foreign categories, and \( p_i \) denotes the proportion of ZCTA foreign born population in foreign category \( i \). The index measures the probability that two randomly chosen foreign born individuals are from different foreign categories. As above, if foreign born diversity in a place makes issues of equality, liberty, and solidarity more salient, then one may hypothesize a positive relationship between foreign born diversity and

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\(^{84}\) For 2000, the Racial entropy measure and the Simpson’s reciprocal diversity index correlate to \( r=0.981 \). For 1990, the Racial entropy measure and the Simpson’s reciprocal diversity index correlate to \( r=0.979 \).

\(^{85}\) Census 1990 does not give place of birth for the foreign born population, so we cannot calculate these measures for 1990.

\(^{86}\) The six categories are: Europe, Asia, Africa, Oceania, Americas, and Born at Sea.
participation in new movement organizations. Conversely, if such diversity makes political cooperation more difficult, then it may relate negatively to political participation.

3.2 Methods

Our analytical plan has several aspects. We test hypotheses 1-5 using linear regression. We assess mediation – hypothesis 6 – by employing (1) Sobel and (2) Freedman and Schatzkin tests. We account for potential problems stemming from the spatial nature of our data by (1) computing cluster-robust standard errors and (2) estimating a spatial lag model. We describe each of these below.

3.2.1 Regressions

To test hypotheses 1-5, we employ the variables described above to estimate a number of regressions. Specifically, we examine the direct effects of density, connectivity, land-use mix, and urban walking on new movement organization activity, controlling for relevant demographic and socio-economic factors. We do this by estimating regressions with our new movement organization variables as dependent variables, urban context and walking as independent variables and ZCTAs as our unit of observation.

As noted above, we have three different new movement organization measures for our dependent variables: (1) human rights groups, (2) environmental, conservation, and wildlife groups, and (3) social advocacy groups. First, we will use factor analysis\textsuperscript{87} to combine these three measures into a single “new movement organization index”, and then use this index as the dependent variable in an OLS regression. Table 1 [see Appendix] gives the results of this factor analysis. As evident from the factor matrix, these three measures load highly on a single factor, thus suggesting the presence of an underlying “new movement organization” dimension accounting for the correlation between the three measures. We compute the factor scores and use them as values for our dependent variable. In addition, we will estimate three separate OLS regressions using each of the new movement organization measures as the dependent variable in turn. These three measures are examples of count data in that they take non-negative integer values. Count

\textsuperscript{87} Factor analysis was carried out in SPSS, using principal axis factoring with varimax rotation. Since only one factor was extracted, the solution was not rotated.
variables often have a positive skew with a clustering of “0” and smaller values and a long upper tail. As such, we will also estimate regressions using Poisson and Negative Binomial regression, both of which are regression methods specifically for count data. Gardner, Mulvey, and Shaw (1995, p.393) note that these “alternative regression models… are based on nonlinear models for the expected counts that respect the fact that counts are nonnegative. Moreover, they use probability distributions for the dispersion of the dependent variable scores around the expected value that are appropriate for dependent variables which take on only nonnegative integer values. The simplest such regression model for counted data is Poisson regression. However, unless extremely restrictive assumptions are met [expected count equals the count variance], the Poisson model produces incorrect estimates of its variance terms and misleading inferences about the regression.” The Negative Binomial regression model attempts to overcome the limits of Poisson regression when such assumptions are violated.

We will estimate regressions for the full set of ZCTAs – i.e. for all 33,322 ZCTAs in the U.S. Also, we will estimate regressions on smaller selections of ZCTAs, such as ZCTAs from cities88 with populations of more than 2 million, between 1 and 2 million, between 500,000 and 1 million, and between 250,000 and 500,000. Doing so will enable us to examine the robustness of our results across various subsets of the data, as well as to see whether the magnitudes or directionality of effects differ for ZCTAs in different sized cities.89

3.2.2 Mediation

Hypothesis 6 (H6) posits that walking mediates between urban context and new movement organizations. As such, we conduct several empirical analyses to assess the magnitude and statistical significance of this mediation. H6 suggests a specific conceptual relationship between a third variable (walking), the independent variable (urban context), and the dependent variable (new movement organizations). Mediation implies a causal path (Judd and Kenny 1981, Baron

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88 By “cities”, we are referring to Census Defined Places (CDP). The CDP is the actual city municipality. The New York city CDP has a population of 8 million. By contrast, the New York City – Northern New Jersey – Long Island Metropolitan Statistical Area (of which the New York city CDP is a part) has a population of over 21 million.

89 We can identify the ZCTAs within CDPs by using the “Geo in Geo” feature on the U.S. Census Bureau’s American Factfinder (see factfinder.census.gov). We rank the CDPs by population to determine, for instance, which CDPs have populations over 2 million. We can then use Geo in Geo to select the ZCTAs that are contained in those CDPs.
and Kenny 1986, MacKinnon, Krull, and Lockwood 2000, MacKinnon, Lockwood, Hoffman, West, and Sheets 2002) running from the independent variable, through a mediating third variable, to the dependent variable. The mediating variable intervenes between the independent and dependent variables, with the causal effect transmitted through walking. OLS regression can be used to estimate the magnitude of the mediated effects, and recently developed procedures enable statistical significance tests of these estimates. Following the literature, we calculate the mediated effect as a product of coefficients, $\alpha \beta$, where $\alpha$ is the slope coefficient in a regression of the mediator on the independent variable, and $\beta$ is the slope coefficient on the mediator in a regression of the dependent variable on the mediator and independent variable. The point estimate of the mediated effect is $\alpha \beta$, and Sobel’s test for statistical significance is:

$$Z = \frac{\alpha \beta}{\sqrt{\alpha^2 \sigma^2_\alpha + \beta^2 \sigma^2_\beta}}.$$  

In this equation, $\sigma^2_\alpha$ is the variance of $\alpha$ and $\sigma^2_\beta$ is the variance of $\beta$.

MacKinnon, Krull, and Lockwood (2000, p.176) point out that an equivalent way of calculating the mediated effect is a difference of coefficients, $\tau - \tau'$, where $\tau$ is the slope coefficient on urban context in a regression estimation that excludes walking, and $\tau'$ is the slope coefficient on urban context in a regression estimation including walking. Paraphrasing MacKinnon, Krull, and Lockwood (2000, p.176), the difference $\tau - \tau'$ represents the mediated effect that urban context has on new movement organizations by causing changes in walking, which then causes new movement organizations. If walking mediates the relationship between urban context and new movement organizations, $\tau$ will be greater than $\tau'$, such that $\tau - \tau' > 0$. Using the standard error developed by Freedman and Schatzkin, we test for the statistical significance of the mediated effect.

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90 MacKinnon, Krull, and Lockwood (2000, p.173) write that an “indirect or mediated effect implies that the independent variable causes the mediator, which, in turn causes the dependent variable.”

91 Mediation effects differ from other third variable effects. For instance, as MacKinnon, Krull, and Lockwood (2000) point out, whereas mediating variables are considered as part of the causal system between independent and dependent variables, confounding variables typically are not. Instead, confounding variables are included in a regression estimation to remove distortion from the relationship between independent and dependent variables. They write that (2000, p.179) the “confounding hypothesis...focuses on adjustment of observed effects to examine undistorted estimates of effects.” MacKinnon, Krull, and Lockwood (2000, p.174) provide a hypothetical example, whereby an excluded third variable (“age”) confounds the relationship between an independent variable (“income”) and dependent variable (“cancer rates”). By including “age” in a regression of “cancer rates” on “income”, we remove this potential source of distortion and gain a better depiction of the true relationship between “income” and “cancer rates”. However, income is not considered to cause age, which then causes cancer. Although these conceptual differences distinguish mediating and confounding variables, in practice statistical tests for mediation and confounding are often identical.
effect, $\tau - \tau'$. The Freedman and Schatzkin test is: $t_{n-2} = \frac{\tau - \tau'}{\sqrt{\sigma_\tau^2 + \sigma_{\tau'}^2 - 2\sigma_\tau\sigma_{\tau'}\sqrt{1-\rho_{\tau\tau'}^2}}}$. In this equation, $\rho_{XY}$ is the correlation between the independent variable and the mediator, $\sigma_\tau$ is the standard error of $\tau$, and $\sigma_{\tau'}$ is the standard error of $\tau'$. We will use OLS regression to compute the magnitude of the mediated effect of urban context on new movement organizations. We will subsequently employ both the Freedman and Schatzkin and Sobel tests to assess statistical significance.

3.2.3 Spatial Dependence

The geographic adjacency of our observational units – ZCTAs – may complicate causal inference, potentially leading to mistakes in hypothesis testing if not accounted for. In our analyses, this is especially true when we estimate regressions on subsets of ZCTAs, such as ZCTAs from cities with populations over 250,000. If left unaddressed, the potential spatial dependence (sometimes called spatial autocorrelation in the econometrics literature) of ZCTAs in close geographic proximity can artificially deflate standard errors of regression slope coefficients, leading to inflation of $t$-statistics and possible inferential errors. As such, we conduct several analyses to account for such possibilities: (1) we compute cluster-robust standard errors, and (2) we construct and estimate a spatial lag model. We briefly discuss each in turn.

Cluster-robust standard errors: Cluster-robust standard errors (CRSE) are typically computed to correct for intraclass correlation, which occurs when observations within classes or groups are correlated, but observations across groups are not. In our case, there would be intraclass correlation if ZCTAs from the same city are correlated on levels of our dependent variable. For instance, there may be attributes of the cities in which ZCTAs are located that are the same for all ZCTAs in a city. Those ZCTAs will likely be correlated in terms of their values on key variables. This kind of spatial dependence is a violation of the Classical Linear Regression assumption that errors are independent and identically distributed (Primo, Jacobsmeier, and Milyo 2007, p.447). Incorrectly assuming independence of errors can lead to underestimation of regression standard errors and “exaggerated levels of statistical significance to coefficient

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92 The Freedman and Schatzkin test, the Sobel test, and other statistical significance tests for mediated effects are collected in MacKinnon, Lockwood, Hoffman, West, and Sheets (2002).
Calculating CRSE is a method commonly used to adjust standard errors for the possibility of such intraclass correlation and non-independence of errors. CRSE leaves OLS point estimates unchanged, and computes robust standard errors by permitting observations within clusters to be correlated, but assumes no correlation for observations across clusters. Such a correction typically results in larger standard errors than with unadjusted OLS. Since we have ZCTAs nested within cities, CRSE is one of the methods we employ to account for spatial correlation. One shortcoming of CRSE is that the procedure has been shown to work as long as the number of clusters is large enough. Recent simulations (Kezdi 2003) suggest that at least 50 clusters are typically needed to ensure improvements in inference. For this and other reasons, we also estimate a spatial lag model as an additional test for spatial dependence.

Spatial lag models: A growing number of social scientists – especially economists, geographers, and regional scientists – have begun employing the methods of spatial econometrics to deal with the problems of spatial dependence. In contrast to the simple and straightforward computation of cluster-robust standard errors, spatial econometrics (Anselin and Bera 1998, p.237) is a field of applied econometrics that creates models to deal with specification and estimation problems arising from spatial dependence and autocorrelation in cross-sectional data. As such, it is a comprehensive and formal means for dealing with the spatial nature of social scientific data.

Anselin and Bera (1998, p.239) contend that the general principles of econometrics should be “applied to deal with spatial [autocorrelation]”, which they define (p.241) as “the coincidence of value similarity with locational similarity.” They further explain that the “existence of positive

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93 As Primo, Jacobsmeier, and Milyo (2007, p.453) explain: “The intuition is that OLS, by treating every observation as independent, calculates standard errors as if there is more data than actually exists once the dependence of observations is accounted for.”

94 Specifically, CRSE calculate a variant on Huber-White variance estimates.

95 Nichols and Schaffer (2007) write that the “CRSE is asymptotic in the number of clusters M. If M is small, there is no guarantee that the cluster-robust estimator will improve your inference – the cluster-robust estimator may make matters worse. Kezdi (2003) shows that 50 clusters is often close enough to infinity for accurate inference....”

96 They formally express the existence of spatial autocorrelation as:

$$\text{Cov}(y_i, y_j) = \text{E}(y_i y_j) - \text{E}(y_i) \text{E}(y_j) \neq 0 \text{ for } i \neq j,$$
spatial autocorrelation [i.e. when similar values for a random variable are clustered in space] implies that a sample contains less information than an uncorrelated counterpart. In order to properly carry out statistical inference, this loss of information must be explicitly acknowledged in estimation and diagnostic tests.” Inaccurate inferences and inconsistent coefficient estimates may result if this loss of information is not accounted for. Spatial autoregressive models are estimated to correct for these problems.

There are two primary varieties of spatial autoregressive models: spatial lag models and spatial error models. Spatial lag models are appropriate (Tam Cho and Rudolph 2008, p.281) “when the spatial patterning is a function of neighboring observations”, and as such is the model we will likely estimate. Spatial lag models take the form

\[ y = \rho Wy + X\beta + \epsilon, \]

where \( W \) is an \( N \times N \) spatial weights matrix, \( \rho \) is the spatial autoregressive coefficient, \( y \) and \( X \) denote the dependent and independent variables and \( \epsilon \) is the error. Whereas temporal correlation in time series analyses may be expressed by inclusion of a temporally lagged dependent variable \( (y_{t-k}) \), in spatial regressions we attempt to capture the influence of geographic proximity by including a spatially lagged dependent variable, \( Wy \). The spatial weights matrix \( W \) is (Anselin and Bera 1998, p.243) the “operational specification of the neighborhood set”, or in other words, it defines how geographic units are related to each other and which locations are considered “neighbors”. The spatially lagged dependent variable, \( Wy \), depicts the spatial relationship between values in a neighborhood set. Each element of \( Wy \) is a weighted average of the \( y \) values in the neighborhood set. In our case, the inclusion of the spatially lagged dependent variable implies (Tam Cho and Rudolph 2008, p.282) that a particular ZCTA’s new movement organization activity is influenced by the neighboring (as defined by the weights matrix) ZCTA’s new movement organization activity. Finally, spatial lag models are typically estimated using

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97 We will construct our spatial weights matrix on a distance-based definition of “neighbor”. Using the centroid latitude and longitude, ZCTAs will be designated as neighbors when they are within a certain distance of each other.
maximum likelihood estimation. Given the spatial nature of our data, we employ a spatial lag model to account for these potential problems.

4. Discussion

We anticipate empirical results that are supportive of our hypotheses. For instance, we anticipate finding positive and significant regression coefficients on our measures of density, mixed land uses, connectivity, and walking in linear regression estimations with new movement organizations as the dependent variable. Additionally, we also anticipate that the Sobel and Freedman / Schatzkin tests will indicate statistically significant mediation by walking of the relationships between the three dimensions of urban context – density, mixed-use, and connectivity – and new movement organizations. We expect the coefficients on density, mixed-use, and connectivity to decline when walking is included alongside them, and the Sobel and Freedman / Schatzkin tests should then rule out sampling variability as the explanation for this decline. Furthermore, we anticipate that these results will withstand attempts to empirically account for possible violations of the Classical Linear Regression model, such as tests for spatial autocorrelation, heteroskedasticity, and multi-collinearity.

Findings supporting our hypotheses would be important and unique because they would be the first empirical linkage between new movement organizations and dimensions of urban context. Also, they would represent the first empirical linkage between walking and any measure of political activity, including new movement organizations. In addition, by examining mediating effects along with direct effects, the findings would become important in that they consider the relationships between urban context, walking, and new movement organizations in a uniquely nuanced way. Lastly, these findings would be important in that they involve the first known use of the Zip Code Business Patterns (ZBP) data in a study of new movement organizations, as well as the first attempt to use ZBP data alongside measures of walking and urban context.

Our data, measures, and anticipated findings have important limitations. These limitations will be completely elaborated in the final thesis, but we foreshadow some of them here. First, our measure of walking – the ZCTA percentage of workers 16 years of age and older who walk to

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98 Given the spatial nature of our data, we consider spatial autocorrelation as the most serious possible violation of the Classical Linear Regression Model. As such, discussions of heteroskedasticity and multicollinearity are not discussed at length in the methods section, but will be empirically accounted for in our analyses.
work – is an imperfect measure in that it only considers walking for a singular purpose. Persons walking to work may not take the same time to observe and experience the local social diversity as when walking for recreation and leisure. As such, we would prefer measures of walking that included additional destinations and purposes. However, since the Census Bureau currently only provides measures of walking to work, this remains a limitation of our data. It may not be a prohibitive limitation, since places in which people walk to work may also be places in which people walk for other purposes. Also, our current walking measure has the added strength of being available for all ZCTAs in the U.S. Nevertheless, in future research we will seek measures of walking that better reflect the numerous reasons individuals walk. As noted in section 3.1.1, there are also limitations to the measures we employ for new movement organizations. Most notably, there is imperfect alignment between our conceptual treatment of new movement organizations and our measurement of them using variables from the Zip Code Business Patterns dataset. We conceptualize new movement organizations as decentralized and anti-hierarchical, but use as measures counts of social advocacy organizations that have paid employees. Although this is a limitation to these data, we discuss this issue at length in the methods section. Overall, we suggest that although it would be preferable to have variables more reflective of ad hoc organizations, our current indicators measure the key characteristics of new movement organizations and achieve broad geographic coverage at a small unit of geography. Another limitation of these findings is that they might not account for selection bias. In the presence of selection bias, individuals with a predisposition to engage in new movement organizations would select into dense, mixed-use, connected urban locales. This selection bias could occur if such politically-oriented individuals perceive that certain urban contexts are more conducive to forming new movement organizations. Explicit political considerations, by this reasoning, motivate individuals to sort into particular urban locations. Potentially more plausible is the

99 The U.S. Census counts the number of people in a geographical area taking a variety of modes of transportation to work, including walking.

100 One such measure may be “walkability” from the website Walkscore.com. The creators of Walkscore use Google Maps to calculate straight-line distances from a specific street address to a variety of possible destinations such as schools, restaurants, bars, theatres, and parks. The website calculates a “walkscore” for an address based on the number of destinations nearby and the distance to them. As such, this measure better reflects the multiple destinations to which persons may walk. However, unlike the Census measure which captures actual walking behavior, the walkscore data only reflects the opportunity to walk. We do not currently have this data, but are seeking access to it from persons associated with the website. As such, we may or may not be able to incorporate this alternative walking data into this thesis’ analyses.
possibility that (Williamson 2008, p.919) individuals predisposed to participate in new movement organizations value certain non-political factors when selecting neighborhoods. Urban neighborhoods may provide certain lifestyle or cultural goods that persons predisposed to this sort of political activity may select when choosing places of residence. Ideally, such scenarios should be empirically accounted for in one’s analyses. Economists often suggest using instrumental variables (IV) regression to deal with such situations. However, IV crucially depends on a theoretically defensible selection of an instrument, which unfortunately is not available from the social movement literature. Another empirical approach would be to conduct a longitudinal study, so as to more adequately account for the temporality of the effects. This may be a future possibility for us, as we have most of our variables available for at least a twenty year span. Although the possibility of selection bias would be a limitation of our analyses and findings, it may not be as serious as other concerns like spatial autocorrelation. For instance, Williamson (2008, p.922) notes that theories of self-selection must explain why new movement organization participants are systematically attracted to particular places. Neither the social movement nor the urban studies literatures provide such an adequate explanation, thus leaving the conceptual basis for self-selection lacking. In addition, self-selection does not make complete conceptual sense in the context of our hypotheses regarding mediation. For self-selection to be present, the mediator (i.e. walking) would have to work in both directions. However, there is not a coherent conceptual argument for why walking would mediate relationships running from new movement organization participation to choice of urban contextual traits. In general, we recognize self-selection as an important empirical consideration, and intend to deal with it to the extent possible in this and future research.

Finally, the finished thesis will detail policy implications and practical considerations stemming from our concepts and findings. We foreshadow several of these policy implications here. For instance, in May 2009 the Bloomberg administration constructed a pedestrian plaza by closing several blocks of Broadway to vehicles and inserting planters, chairs, tables, and benches. As described in the New York Times (Dunlap, 2009), the plan is designed to reclaim sections of the street for alternative modes of transportation in such a way that also reduces traffic congestion in

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101 By contrast, in section 2.2.2, we present a coherent conceptual argument for why walking mediates relationships running from urban context to social movements.
midtown Manhattan. However, Crowley writes that fundamentally “[t]his is a plan to pedestrianize a street, not to mitigate traffic,” says someone who has discussed it with [Department of Transportation] officials. ‘This was a plan about greening New York, outdoor space, and seating. It was almost a happy coincidence that they found that traffic could be mitigated.” A similar pedestrian plaza was also constructed in the Castro neighborhood of San Francisco in June 2009. The project is based off of the Broadway plaza, in that sections of street are closed to vehicle traffic and turned over to pedestrians through the use of simple treatments such as seating and movable furniture. An article in the San Francisco Chronicle (Gordon, 2009) notes that the “17th Street project is the first of the city’s ‘pavement-to-parks program’ in which the traditional use of streets to carry cars is being rethought…. Mayor Gavin Newsom, who is pushing the idea, described it as ‘democratizing the streets’.” Elsewhere, the city of Portland (OR) has a history of enacting policies to make existing streets friendlier for pedestrians and cyclists. Various traffic calming measures such as speed bumps, physically separated bike lanes, curb extensions, and diagonal diverters\(^\text{102}\) make streets more conducive to alternative modes of transportation. Portland is also committed to crosswalk enforcement actions, whereby failure to yield to pedestrians results in a $242 fine. In addition to these low-cost policies, expanding and improving public transportation in urban areas is a measure that should be regarded as complementary to walkability. For instance, with an eye towards “reducing the physical, social, and institutional barriers that limit walking activity”, the International Charter for Walking\(^\text{103}\) recommends providing “an integrated, extensive and well-equipped public transport service with vehicles which are fully accessible to all potential users”. Public transportation enhances walkability by making urban life more car-independent. As noted, we will expand upon these and other policy ideas in the final thesis.

\(^\text{102}\) This is a means by which car traffic is kept on busy streets and off of residential streets. If a car leaves a main thoroughfare to take a shortcut down a residential shortcut, the “diagonal diverter” directs it back onto the main road. Residential streets are thus preserved primarily for pedestrians and bicycles. For more information on Portland’s transportation planning strategies, see http://www.streetfilms.org/archives/portland-celebrating-americas-most-livable-city/, accessed October 16, 2009.

\(^\text{103}\) See http://www pedestrians-int.org/content/16/32006_ch.pdf, accessed October 16, 2009.
References


U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, Federal Highway Administration, National Household Travel Survey, 2001 (Washington, DC).


Appendix – Results Tables

(i) Factor Analysis of all U.S. ZCTAs

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<th>Factor</th>
<th>Total</th>
<th>% of Variance</th>
<th>Cumulative %</th>
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<td>73.570</td>
<td>73.570</td>
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*Eigenvalues*

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<th>Cumulative %</th>
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<td>74.082</td>
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<td>2</td>
<td>0.484</td>
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<tr>
<td>3</td>
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*Factor Matrix*

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<th>Human rights organizations</th>
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<td>Other social advocacy organizations</td>
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(ii) Factor Analysis of ZCTAs from cities with populations of over 2 million

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<td>9.792</td>
<td>100.000</td>
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<tr>
<td>2</td>
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*Factor Matrix*

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<thead>
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Table 1 – Factor Analysis of New Movement Organization Variables