

Can Mayors Lead on Climate Change? Evidence from Six Years of Surveys

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Abstract: In the face of federal government intransigence, climate activists are looking to the local leaders to aggressively address climate change. While local politicians are limited in many respects, their control over land use and transportation policy provides them with powerful tools to reduce Americans' reliance on cars--thereby decreasing greenhouse gas emissions. Using six years of novel elite survey data, we find that mayors are strongly committed to addressing climate change and reducing their communities' reliance on cars. They are also supportive of some specific policies--including the construction of dense, multifamily housing and bicycle lanes--that would decrease greenhouse gas emissions. Other policy views, though, reveal that mayors do not consistently endorse evidence-based transportation policy practices that would make walking and cycling safe and attractive modes of transit. Insufficient knowledge, a lack of funding, partisan polarization, and public opposition all pose potent obstacles to mayors taking the lead on climate change.

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Introduction

The world is facing an accelerating climate crisis, one that scientists worry is approaching an irreversible tipping point (Lenton et al. 2019). Researchers agree that the only solution is a drastic reduction in greenhouse gas emissions (Fountain 2019). While state and national governments in the United States have made some progress in promulgating needed energy and climate policies (Stokes and Breetz 2018), obstacles persist. Growing partisan polarization stymies policy action at the state and federal levels (McCarty 2019). While the public generally supports climate initiatives, opposition can be steep (and political consequences for incumbents substantial) when the costs of new programs are concentrated (Stokes 2016). Powerful interest groups lobby against environmental reforms (Mildenberger 2020).

These significant political obstacles at the state and federal levels have led policymakers and advocates to look to the local level as a promising avenue for policy innovation (Schragger 2016). As Mayor Bill Peduto of Pittsburgh put it in 2017, “If you are a mayor and not addressing shifts in changing weather patterns or preparing for the impacts of climate change, you aren't doing your job” (Groppe 2017). Such a focus may seem surprising; in many respects, local governments are limited in what they can do. State and federal governments constrain the legal avenues available to their local counterparts. What's more, competition from surrounding communities restricts the menu of local policy options (Peterson 1981).

These constraints notwithstanding, local governments have an array of tools at their disposal to help address the effects of climate change. Perhaps most importantly, they can use land use regulations and transportation policies to reduce individuals' reliance on cars. The transportation sector is the leading source of greenhouse gas emissions in the United States (Environmental Protection Agency 2018). Reducing car use, then, must be a central part of American climate policy.

Local control over land use is perhaps the most powerful tool local governments wield (Trounstine 2018). Land use regulations allow localities to set allowable uses within their boundaries; local governments choose whether to become dense, walkable communities, or sprawling collections of single family homes on large lots. They decide whether new developments must provide substantial parking, or none. These choices are consequential; communities that opt for restrictive land use contribute to racial segregation, inequality in public goods' provision, and political inequality (Trounstine 2018, Einstein, Glick, and Palmer 2019). They also increase greenhouse gas emissions by encouraging car trips, rather than walking, cycling, or riding mass transportation (Glaeser 2011). By influencing the built environment---and incentivizing dense, walkable communities over sprawling residential development---local governments stand to play a powerful role in shaping individuals' decision to use cars or other, more environmentally friendly modes of transportation.

Moreover, local governments also control important transportation policy levers. They can use policies like speed limits, bicycle lanes, and parking regulations to make it safer and more appealing for residents to walk, bicycle, or ride mass transit (Shill 2020). Increased use of these alternative modes of transportation reduces greenhouse gas emissions.

This article explores whether local leaders pursue the many options available to them to reduce car use in their communities. Over six years, we ask a nationally representative group of over 600 American mayors of cities over 75,000 a range of questions about their policy priorities and preferences. We find that they strongly endorse addressing climate change, even if it means making fiscal sacrifices. Moreover, they generally support taking steps to create denser communities, though they still prefer single-family housing.

Their transportation preferences present a more mixed picture. Mayors wish their cities were less car-oriented, and worry about the safety of pedestrians and cyclists. But, they also eschew many of the evidence-based solutions that would make conditions safer for those vulnerable road users.

Local leaders also face potent obstacles in promulgating climate policies. At the most basic level, they may lack knowledge about the most effective policy solutions. Local governments are also limited (Peterson 1981). While growing body of research suggests local government activism, they are still constrained by competition from surrounding local governments and restrictions from higher levels of government. The partisan polarization that plagues national politics also creates significant problems at the local level (de Benedictis-Kessner and Warshaw 2016, Einstein and Glick 2018). Finally, the public opposition that affects state and federal policies also impacts local politics (Stokes 2016).

In short, local governments present a promising venue for tackling climate change. But, the local politics of reducing Americans' reliance on cars prove complicated and difficult.

Menino Survey of Mayors

Since 2014, we, along with our colleagues at Boston University's Initiative on Cities, have conducted an annual survey of America's mayors. Named after the former mayor of Boston (and co-founder of the Initiative on Cities), the Menino Survey of Mayors captures mayors' priorities, views, and perceptions across a range of important urban issues.⁴ We conduct virtually all interviews directly with mayors either in person or over the phone. We recruit mayors of all American cities over 75,000, and guarantee anonymity of both participants and their responses.

⁴ More details about the survey, and six years of policy reports, can be found at surveyofmayors.com

Every summer between 2014-2019, our team reached out to the mayors of all American cities with over 75,000 residents according to the American Community Survey. This population includes 472 cities ranging from global mega-cities to mid-sized communities. It features cities led by institutionally strong mayors and those led by a part-time mayor working alongside a city manager. In each of these three years, between 20 and 25 percent of eligible cities participated via 30-minute interviews, for a total of XX interviews.

Our response rates are comparable to other elite surveys (Harris and Holman 2017, Broockman and Skovron 2018). Moreover, the participating mayors are representative of mayors in general. Every year we compare the mayors and cities that participated to the total population across a range of individual and community demographics, such as city size, geography, racial demographics, economic traits, mayoral partisanship, and city institutional structure.⁵ These comparisons consistently show that participating cities are not systematically skewed.

Just as importantly, each year's survey covers a broad array of topics. Our surveys are not topic-specific queries about climate change, housing, or gun policy; rather, they are marketed to mayors as general interest surveys. Therefore, mayors are unlikely to choose to participate on the basis of a particularly strong interest in (or distaste with) a specific topic.

Support for Addressing Climate Change and Car Culture

Large majorities of mayors strongly support addressing climate change—even if it requires fiscal sacrifices. In 2014, 2017, and 2019 we asked mayors the same question: “Please rate how strongly you agree/disagree with the following statement: Cities should play a strong role in reducing the effects of climate change, even if it means sacrificing revenues and/or expending financial resources.” Across this five-year time span, 70 percent of mayors supported a forceful local government role in tackling climate change.

A substantial portion (76 percent) of mayors also agreed in 2019 that their cities are too oriented towards cars. This concern is seemingly rooted both in safety and environmental concerns. While a majority of mayors believed residents of all types could travel safely across their cities, substantial minorities worried about the safety of cyclists, persons with disabilities, and pedestrians. More strikingly, mayors overwhelmingly (66 percent) identified vehicles as the leading source of greenhouse gas emissions in their cities. In 2017, over half of mayors believed that meaningfully addressing climate change in their city required inconveniencing drivers.

⁵ Full comparison tables can be found in annual policy reports available at surveyofmayors.com.

Taking these results in concert, we might expect, then, a sizable portion of mayors to support housing and transportation policies that could reduce car travel.

Housing

Land use is a core local policy tool over which mayors have influence, and one they can use to address climate change. Building more, and denser housing, especially near transit, does not just ameliorate social mobility, the economy, and family budgets. It has direct and indirect environmental benefits (Glaeser 2011, see also Barro (2017) and Schuetz (2019)). Among other things, land use that permits denser, transit-oriented development incentivizes the construction of smaller and more energy efficient homes on less environmentally risky land. It also allows more people to either walk or take mass transit as part of their daily commutes, reducing the transportation sector's contribution to emissions (EPA 2018).

Mayors are deeply concerned about rising costs, and want to change their housing stock to better serve their cities' economic and environmental needs. In 2017, mayors cited housing costs over all other arenas--including schools and jobs--as the chief reason their residents moved away. That same year, only 13 percent of mayors said that their cities' housing stock met community needs "very well" or "well."

Recognizing that their cities' housing is not serving residents, mayors generally would like to increase the housing supply--sometimes quite substantially. In 2018, we asked mayors how many new housing units they would like to see their cities build over the next ten years. Virtually all mayors wanted to see some housing growth; over one quarter hoped to see their housing stock grow by at least 20 percent. 70 percent of mayors wanted to see their housing stock grow faster than its current rate.

Moreover, they desired the bulk of these new hypothetical units to be multifamily housing, suggesting a strong mayoral preference for increased housing density. While single-family housing was the single-most popular category--garnering 30 percent of the hypothetical new units--multifamily family units together comprised the large majority of mayors' desired new housing. This multifamily tilt represents a substantial increase relative to the actual share of multifamily housing in most cities. Using the American Community Survey, we compared the share of each city's current housing stock that is multifamily to the percent of multifamily units that mayors would like to see in new housing over the next ten years. Ninety percent of mayors would like to see the share of multifamily housing increase. In the figure below, each bar represents one city. The blue dots represent the current share of multifamily housing, and the red dots indicate mayors' desired multifamily share for new housing stock. In many cases, the gap between them is quite large, suggesting a sizable number of mayors hope to ambitiously reshape the composition of their housing stock.

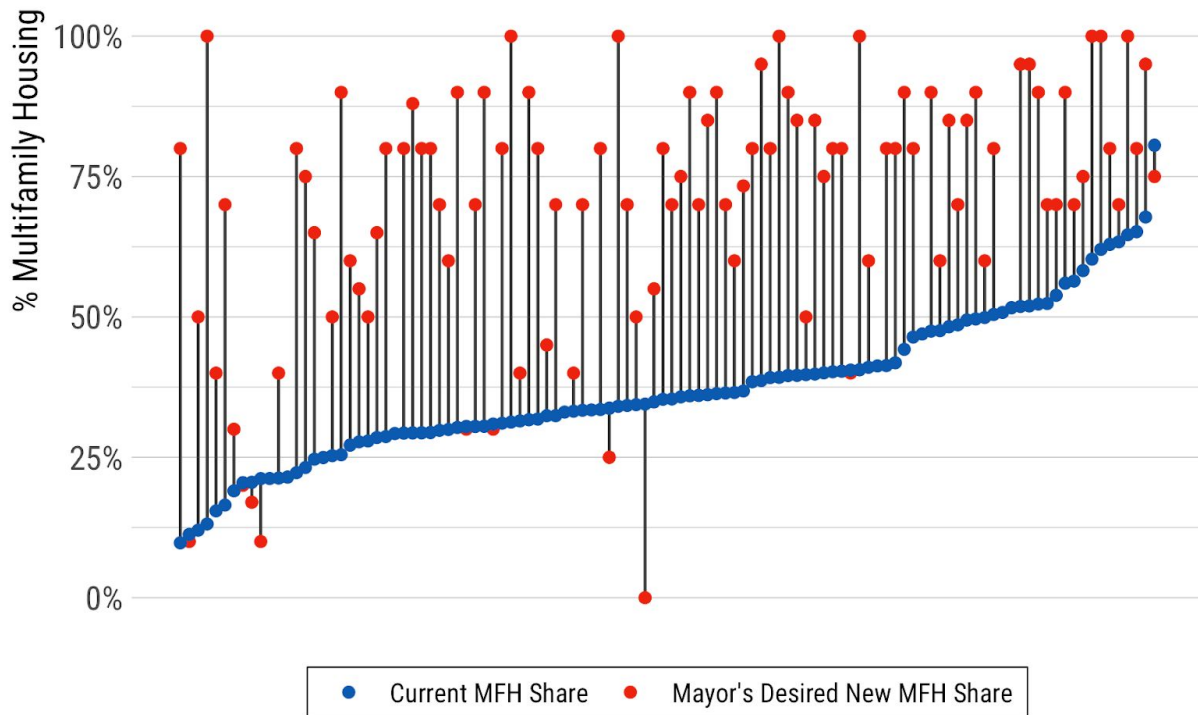


Figure 1: Current and Desired Multifamily Housing Share. Source: 2018 Menino Survey of Mayors and 2017 American Community Survey.

Some mayors are willing to make politically hard tradeoffs to encourage the production of more multifamily housing, though, here, the picture is more mixed. In 2018, we asked mayors whether cities “should encourage increased density in popular, established neighborhoods. Fifty-five percent of mayors agreed that they should—but, 45 percent either disagreed or were neutral. A majority—though not an overwhelming one—supported a hard political tradeoff that would allow cities to produce environmentally friendly housing. Mayors’ mixed views on this tradeoff, however, may be indicative of some of the political obstacles facing local climate activism that we return to later in this article.

Transportation and Mobility

Mayors can reduce the effects of climate change by incentivizing walking and biking over driving, when possible. This means making roads *safer* for these vulnerable road users. Indeed, America’s pedestrian fatalities are at nearly a thirty-year high. Cycling injuries and fatalities are similarly on the rise (NHTSA 2019). If alternative modes of transportation are unsafe, Americans will continue to opt for cars.

Transportation planners and scholars have identified a variety of policy tools that make urban areas safer for cyclists and pedestrians. These include reduced speed limits, parking regulations, and bicycle lanes (Shill 2020). In 2019, we asked mayors about these arenas to determine whether they were following evidence-based best practices. We also asked about more general policy priorities.

Our results paint a decidedly mixed picture. When asked what infrastructure they would prioritize if they could allocate a significant amount of new money, 66 percent of mayors selected roads--overwhelmingly the most popular result. Only 43 percent highlighted mass transportation, and a mere 22 percent mentioned bicycle and pedestrian friendliness. In short, mayors prioritized infrastructure for cars over other modes of transportation.

Large majorities of mayors also do not endorse policy proposals that would make travel safer for pedestrians and cyclists. In the event of a collision between a vehicle and pedestrian/cyclist, vehicle speed has a marked impact on an individual's likelihood of sustaining serious or fatal injuries. When a vehicle strikes a pedestrian traveling at 16 miles per hour, the pedestrian's likelihood of sustaining a serious injury is 10 percent. That probability jumps up to 25 percent at 23 miles per hour, 50 percent at 39 miles per hour, and 90 percent at 46 miles per hour. Moreover, slower-moving vehicles are better able to avoid collisions with pedestrians and cyclists in the first place (Tefft 2013). In short, vehicle speed is critical to pedestrian and cyclist safety.

Mayors were largely satisfied with their speed limits. Seventy seven percent agreed that they were set at the right levels. Moreover, a majority of mayors did not want to see enforcement for moving violations in their city strengthened, despite ample evidence that, in many cities, the police do little to curb rampant and dangerous speeding (Shill 2020).

One challenge even the most pedestrian-oriented mayors face in promoting street safety initiatives is a longstanding and widespread emphasis on parking. American cities devote an astonishing percentage of their land area to parking. Seattle, WA, for example, features an average of 30 parking spaces per acre (5 times the residential density), with more than five parking spaces for every household residing in Seattle. In Des Moines, IA, there are 30 parking spaces per acre—20 times its residential density. Cities make it remarkably cheap to park in places where land is scarce—far cheaper than the social costs imposed by parking on American cities (Florida 2018). What's more, minimum parking requirements ensure that parking continues to be oversupplied, even in communities with little available land. Indeed, these policies mandate that new developments provide a certain amount of parking, often far in excess of what is actually needed (Manville and Shoup 2005). Collectively, the nation's emphasis on parking creates multiple obstacles to implementing evidence-based pedestrian safety programs. First, parking takes up valuable land area, especially in dense cities. With multiple traffic lanes devoted to parked cars, there is less space available to put in place curb bump-outs, separate bus lanes, and separate bicycling lanes that would improve pedestrian and

cyclist safety, and the overall experience of riding urban mass transit. Second, when city leaders make it easier to park, they encourage car commuting; this both worsens congestion and creates a constituency of regular drivers who demand more parking, resulting in a potent political obstacle to reforming urban parking systems (The Economist 2018).

Despite widespread agreement among urban planners that parking is priced too cheaply given its steep environmental and human costs, an overwhelming majority of mayors believe that parking in their cities is priced at the right level. Over 75 percent of mayors see residential street parking as priced correctly, and over half say the same of metered street parking.

Mayors similarly do not acknowledge that parking is dramatically oversupplied in their communities. 60 percent believe that their cities feature the right level of street parking, and 27 percent worry that there is too little parking in their cities.

The majority of mayors also believe that their parking minimums are set at the right levels. Thirty percent of mayors think that their parking minimums are set too high; that is, these mayors believe that their land use policy requires too much parking of new developments. 51 percent, however, think that their parking minimums are set at the right level, and 12 percent see their parking minimums as too low, in sharp contrast to current transportation planning best practices.

In contrast to their more tepid support for parking and speed limit restrictions, mayors strongly endorse bicycle lanes. In 2015 and 2019, we asked mayors whether they believed their roads should be more accessible bicycles, even if meant sacrificing driving lanes or parking spaces. In both years, over seventy percent of mayors endorsed allocating more roadways to bicycles.

Even in the realm of cycling, though, mayors do not consistently follow evidence-based best practices. Many cities promote painted bike lanes that offer no physical barriers from traffic. Indeed, a striking 82 percent of mayors agree that painted bicycle lanes are a safe alternative when physically separate bike lanes are too expensive. These views are in stark contrast with the evidence. A recent scientific analysis of painted lanes found that they may actually make conditions more dangerous for cyclists; cars pass cyclists at a much closer distance (1.25 feet) than they do on streets with no cycling infrastructure (Beck et al. 2019). So-called “sharrows”—in which cities paint arrows with bicycles in lanes shared by cars and bikes—are perhaps even worse. An engineering analysis of the implementation of sharrows in Chicago found that “injuries in blocks with sharrows only declined about 20 percent [between 2000 and 2010]—less of a decrease than occurred in Chicago blocks where no bike infrastructure was created at all, nearly 37 percent.” In other words, relative to neighborhoods with no sharrows, painting one increased the risk of cyclist injury. The authors of the report, civil engineers Nicholas Ferenchak and Wesley Marshall, conclude: “It is time that streets are exposed for what they really are, a cheap alternative that not only fails to solve a pressing safety issue, but actually makes the issue worse through a sense of false security” (Jaffe 2016). The evidence suggests that paint alone—either in separate or shared bike lanes—will not make cyclists safer.

In short, mayors largely eschew car culture, and, at times, support policy solutions that would reduce their residents' reliance on cars. More often, though, they do not endorse or prioritize the policies that make biking and walking safer.

Obstacles

Mayoral influence over land use and transportation policy offers them potentially potent weapons in the battle against climate change. Mayors' responses across six years of survey data suggest that they are not consistently using these powerful tools, despite strongly stated support for addressing climate change, increasing the housing supply, and reducing their residents' reliance on cars. Why do their policy priorities not always match their stated preferences? Lack of knowledge, restrictions from the state and federal government, partisan polarization, and public opposition all pose substantial obstacles in the local fight against climate change.

Lack of Knowledge

Elite misperceptions are widespread and systematic. Broockman and Skovron (2018) show that politicians perceive their constituents as significantly more conservative than their actual ideologies. Legislative aides exhibit egocentric biases, with misperceptions especially steep among aides who rely on conservative and business groups for policy information (Hertel-Fernandez et al. 2018). At the local level, Einstein, Godinez Puig, and Piston (Forthcoming) reveal that mayors' see their communities as far more racially equal than what actual conditions suggest.

The sources of misperceptions are many. Researchers and planners do not always communicate clearly or effectively when conveying their findings and recommendations to policymakers (Lemos and Morehouse 2005). Politicians may overvalue their own perspective, rather than considering broader concerns (Hertel-Fernandez et al. 2018). Motivated reasoning may make politicians susceptible to misinformation--and prevent them from seeking and absorbing disconfirming facts (Flynn et al. 2017).

While our cross-sectional survey data does not permit us to adjudicate between these potential sources of mayoral misperceptions, some of our results indicate that mayors are misinformed on some key policy issues. Bicycle lanes provide perhaps the clearest example. Mayors strongly endorse bicycle lanes across multiple survey items in multiple years--even when the items ask mayors to weigh those lanes against drivers' needs. Yet, when asked a factual question about how to safely implement those bicycle lanes, 80 percent of mayors got the answer wrong. Indeed, when we have presented this research to local officials, few have been aware that painted bicycle lanes make cyclists less safe.

Our parking and speed limit results were also suggestive of misinformation. Large numbers of mayors *who believed that their cities were too oriented towards cars* endorsed policies that further tilt their communities towards drivers.

Mayors may be misinformed generally about the critical safety threats pedestrians and cyclists face in their communities. Majorities of mayors rate travel for these groups as safe in their cities, despite the fact that nationwide fatalities are close to a thirty-year high. When we presented information about rising pedestrian fatalities to local officials, one mayor of a large city admitted that they were not aware that pedestrian fatalities were increasing.

Federal and State Restrictions

Mayors also indicate that--consistent with a wealth of urban politics scholarship--they feel constrained by funding and regulatory restrictions from their state and federal governments. In 2017, we asked mayors about obstacles that prevented them from producing adequate housing for low-income people, among other groups. A striking 50 percent of them highlighted a lack of federal funds as the top factor that prevented them from building their desired quantity of low-income housing.

Mayors similarly wish for greater federal support in the realm of transportation policy. In 2019, mayors considered what one issue they wished the 2020 presidential candidates would make a bigger campaign priority. The question was open-ended; mayors could (and did) highlight anything, including sustainability, homelessness, and health. The single most popular option, however, by a margin of over thirty percentage points, was infrastructure; 45 percent of mayors indicated that they wished the federal government would pay more attention to important infrastructure priorities like roads, mass transit, and water issues.

These concerns extend beyond housing and transportation. In 2015, we asked mayors more generally about their relationships with their state and federal governments. Majorities of mayors believed that they received less funding than the average city from both levels of government. A majority of mayors also believe that their cities' regulatory autonomy is unfairly impinged by their state government. Limitations from higher levels of government may prevent mayors from pursuing preferred land use and transportation policies. What's more, if mayors internalize these limitations, they may not even list their ideal policies as priorities in a survey.

Partisan Polarization

Mayors generally like to highlight the non-partisan nature of their job. One common refrain is "there's no Democratic or Republican way to plow snow or fill potholes," reflecting that for many

of the aspects of the job, mayors are evaluated for their administrative abilities rather than ideological positions and policies (Rapkinchuck 2020). However, mayors do take positions and promote policies that align with their political parties. We have found high levels of partisan polarization among mayors across many different issues we have asked about in the Menino Survey of Mayors, including on climate and the environment, transportation, and race.

Mayors are sharply polarized in their attitudes towards climate change. As we noted earlier, in three different years we asked mayors to assess a statement about incurring local costs to fight climate change. Among Democratic mayors, support for this statement has stayed high over time, with 92 percent endorsing this position in 2019. In comparison, only 25 percent of Republican mayors agree. The only substantial change in positions over the five year span of asking this question is among Republicans who shifted from the neutral position to opposition. There are few Republican mayors willing to speak publicly about preparing for and addressing the effects of climate change in their cities. Mayors are similarly polarized in their beliefs about the causes of climate change. In the 2017 survey we found that 95 percent of Democratic mayors attribute climate change to human activities, compared to only 50 percent of Republican mayors. This divide roughly matches partisan divisions on the cause of climate change in the mass public (Norman 2017).

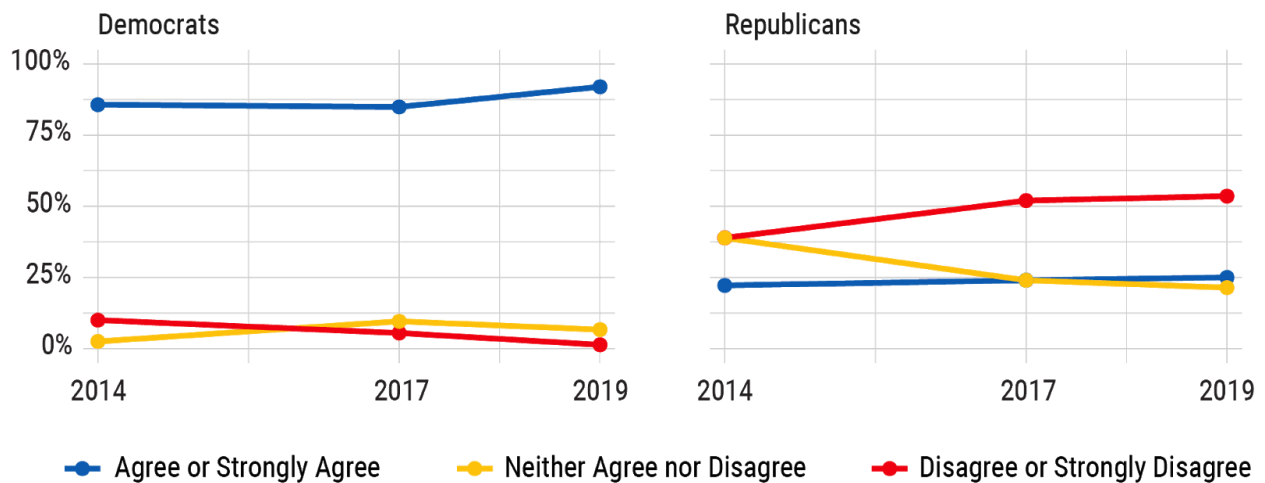


Figure 2: Agreement with the statement “Cities should play a strong role in reducing the effects of climate change, even if it means sacrificing revenues and/or expending financial resources.”

Democratic and Republican mayors are also polarized on how their cities should change in the future, with significant implications for addressing climate change. Mayors are sharply divided on key transportation infrastructure, such as bicycle lanes and electric vehicles. In the 2019 survey, 92 percent of Democratic mayors endorsed creating more bicycle lanes, even if it meant sacrificing traffic lanes or parking spaces, compared to only 34 percent of Republican mayors. This partisan gap has grown by more than 30 percentage points since 2015, primarily due to Republican movement from supporting this tradeoff or taking a neutral position to opposition.

Similarly, Democratic mayors are 40 percentage points more likely to support increasing infrastructure for electric vehicles than Republican mayors.

While mayors are polarized on several aspects of transportation infrastructure, the partisan divide is substantially smaller on questions about car culture. Mayors of both parties are largely opposed to aggressive measures to ameliorate pedestrian and cyclist safety. For example, 72 percent of Democratic mayors believed that speed limits in their cities were set at the right level, compared with 90 percent of Republican mayors. While there is a partisan difference, strong majorities of mayors of both political parties were comfortable with their cities' current speed limits. Similarly, large majorities of both parties concurred that urban speed limits are currently set at the right level. Only 10 percent of Republican mayors and 19 percent of Democratic mayors think speed limits are too high. Majorities of mayors of both parties also agreed on questions about the level and cost of street and metered parking in their cities.

When we asked mayors in the 2017 survey about what their cities can do to help fight climate change, large majorities of mayors of both parties agreed on updating building codes, updating municipal facilities, and replacing municipal vehicles with hybrid or electric vehicles. However, they strongly disagreed on the need to "inconvenience some cars and drivers." Seventy-one percent of Democratic mayors thought such measures might be necessary (such as through increased bike lanes and transit infrastructure that takes away from cars and parking), while only 33 percent of Republican mayors agreed. In 2018, we asked about density and found that sixty eight percent of Democratic mayors support "increasing housing density in popular, established neighborhoods," compared to only 32 percent of Republican mayors.

Neighborhood Opposition

Finally, public opposition is a potent force in local politics. While local elections are low turnout affairs (Hajnal 2010, Hajnal and Trounstein 2010, Anzia 2013), mayors are elected officials who must maintain public support in order to keep their jobs.

What's more, the nature of both housing and transportation planning means that small groups with strong views can block policy reforms in these arenas. Both areas emphasize strong neighborhood control; proposals large and small frequently solicit neighborhood input as part of the planning process (Schleicher 2013, Shill 2020). Indeed, ninety-seven percent of local governments use public meetings as part of their planning and policy processes (Williamson and Fung 2004). Many cities officially empower and support neighborhood councils who wield potent influence over neighborhood planning (Einstein, Glick, and Palmer 2019). In practice, this means that policy outcomes in these arenas may reflect the preferences of the small group of neighbors whose views are most actively solicited, rather than the general public, whose views may be more muted, and possibly supportive, depending upon the proposal.

In 2017, we investigated which policies mayors believed were driven by majority public opinion, and which, in contrast, were controlled by a small group with strong views. Majorities of mayors saw both housing development and bicycle lanes as controlled by a vocal minority with intense preferences. Indeed, our research on the politics of neighborhood meetings reveals that the housing development process is dominated by a privileged group of white homeowners who are disproportionately opposed to the construction of new housing (Einstein, Glick, Palmer 2019). These groups may help to explain why mayors' preferred multifamily housing share exceeds what is actually built in most places by large margins. What's more, mayors may have internalized the preferences of these vocal minorities when formulating their own housing and transportation policy priorities.

Conclusion

Large majorities of mayors want to aggressively tackle climate change. Moreover, they control important policy levers that can reduce greenhouse gas emissions. At times, they strongly support policies, like bicycle lanes and denser housing, that would help their cities achieve these aims.

But, mayors also face important obstacles to becoming climate leaders. They may not know what policies best reduce car use and keep vulnerable road users safe. Or, even if they know the right policies, they may lack the funding to implement them. Partisanship may prevent some mayors from considering certain programs. Potent public opposition to policy proposals that increase density and remove parking may also limit mayoral climate activism. These factors in concert lead mayors to endorse policies that do little and, may, in fact, worsen our housing and street safety crises.

There are, of course, a myriad of ways beyond transportation and land use that mayors can take action on climate change. They can promote greenspace, make buildings more efficient, and promote alternative energy sources. To lead on climate change, though, mayors must also take aggressive policy actions that reduce Americans' reliance on cars. Land use and local transportation policy reform remain promising--though challenging--avenues to address climate change even in the face of federal government intransigence.

References

- Anzia, Sarah F. 2014. *Timing and Turnout: How Off-Cycle Elections Favor Organized Groups*. Chicago: University of Chicago Press.
- Barro, Josh, "Here's what mayors and governors should really do to support the Paris Climate Agreement," Business Insider, June 2, 2017, <https://www.businessinsider.com/what-mayors-and-governors-should-do-to-support-paris-agreement-2017-6>, Accessed on March, 4, 2019
- Ben Beck, Derek Chong, Jake Olivier, Monica Perkins, Anthony Tsay, Adam Rushford, Lingxiao Li, Peter Cameron, Richard Fry, Marilyn Johnson. 2019. "How much space do drivers provide when passing cyclists? Understanding the impact of motor vehicle and infrastructure characteristics on passing distance." *Accident Analysis & Prevention*.
- Broockman, David and Christopher Skovron. 2018. "Bias in Perceptions of Public Opinion Among Political Elites." *American Political Science Review*. 112(3): 542-563.
- De Benedictis-Kessner, Justin and Christopher Warshaw. 2016. "Mayoral Partisanship and Municipal Fiscal Policy." *Journal of Politics*. 78(4): 1124-1138.
- The Economist. 2018. "The Perilous Politics of Parking." *The Economist*. <https://medium.economist.com/the-perilous-politics-of-parking-43f1f34d4b97>. Accessed on February 26, 2020.
- Einstein, Katherine Levine and David M. Glick. 2018. "Mayors, Partisanship, and Redistribution: Evidence Directly from U.S. Mayors." *Urban Affairs Review*. 54(1): 74-106.
- Einstein, Katherine Levine, David M. Glick, and Maxwell Palmer. 2019. *Neighborhood Defenders: Participatory Politics and America's Housing Crisis*. New York: Cambridge University Press.
- Einstein, Katherine Levine, Luisa Godinez Puig, and Spencer Piston. Forthcoming. "The Pictures in Their Heads: How U.S. Mayors Think About Racial Inequality." *Urban Affairs Review*.
- Environmental Protection Agency. 2018. "Sources of Greenhouse Gas Emissions." <https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions>. Accessed on February 25, 2020.
- Flynn, D.J., Brendan Nyhan, and Jason Reifler. 2017. "The Nature and Origins of Misperceptions: Understanding False and Unsupported Beliefs About Politics." *Political Psychology*. 38(S1): 127-150.

Fountain, Henry. 2019. "Climate Change is Accelerating, Bring World 'Dangerously Close' to Irreversible Change." *New York Times*.
<https://www.nytimes.com/2019/12/04/climate/climate-change-acceleration.html>. Accessed on February 25, 2020.

Florida, Richard. 2018. "Parking has eaten American cities." CityLab.
<https://www.citylab.com/transportation/2018/07/parking-has-eaten-american-cities/565715/>. Accessed on February 26, 2020.

Glaeser, Edward. 2011. *Triumph of the City*. New York: Penguin

Groppe, Maureen 2017. "Mayors pledge to take the lead on fighting climate change."
<https://www.usatoday.com/story/news/politics/2017/06/02/mayors-pledge-take-lead-fighting-climate-change/102435920/>. Accessed on February 25, 2020.

Hajnal, Zoltan L. 2010. *America's Uneven Democracy: Race, Turnout, and Representation in City Politics*. New York: Cambridge University Press.

Hajnal, Zoltan L. and Jessica Trounstein. 2010. "Who or What Governs? The Effects of Economics, Politics, Institutions, and Needs on Local Spending." *American Politics Research* 38(6): 1130-1163.

Harris, Emily and Mirya Holman. 2017 "All Politics Is Local? County Sheriffs and Localized Policies of Immigration Enforcement." *Political Research Quarterly*. 70(1): 142-154.

Hertel-Fernandez, Alexander, Matteo Mildemberger, and Leah C. Stokes. 2018. "Legislative Staff and Representation in Congress." *American Political Science Review*. 113(1): 1-18.

Jaffe, Eric. 2016. "Some Bike Infrastructure Is Worse Than None at All." CityLab.
<https://www.citylab.com/solutions/2016/02/sharrow-safety-bike-infrastructure-lane-chicago/460095/>. Accessed on February 26, 2020.

Lemos, Maria Carmen and Barbara J. Morehouse. 2005. "The co-production of science and policy in integrated climate assessments." *Global Environmental Change*. 15: 57-68.

Lenton, Timothy M. Johan Rockström, Owen Gaffney, Stefan Rahmstorf, Katherine Richardson, Will Steffen, Hans Joachim Schellnhuber. 2019. "Climate Tipping Points -- Too Risky to Bet Against." *Nature*. <https://www.nature.com/articles/d41586-019-03595-0>. Accessed on February 25, 2020.

Manville, Michael and Donald Shoup. 2005. "Parking, People, and Cities." *Journal of Urban Planning and Development*. 131(4): 234-45.

McCarty, Nolan. 2019. *Polarization: Everything You Need to Know*. New York: Oxford University Press

Mildenberger, Matteo. 2020. *Carbon Captured: How Business and Labor Control Climate Politics*. Cambridge, MA: MIT University Press.

National Highway Traffic Safety Administration. 2019. Traffic Safety Facts. <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812826>. Accessed on February 26, 2020.

Norman, Jim. 2017. "Democrats Drive Rise in Concern About Global Warming." <https://news.gallup.com/poll/206513/democrats-drive-rise-concern-global-warming.aspx>. Accessed on March 6, 2020.

Peterson, Paul. 1981. *City Limits*. Chicago: University of Chicago Press.

Rapinchuk, Daniel. 2020. "Carmel mayor among attendees of US Conference of Mayors winter meeting." Fox 59. <https://cbs4indy.com/news/carmel-mayor-among-attendees-of-us-conference-of-mayors-winter-meeting/>. Accessed on March 6, 2020.

Schleicher, David. 2013. "City Unplanning." *Yale Law Journal* 122: 1672-1736.

Schragger, Richard. 2016. *City Power: Urban Governance in a Global Age*. New York: Oxford University Press.

Schuetz, Jenny, "To save the planet, the Green New Deal needs to improve urban land use," Brookings, June 15, 2019, <https://www.brookings.edu/blog/the-avenue/2019/01/15/to-save-the-planet-the-green-new-deal-needs-to-improve-urban-land-use/> Accessed on March, 4, 2019

Shill, Gregory H. 2020. "Should the Law Subsidize Driving?" *New York University Law Review*. Forthcoming.

Stokes, Leah C. 2016. "Electoral Backlash against Climate Policy: A Natural Experiment on Retrospective Voting and Local Resistance to Public Policy." *American Journal of Political Science*. 80(4): 958-974.

Stokes, Leah C. and Hannah L. Breetz. 2018. "Politics in the U.S. energy transition: Case studies of solar, wind, biofuels and electric vehicles policy." *Energy Policy*. 113: 76-86.

Tefft, Brian C. 2013. "Impact speed and a pedestrian's risk of severe injury or death." *Accident Analysis and Prevention*. 50:871-8

Trounstine, Jessica L. 2018. *Segregation by Design*. New York: Cambridge University Press