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Constituency Population and Representation in the U.S. House

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The U.S. House of Representatives has remained frozen at 435 members for almost a century. House members on average represent more than 640,000 citizens, which is expected to continue to rise if the body remains constituted of close to 435 members. One assertion put forward by critics of this rise is that it leads to a less intimate relationship between the representative and the constituent. Yet there has not been empirical substantiation that the increase in constituency population size has interfered with the representational linkage in the House. This study employs a series of multivariate models using survey data from the American National Election Study to test whether citizens in more heavily populated House districts have less access to their representatives and are less likely to approve of their performance. Findings indicate that increases in House district population size reduce the accessibility and approval of U.S. House members.

Keywords: *U.S. House of Representatives; constituency population; congressional districts; representation; constituency contact*

The U.S. House of Representatives has been constituted of 435 members for almost a century. Although the House has remained constant in size for nearly 100 years, the nation's population has grown by more than 200%. Members of the House on average represent more than 640,000 citizens, and that figure is expected to continue on an upward trajectory if the body remains composed of close to 435 members.[1] When the first census was taken to apportion the House, the ratio of citizens per district stood close to 30,000 for each representative. Given this population expansion, there is a glaring need to empirically parse out what the substantive impact of retaining the 435 seat figure has had on the representational capacity of this institution. Members of the U.S. House represent far more citizens than ever before,

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and yet there has still not been a full accounting of the consequences of this development for the U.S. political system (Squire & Hamm, 2005). Many observers maintain that it is long past time to consider an enlargement of the body to improve the quality of representation that House lawmakers provide to their constituents (Jacoby, 2005; Kromkowski & Kromkowski, 1991; Lucas & McDonald, 2000).[2]

One assertion put forward by critics of the rise in the mean House district population size is that it leads to a less intimate relationship between the representative and the constituent (Yates, 1992).[3] As constituency size increases it becomes progressively more challenging for politicians to know, and therefore to represent the interests of, their constituents (Dahl & Tufte, 1973). Beginning with Anti-Federalists, the argument has been that a larger constituency size creates a situation in which members of the nation's lower House are more likely to lose touch with people in their district (Zagarri, 1987). According to one former House member,

> If we keep adding tens of thousands of constituents to an individual Member of Congress . . . through no fault of his own a Member would become unavailable and inaccessible, which is just the reverse of what the Founding Fathers envisioned when they drafted our Constitution.[4]

Many comparative legislative scholars theorize that the current ratio of population per representative creates an overly burdensome number of communication channels that interferes with the typical House member's ability to interact with his or her constituents (Taagepera & Shugart, 1989). The average number of constituents per House district may have reached a point where legislators are overworked and the communicative linkage mechanism is potentially undermined. According to this logic, lawmakers can no longer adequately balance the need to remain in contact with their constituents while at the same time monitoring communications with other members of the body in which they serve. Some observers have gone as far as to propose boosting the number of seats in the U.S. House to 650 to mitigate these effects (Lijphart, 2000).

In spite of these claims, there has yet to be empirical substantiation that the increase in constituency population size has interfered with the representational linkage in the U.S. House of Representatives. As Squire and Hamm (2005) observe in their comprehensive study of legislative chambers in the United States,

> The effect of constituency size on legislative behavior is a relatively unexplored area. Research comparing the electoral and representational effects

of constituency size has been conducted using the U.S. Senate. . . . Little atten-
tion, however, appears to have been given to this variable in studies of the U.S.
House. (pp. 54-55)

Although the U.S. Supreme Court's decision in *Westberry v. Sanders*
mandated that the population of House districts should be as equal as
possible, there is variation in the number of constituents per district. For
instance, because the state of Montana missed the minimum population
threshold to gain two House seats following the 2000 census, its lone House
member represents more than 900,000 people, whereas Wyoming's lone
representative serves around 500,000 citizens. Furthermore, even though
the population deviations between congressional districts must be minimized
when a new round of reapportionment takes place, massive shifts in the size
of congressional districts can occur within this 10-year window of time. To
illustrate this point, in Nevada's Second Congressional District, the popula-
tion grew an astounding 76.8% from 1990 to 2000, going from 600,791
persons in 1990 to 1,062,153 in 2000. Conversely, during the same time frame
in Maryland's Seventh Congressional District, the population dropped 9.7%,
going from 597,660 in 1990 to 539,439 in 2000.[5] Based on this variability
in population levels, an empirical inquiry into the influence of constituency
size on representation can be undertaken for the U.S. House.[6]

The objective of this study is to investigate whether variance in House
district population levels carries any ramifications for the quality of repre-
sentation the populace receives from its national legislators. This study
employs a series of multivariate models using survey data from the American
National Election Study (ANES) to test whether citizens in more heavily
populated House districts have less access to their representatives and are
less likely to approve of their performance. Answering these questions will
lend empirical clarity to the normative debate over the wisdom of increasing
the size of the House to offset population growth. Confirmation of a negative
relationship extends support to the idea that a more representative House
requires taking action to prevent the average number of persons in each
congressional district from continuing its upward spiral.

Constituency Population Size and Its Relationship to Accessibility and Approval

Empirical inquiry into the relationship between constituency population
size and perceptions of legislators has heavily concentrated on the U.S.

Senate and state legislatures (Squire & Hamm, 2005). This research has documented that as the size of a jurisdiction's population increases, the less accessible and in some cases the less popular politicians are perceived to be. For the U.S. Senate, there has been consistent validation of the proposition that citizens in larger states are less likely to report having contact with their senator than their counterparts in smaller states (Hibbing & Alford, 1990; Krasno, 1994; Lee & Oppenheimer, 1999; Oppenheimer, 1996). Based on data compiled from the ANES senate study, a number of works have shown that a higher state population level serves as a barrier for constituent access to senators. Not only do citizens have less frequent contact with their incumbent senators in the most populous states, but they are also less likely to initiate contact. The connection with perceptions of how helpful the senator would be is equivocal, with some studies reporting that large state senators are viewed as less helpful (Lee & Oppenheimer, 1999), whereas others find no link at all (Hibbing & Alford, 1990; Krasno, 1994).

At the state legislative level the evidence also reveals a similar dynamic regarding accessibility. One survey of respondents in seven states found that district constituency size reduced the probability that a citizen had contact with a state legislator. The effect was even more powerful than the degree of professionalism of the state legislature (Squire, 1993). Even though legislators representing more citizens have a difficult task in remaining accessible, they do not report devoting extra time to this activity. A 1995 survey of state legislators failed to establish any significant connection between district constituency population size and time spent keeping in touch with the citizenry (Carey, Niemi, & Powell, 2000). In 2002, a replication of this state legislative questionnaire produced a similar nonfinding (Carey, Niemi, Powell, & Moncrief, 2006).

The causal connection between constituency population level and approval ratings for politicians is not as conclusive. Generally, U.S. House members, who on average represent fewer constituents than U.S. senators, tend to receive higher job approval ratings (Jacobson, 2004).[7] Both Krasno's (1994) and Hibbing and Alford's (1990) examinations of the ANES Senate election study came up with a null finding on whether the magnitude of a state's population and senate approval ratings were related. Contrary to this earlier research, Lee and Oppenheimer (1999), employing an extended analysis of data from the 1988 to 1992 ANES Senate Study, estimate that senators from California receive a job approval rating 20 points lower than their colleagues in the least populated states. An alternative research strategy using polls from the Mason-Dixon company also indicated that senatorial approval is a negative function of population size after controlling for other variables

(Binder, Maltzman, & Siegelman, 1998).[8] At the state legislative level, district constituency population has little discernible relationship to the job performance of the legislature as an institution (Squire, 1993). State population has not been a consistent predictor of gubernatorial popularity having varying effects depending on the model specification used in particular studies (Cohen & King, 2004; J. D. King & Cohen, 2005).

However, little work has been undertaken to determine whether constituency size matters for House members' approval ratings or contact with constituents (Squire & Hamm, 2005). It is logical to presume that a similar pattern exists in the House, but it still must be empirically borne out. Constituency population size might be less meaningful in the House because the magnitude of population variance for congressional districts differs markedly from both state legislative districts across the country and at the state level. There are huge population differences between the states of California and Wyoming and a substantial gap between the average constituency size for New Hampshire's lower house and California's state senate (Squire & Hamm, 2005). Even after the shifts in the population that occurred between 1990 and 2000, the difference in constituency size between the most populous and least populous House district was less than 600,000. Hence, it may be more difficult to tease out any relationship between constituency size and representation for members of the U.S. House.

Conversely, unlike the U.S. Senate, every citizen is represented by only one member of the U.S. House. Single-member House districts require that representatives must be attuned to all of the policy and service needs of a particular geographic jurisdiction, which are responsibilities that cannot be shared with another legislator. If House members are less accessible to the citizens in their districts because they must represent additional constituents, they are held solely accountable for such a development. In contrast to many state legislators, U.S. House members are full-time professional legislators who must help their constituents navigate the complex federal bureaucracy as a part of their job description (Fiorina, 1977). Thus, managing increases in constituency size for U.S. House members may pose more difficulty than it does for state legislators.

Therefore, contending that the nature and strength of the relationship uncovered in the research on these other institutions is automatically the same for the House is still open to conjecture. To acquire a better understanding of the implications of constituency size for representation in the U.S. House, it is critical to formulate models that rely on survey data eliciting attitudes toward members of this institution so unique among U.S. legislatures. This study attempts to fill this empirical void with a series of models estimating

the relationship between constituency population size and citizens' perceptions of their representatives in the U.S. House.

Based on the prior research conducted on the impact of constituency population size, two major hypotheses ought to be confirmed by the multivariate models predicting citizen attitudes toward their U.S. House incumbents, one hypothesis relating to citizens' perceptions of the accessibility of their House members and the other related to approval of their job performance: (a) The accessibility hypothesis states that as district population increases, citizens will be less likely to report having contact with their House member; (b) The approval hypothesis states that as district population increases, the likelihood of citizens favorably evaluating the performance of their representatives will decrease.

Models Testing the Relationship Between District Population and Accessibility and Approval

Evaluating the interaction of district population levels and accessibility and approval runs into the reality that precise population estimates for U.S. House districts are available only once a decade. This concern is particularly pressing when studying the impact of the average House constituency size because even though the population deviations between congressional districts must be minimized when a new round of reapportionment takes place, massive shifts in the size of congressional districts will occur within this 10-year time frame. The cases cited in the introduction are illustrative of the danger of utilizing census estimates of House district constituency size the farther in time the election cycle is from the year the census was taken. This obstacle may be overcome when studying state or countywide elected offices because the U.S. Census Bureau provides estimates on an annual basis for these jurisdictions, but these estimates are not supplied for House districts in the same fashion. However, there are time points when the most accurate estimates of House district population are available, and that occurs in the year the census is taken. These immediate postcensus estimates of district population function as the chief independent variable in this study.[9] With U.S. Census Bureau figures on district population size when they are at their most precise, this relationship can be tested by models predicting responses to a series of questions about members of the House the ANES has asked in the years 1980, 1990, and 2000. Pooling the data from these surveys can help to determine whether constituency population size has any influence on perception of House incumbents' accessibility and performance.

To assess how accessible representatives are perceived to be by respondents in this study, responses from two ANES questions are utilized. These questions have been used in past studies of citizen evaluation of House members (e.g., Gay, 2002). The first question investigates the link during the context of the campaign asking respondents whether they have had any contact with incumbent candidates for the U.S. House.[10] The second question asks whether citizens initiate contact with their House member.[11] Although about 70% of respondents said they had some form of contact with their representative in the years this question was asked, well less than half that number reported being inspired enough to contact their representative of their own volition. Including both questions in the analysis can parse out whether the population size of the House district interferes with vertical communication between the citizen and the legislator, both when the member provided the stimulus for contact and when the constituent decided to make the effort. Unfortunately, the ANES did not include these survey items in 2000, so the analysis in this study is confined to responses in the 1980 and 1990 surveys.

There may be more contact with citizens in less populated districts, but it does not necessarily follow that House members are evaluated any more favorably because of it. There are four questions used to tap attitudes toward House members' performance, including how well the incumbents stay in touch with the district, their willingness to provide help with a problem, overall job approval rating, and their feeling thermometer evaluation.[12] The approval and feeling thermometer questions were asked in each of the three elections covered in this study. The question dealing with helpfulness was asked only in 1980 and 1990, whereas the item probing whether the incumbent House member stays in touch was included as a part of the 1990 and 2000 studies.[13]

Besides constituency population, a variety of other factors have been shown to predict variance in attitudes toward members of Congress. To rule out spuriousness, several of these variables are controlled for in the models formulated for this study. Scholars have repeatedly demonstrated that partisanship is a primary determinant of political attitudes and behavior (Campbell, Converse, Miller, & Stokes, 1960; Green, Palmquist, & Schickler, 2002). One would expect that individuals will be more likely to have contact with and approve of their member of Congress if they share the same party affiliation. Consistent with past studies (e.g., Box-Steffensmeier, Kimball, Meinke, & Tate, 2003), shared partisanship is coded 1 for respondents who profess the same party identification as their representative and 0 otherwise.

Descriptive representation can also influence political efficacy and support for one's representative (Mansbridge, 1999). Constituents who share

demographic characteristics with their legislators may feel more connected to and express a greater level of support for them. Two central components of descriptive representation well documented by the political science literature are race and gender. When there is racial incongruity between citizens and their members of Congress, there tends to be a reduced likelihood that individuals will express higher levels of support and trust for and attempt to contact their representatives in government (Box-Steffensmeier et al., 2003; Gay, 2002; Griffin & Flavin, 2007; Tate, 2003). To account for racial identity, respondents who share the same race as their representative are coded as 1 and 0 otherwise.[14]

Gender has also been shown to play a more mixed role in the likelihood of citizen contact with and level of approval toward House incumbents. The sex of the candidate alone does not have a significant effect on whether constituents have contact with a member of Congress (Darcy, Welch, & Clark, 1994). However, there is evidence that sex congruence may positively affect the evaluations and vote choice for incumbents (Box-Steffensmeier et al., 2003; Lawless, 2004). To control for sex effects on the dependent variables used in this analysis, a dummy variable is created, coded 1 for persons represented by someone of the same sex and 0 otherwise.

Certain characteristics of the respondent's House member could cause variation in the accessibility and approval measures. Fenno (1978) distinguishes members of Congress based on the expansionist and protectionist stages of their careers. In the former, they must work harder to cultivate support in the district before they can began to start investing more time pursuing policy objectives and power within the institution. When the representative's career in Washington, D.C., advances, such as when he or she assumes a party or committee leadership position, there is inevitably less time available for the member to devote to meeting with constituents back home. This development may reinforce perceptions that a representative has lost touch with the district. On the other hand, a longer tenure in Congress increases visibility and voter familiarity within the district (Hibbing, 1991). Multiple independent variables are incorporated in this analysis to represent the impact of institutional status. Separate dummy variables are created, coded 1 for respondents represented by a standing committee chair or ranking member and respondents represented by elected party leaders in the House and 0 otherwise. Seniority is measured by the number of terms served by the respondent's member of the House. A dummy variable indicating freshman status is introduced because 1st-year members are particularly mindful of the need to spend time working to acquire support in their district because they are not as well known as more senior colleagues.[15] Campaign spending

cuts in many ways, as it may increase awareness of an incumbent's activities, but the most endangered incumbents are also forced to spend the most money. To control for any spending effects, inflation-adjusted spending is included as an independent variable in this analysis.

In addition, several demographic variables are likely to shape whether citizens have contact with their representative, especially if it is initiated by the citizen. Age, education, and income are strong correlates of political participation and efficacy (Verba, Schlozman, & Brady, 1995). Higher levels of interest in politics also predict the willingness of citizens to engage in the political process (Box-Steffensmeier et al., 2003). This variable is measured in this study through the ANES question asking respondents how closely they follow the campaign.

When modeling approval of incumbents, respondents' attitudes toward the U.S. Congress as an institution may color how they feel about their own member of House, even if these two variables are only modestly related (Born, 1990; Hibbing & Theiss-Morse, 1995). Thus, strength of approval toward Congress is entered into the various models estimating approval as well.

The geographic size of the district is likely to influence how much contact House members have with their constituents. Greater geographic dispersion can pose a substantial barrier for politicians seeking to interact with their constituents. To account for this possibility, each of the models includes the geographic size of the district measured in land square miles.[16] Because of the positively skewed distribution of this variable in the sample, a log transformation is employed in this analysis.

Because the number of respondents in this sample varies from 1 per district all the way to up to 70 per district, the reliability of the point approximation for each dependent will be stronger for some incumbents than for others. To address this disparity, in all of the models tested in this study, the data were weighted for the number of respondents in each district. Finally, because the key independent variable, constituency population, is identical for each respondent in the district, the models are estimated with robust standard errors clustered on the congressional district.

Congressional Contact With Constituents

Table 1 displays the results of a logistic regression model estimating the effects of district population on constituents' contact with their incumbent U.S. House member running for reelection in 1980 and 1990.[17] Here, the dependent variable is coded 1 if the citizen had some form of contact and

Table 1
Logistic Regression Model of Constituent Contact
With Incumbent House Member

Independent Variable	Coefficient	Robust *SE*
District population (in 100,000s)	–0.237**	0.105
Geographic size (log)	0.177****	0.051
Respondent characteristics		
Age	0.013****	0.004
Education	0.096****	0.018
Income	0.038****	0.604
Political interest	0.604****	0.078
Same party	0.340**	0.133
Same race	0.079	0.182
Same race × African American	0.758*	0.412
Same sex	0.135	0.150
Member characteristics		
Committee leader	0.771*	0.416
Freshman	0.009	0.389
Incumbent's previous vote share	–0.010	0.006
Incumbent's spending (in 100,000s)	0.059	0.053
Party leader	–0.951	0.989
Seniority	0.034	0.038
Constant	–1.916	0.879
Pseudo R^2	.101	
Log likelihood	–1,310.089	
N	2,818	

Note: Dependent variable is whether respondents had contact with their incumbent member of the U.S. House, coded 1 for *yes* and 0 for *no*. Data are from the 1980 and 1990 American National Election Studies.
*$p < .1$. **$p < .05$. ***$p < .01$. ****$p < .001$.

0 otherwise. It shows that, consistent with prior research on the Senate, constituency population size is negatively related to citizen interaction with the incumbent.[18] The coefficient is in the expected direction and is statistically significant ($p < .05$). To evaluate the substantive impact of district population across a range of values in this sample, predicted probabilities of respondents' contact with their House members were calculated holding all the other independent variables in the model at their appropriate means, medians, and modes.[19] An individual living in a district comprised of approximately 482,000 citizens (20th percentile) has a predicted probability of about .82 of having some form of contact. The predicted probability at the 80th percentile of constituency size, about 624,000 is .76, a difference of

6 percentage points. Although the magnitude of this effect appears modest, it does exceed the differential for party congruence versus noncongruence, about 5 percentage points. In other words, the difference in the probability of a citizen having contact with the incumbent House member between the top quintile of district population and the bottom quintile of district population exceeds the difference between a citizen represented by a House member of the same party and someone who is not.

It is striking to find that variance in district population magnitude influences the chance of contact on a level comparable to this variable so integral to representation. This finding extends support to critics of the escalation in the size of House district populations who charge this development will weaken the connection between citizen and representative. Moreover, it is consistent with studies showing that citizens in least populous states have a greater likelihood of reporting some form of contact with their U.S. senator (Hibbing & Alford, 1990; Krasno, 1994; Lee & Oppenheimer, 1999; Oppenheimer, 1996).

Citizens' Attempts to Contact Their Incumbent House Members

The previous analysis examined contact initiated by the representative rather than by the constituent. The model presented in Table 2 tests whether citizens' efforts to contact their representatives are a negative function of district population size. After controlling for the other variables in the model, the findings reported in Table 2 indicate that they are. The coefficient for district population is negatively signed and statistically significant ($p < .01$). Not only do citizens claim to have contact less often in heavily populated House districts, they also seem to try to make an overt effort to do so less frequently.

Shifting to the substantive effects of variation in district population, ceteris paribus, a respondent in a district at the 20th percentile of population has a predicted probability of .14 versus .11 at the 80th percentile. Comparing the difference between the 20th and 80th percentiles with seniority reveals about a 1 percentage point gap for a respondent with a two-term representative (20th percentile) and an eight-term representative (80th percentile). This differential indicates that the length of House service of a citizen's representative has a smaller marginal effect than does the magnitude of the population in the district.

Constituency population size influences the likelihood of an individual taking the step to reach out to a member of the House, albeit modestly. In tandem with the results from the previous model, the evidence put forward

Table 2
Logistic Regression Model of Constituents Who Attempt to
Contact Their Incumbent House Member

Independent Variable	Coefficient	Robust *SE*
District population (in 100,000s)	–0.203***	0.078
Geographic size (log)	0.086***	0.029
Respondent characteristics		
Age	0.012***	0.005
Education	0.092***	0.033
Income	0.029***	0.011
Political interest	0.627****	0.077
Same party	0.173	0.120
Same race	0.246	0.212
Same race × African American	–0.280	0.668
Same sex	0.193	0.165
Member characteristics		
Committee leader	0.203	0.282
Freshman	–0.363	0.282
Incumbent's previous vote share	0.008	0.005
Incumbent's spending (in 100,000s)	0.008*	0.005
Party leader	0.004	0.667
Seniority	0.056*	0.031
Constant	–6.107	0.949
Pseudo R^2	.082	
Log likelihood	–1,080.524	
N	2,795	

Note: Dependent variable is whether respondents attempted to contact their incumbent House member, coded 1 for *yes* and 0 for *no*. Data are from the 1980 and 1990 American National Election Studies.
*$p < .1$. ***$p < .01$. ****$p < .001$.

here supplies confirmation that expanding district populations lessen the channels of communication between representative and constituent. Citizens in less populated districts are more likely to have had some access to and sense that their House member is more accessible, as is the case for the U.S. Senate (Lee & Oppenheimer, 1999; Oppenheimer, 1996).

Perceptions of How Well House Members Stay in Touch

The data just presented demonstrate how the variability of constituency population can have an effect on the amount of contact between citizens and

their members of the House. Merely because this evidence suggests less contact as the population in the district rises, it does not automatically follow that this dynamic will translate into how the member will be perceived by the constituents on other aspects of job performance. Citizens express a clear preference that their members of Congress avoid concentrating too much on happenings in Washington and want them to remain connected to the people in their districts (Hibbing & Theiss-Morse, 1995). In 1990 and 2000, the ANES asked respondents how well they felt their member of the House does staying in touch. Table 3 depicts the results of an ordered probit model testing the extent to which constituency population size influences perceptions of the incumbent's ability to remain in touch with the people of the district.

As was the case in the previous analysis, the sign of the coefficient is in the negative direction and highly significant ($p < .01$). As predicted by the Anti-Federalists and other critics of a larger House constituency size, there is a negative relationship between these two variables. Citizens in less populated districts feel their members of the House do a superior job of staying in touch with their constituents. At the 20th percentile (672,159) of district population in this sample, the probability of a respondent giving the incumbent a rating of very good is .27 versus .18 at the 80th percentile (529,853) of district population. This 9 percentage point differential in the likelihood of believing a representative does a poor job staying in touch is striking in its own right. That it exceeds the 6 percentage point differential for the party congruence variable is also noteworthy. These data further corroborate the claims of scholars who maintain that failing to adjust legislative size to account for population growth does in fact undermine the representational relationship between lawmakers and their constituents (Dahl & Tufte, 1973; Lijphart, 2000; Taagepera & Shugart, 1989).

Perceptions of House Members' Helpfulness

One of the key components in evaluating a legislator's responsiveness is how well that individual performs in the role of providing constituency service, also referred to as service representation (Eulau & Karps, 1977). People expect their representatives to provide assistance if they need help dealing with issues such as a delayed social security check or a matter of local importance. In 1980 and 1990, the ANES asked respondents how helpful they believed their member of the House would be if contacted about some problem. Table 4 presents the results of an ordered probit model estimating the relationship between perceptions of a House member's helpfulness and

Table 3
Ordered Probit Model of How Well Incumbent House
Member Stays in Touch

Independent Variable	Coefficient	Robust *SE*
District Population (in 100,000s)	−0.196***	0.065
Geographic size (log)	0.079***	0.030
Respondent characteristics		
Age	0.017****	0.002
Approval of Congress	0.179****	0.027
Education	0.015	0.016
Income	0.005	0.007
Political interest	0.202****	0.051
Same party	0.198***	0.072
Same race	−0.075	0.092
Same race × African American	−0.265	0.313
Same sex	−0.119*	0.069
Member characteristics		
Committee leader	0.254	0.165
Freshman	0.019	0.219
Incumbent's previous vote share	0.007**	0.003
Incumbent spending (in 100,000s)	−0.010	0.011
Party leader	0.372	0.233
Seniority	−0.001	0.019
Threshold 1	0.249	0.504
Threshold 2	0.836	0.499
Threshold 3	2.356	0.498
Log likelihood	−2,160.978	
Pseudo R^2	.065	
N	1,984	

Note: Dependent variable is how good of a job individual respondent feels the incumbent House member does keeping in touch with people in the district, coded 4 (*very good*), 3 (*fairly good*), 2 (*fairly poor*), and 1 (*poor*). Data are from the 1990 and 2000 American National Election Studies.
*p < .1. **p < .05. ***p < .01. ****p < .001.

the magnitude of district population. To repeat a familiar refrain in this study, the direction of the coefficient for district population is negative and achieves statistical significance ($p < .01$). As constituency population increases, the likelihood the respondent's representative will be perceived as very helpful declines. One can conclude from this finding that it is a greater challenge to provide service representation as the numerical size of the district rises. Furthermore, it supports the assertions of House enlargement advocates who argue that increased staff and perquisites alone are insufficient to prevent

Table 4
Ordered Probit Model of Constituent Perception of
Incumbent House Member's Helpfulness

Independent Variable	Coefficient	Robust *SE*
District population (in 100,000s)	−0.148***	0.056
Geographic size (log)	0.069***	0.024
Respondent characteristics		
Age	0.015****	0.002
Approval of Congress	0.125****	0.030
Education	0.012	0.015
Income	0.004	0.006
Political interest	0.258****	0.050
Same party	0.185***	0.063
Same race	−0.011	0.081
Same race × African American	0.010	0.166
Same sex	−0.065	0.061
Member characteristics		
Committee leader	0.364***	0.119
Freshman	−0.064	0.140
Incumbent's previous vote share	0.004	0.004
Incumbent spending (in 100,000s)	0.007	0.031
Party leader	0.507	0.452
Seniority	−0.013	0.011
Threshold 1	0.484	0.453
Threshold 2	0.576	0.459
Threshold 3	2.133	0.451
Log likelihood	−2,105.502	
Pseudo R^2	.056	
N	2,106	

Note: Dependent variable is how good of a job individual respondent feels the incumbent House member does keeping in touch with people in the district, coded 4 (*very good*), 3 (*fairly good*), 2 (*fairly poor*), and 1 (*poor*). Data are from the 1980 and 1990 American National Election Studies.
**p < .05. ***p < .01. ****p < .001.

a diminution in the quality of constituency service from the perspective of the citizenry.

The substantive effects of district population on perceptions of helpfulness are comparable with what was found for the in touch rating. A respondent residing in a district at the 20th percentile of population has a .32 predicted probability of calling his or her member very helpful. In contrast, at the 80th percentile it drops to .25. For the not very helpful category, the probability is .12 for a respondent at the 20th percentile of district population

compared to .17 for someone at the 80th percentile. This impact is roughly equivalent to the differential for party congruence between the representative and the respondent, which is about a 7-point gap for the very helpful category and a 3-point difference for the not very helpful category, an additional sliver of empirical evidence lending credence to the idea that allowing the mean population size of House districts to rise is detrimental to representation.

Approval of House Members

Citizens residing in House districts that encompass a wider sphere of population have less contact with their representative, view them as less helpful, and are more likely to see their member as out of touch. The next question investigated in this study is whether constituency population size carries any ramifications for the incumbent's overall job approval. Table 5 provides the results of an ordered probit model testing the strength of respondent approval as a function of district population with the appropriate multivariate controls. It offers confirmation for the hypothesis that House members representing more populated districts receive lower marks for their overall job performance. The significance level ($p < .05$) for the coefficient meets the conventional threshold required for rejecting null hypothesis. However, not unexpectedly, the substantive impact does not match the effects of shared partisanship.

At the 20th percentile (505,001) of district population in the sample, there is a .38 predicted probability that a respondent will strongly approve of his or her representative. At the 80th percentile (663,275), that value declines to .31. In contrast, a respondent who shares the party affiliation of his or her House member has a .53 predicted probability of expressing strong approval compared to a .35 probability for someone who does not. These numbers show that constituency population size does not rival party affiliation in its impact on approval; however, it does reduce the likelihood that someone will voice approval of the job the representative is doing.

Table 6 bolsters this conclusion even further. In this analysis, a least squares regression model is employed in which the dependent variable is the feeling thermometer measure of how favorable constituents feel toward their member of the House on a scale from 0 to 100. Inspecting the results in Table 6 reveals that for every additional 100,000 constituents in the House district, the feeling thermometer rating declines 2.4 percentage points, holding the other variables in the model constant. It appears that having to

Table 5
Ordered Probit Model of Incumbent House
Member's Job Approval

Independent Variable	Coefficient	Robust *SE*
District population (in 100,000s)	−0.121**	0.056
Geographic size (log)	0.049**	0.023
Respondent characteristics		
Age	0.010****	0.002
Approval of Congress	0.180****	0.030
Education	−0.004	0.012
Income	0.001	0.006
Political interest	0.101**	0.045
Same party	0.464****	0.060
Same race	−0.044	0.084
Same race × African American	−0.177	0.384
Same sex	−0.063	0.064
Member characteristics		
Committee leader	0.320***	0.124
Freshman	−0.050	0.156
Incumbent spending (in 100,000s)	0.011	0.022
Party leader	−0.221	0.147
Seniority	−0.004	0.016
Threshold 1	−0.748	0.369
Threshold 2	−0.269	0.370
Threshold 3	1.046	0.381
Log likelihood	−2,528.110	
Pseudo R^2	.049	
N	2,421	

Note: Dependent variable is the respondent's job approval rating for the incumbent House member, coded 4 (*strongly approve*), 3 (*approve not strongly*), 2 (*disapprove not strongly*), 1 = (*disapprove strongly*). Data are from the 1980, 1990, and 2000 American National Election Studies.
**p < .05. ***p < .01. ****p < .001.

contend with representing more persons in the House district causes members to be evaluated less warmly than would otherwise be the case. Citizens residing in more heavily populated congressional districts feel perceptibly less favorable toward their incumbent House member, although this relationship does not approach the strength of the linkage between support for one's representative and partisanship. Nevertheless, there is further empirical verification of the proposition that an expansion of constituency size weakens the level of support citizens extend to their representatives.

Table 6
Regression Model of Constituent Feeling Thermometer
Ratings of Incumbent House Members

Independent Variable	Coefficient	Robust *SE*
District population (in 100,000s)	−2.441**	1.039
Geographic size (log)	0.889**	0.428
Respondent characteristics		
Age	0.188****	0.033
Approval of Congress	2.903****	0.540
Education	−0.405	0.303
Income	0.0489	0.108
Political interest	1.808**	0.900
Same party	8.688****	1.046
Same race	1.785	2.167
Same race × African American	4.395	5.786
Same sex	−0.878	1.029
Member characteristics		
Committee leader	10.901****	2.861
Freshman	−3.839	3.077
Incumbent spending (in 100,000s)	−0.172	0.439
Party leader	−2.930	4.107
Seniority	−0.367	0.266
Constant	55.446	8.053
Adj. R^2	.111	
N	2,635	

Note: Dependent variable is how warm respondents feel toward their incumbent House members. Data are from the 1980, 1990, and 2000 American National Election Studies.
**$p < .05$. ***$p < .01$. ****$p < .001$.

Discussion and Implications

This study has produced some newfound insights into how the magnitude of population can affect the kind of representation citizens receive from their national legislators. It has shown that individuals are less likely to report having contact with and to attempt to contact their House incumbent as the population of the district escalates. They also have a higher probability of claiming their member is out of touch with the district and have a greater propensity to believe their House member would not be helpful if they need assistance. Constituents in larger House districts evaluate the performance of their representatives less favorably and feel less warmly toward them.

In some cases, these effects rivaled factors such as partisan congruence in shaping perceptions toward House members. This evidence comports rather well with earlier research on U.S. senators and constituency size (Lee & Oppenheimer, 1999).

This study advances scholarly understanding of the implications of constituency size by demonstrating that even when variation in constituency size is on a measurably smaller scale, as it is for the House compared to the Senate, fundamental differences emerge in the perceptions citizens hold toward their representatives depending on the number of citizens these legislators serve. Furthermore, it reveals that shifting population patterns occurring in the 10-year window between each census places a burden on representatives who serve additional constituents.

Representing thousands of extra people contributes to an environment in which lawmakers are less accessible to their constituents and the channels of communication are diminished (Dahl & Tufte, 1973; Taagepera & Shugart, 1989). Collectively, the portrait painted here is one of damage to the representational linkage that has resulted from permitting the mean congressional district size to grow. This study offers additional ammunition to the proponents of enlarging the U.S. House, who insist that it will enhance the quality of representation the U.S. citizenry receives. Technological advancements, additional staff, and other perquisites of office have expanded simultaneously with the jump in the ratio of citizens per House district.[20] Representatives are not shy about exploiting the institutional advantages of their office and advertising their efforts to the voters (Fiorina, 1989; Mayhew, 1974). The advent of the Internet as a staple of the communications apparatus of House members both on the official government side and in the campaign may foster a closer relationship with constituents (Adler, Gent, & Overmeyer, 1998). Yet all of these developments cannot fully militate against the demands that a more populous district brings, as there has been a downward trend in the ratings citizens give to their House members on district service and attention (Jacobson, 2004). Americans want expanded access to their House members and expect them to maintain a connection to their districts (Hibbing & Theiss-Morse, 1995). A larger constituency impinges on the representative's ability to fulfill this expectation, and more staff and improvements in technology are not sufficient to ameliorate this condition.

Nevertheless, the importance of these findings should not be exaggerated. Overall, U.S. House members remain popular with their constituents, even if the institution in which they serve is held in much lower regard (Cook, 1979; Parker & Davidson, 1979). This reality has not been fundamentally altered

by the surge in constituency size that has materialized over the decades. The standing of the typical representative is such that he or she can afford a slight loss in his or her job rating. Most citizens can gain access to a representative in one way or another and have their problems dealt with in a satisfactory manner. What this study shows is that it becomes progressively more challenging to do so as the number of citizens each representative serves rises, and voters appear to notice. There is a measurable cost to allowing an unchecked district constituency population growth. In the final analysis, however, it is up to lawmakers and citizens to determine whether this diminished state of representation warrants steps to stop further increases in the average constituency size by enlarging the numerical size of the House in future rounds of reapportionment.

Appendix
Descriptive Statistics on U.S. House District Population in the ANES Sample, 1980, 1990, and 2000

Year	*M*	*SD*	Min	Max	20th Percentile	80th Percentile
1980	539,341.7	100,549.4	351,997	880,078	464,582	611,505
1990	567,888.5	84,179.5	395,349	841,297	506,260	623,501
2000	647,134.8	71,391.1	493,782	1,062,153	590,062	702,102
1980 and 1990	555,068.7	92,970.2	351,997	880,078	481,931	623,501
1990 and 2000	605,613.8	87,774.1	395,349	1,062,153	529,853	672,159
1980, 1990, and 2000	585,780.1	96,663.3	351,997	1,062,153	505,001	663,275

Notes

1. In early 2007, the House passed legislation to increase its membership 437. However, as of this writing, prospects for enactment of this proposal appear highly uncertain.

2. But a number of scholars raise serious questions about increasing the size of the House on the grounds that such a policy change would undermine deliberation and reduce legislative efficiency (Evans & Oleszek, 2000; Overby, 1992).

3. One observer complained after the 1990 census that "a member cannot be close to, much less adequately represent, 572,000 people" (Yates, 1992, p. 179).

4. This sentiment was expressed in the testimony of former Rep. Frank Chelf and many others during hearings in the 1960s considering an increase in size of the U.S. House of Representatives (U.S. House, Subcommittee No. 3 of the House Committee on the Judiciary, 1964, p. 34).

5. Nutting and Stern (2001) provide a comprehensive documentation of the shifts in population occurring in House districts between the 1990 and 2000 census years.

6. A breakdown of the descriptive statistics for House district population in the American National Election Study samples used in this study can be found in the appendix.

7. U.S. senators from more heavily populated states also tend to perform worse when aggregate election returns are examined (Abramowitz & Segal, 1992; Hibbing & Brandes, 1983; Lee & Oppenheimer, 1999).

8. These discrepancies might be based on the different samples used in these surveys.

9. Population growth in the district during the 10-year period was also controlled for, although it was highly correlated with district population. The most populated districts tended to be the fastest growing and contain the most new residents. Because constituency size was the principal variable of interest in this study, population growth was excluded from the models presented in this study.

10. These forms of contact included actually meeting the candidate, attendance at a meeting with a candidate, contact with a staff member, receiving a mailing from the candidate, reading about the candidate in the newspaper, hearing the candidate on the radio, and seeing the candidate on television.

11. This question asks if the respondent or anyone in the respondent's household has ever contacted the representative or anyone in his or her office.

12. The text of these questions is as follows: (a) "If you had a problem that your current representative could do something about, do you think he/she would be very helpful, somewhat helpful, not very helpful, or does it depend?" (b) "How good of a job would you say your representative does of keeping in touch with the people in your district, very good, fairly good, fairly poor or poor?" (c) "In general, do you strongly approve, approve not strongly, disapprove not strongly or disapprove strongly of the way your representative has been handling his/her job?" and (d) "Using the feeling thermometer, how would you rate your current representative?"

13. Because these questions were not asked in each year, the models presented here do not include consistent sample sizes.

14. This relationship may be particularly strong for African American citizens represented by an African American member of Congress. Hence, the models also include an interaction term controlling for this relationship.

15. Regression diagnostics did not indicate multicolinearity problems by including both the freshman and seniority variables in the same model.

16. The statistics on district-level area size were collected from data posted by Professor Scott Adler (http://socsci.colorado.edu/~esadler/districtdatawebsite/CongressionalDsitrict Datasetwebpage.htm).

17. All of the models tested in this study were estimated using a battery of year dummy variables. The results of the models were not substantively different than what is presented in this article's results. These models are not presented here to facilitate the calculation of predicted probabilities based on changes in level of district population.

18. Separate analyses were conducted using each individual form of contact as the dependent variable. The greatest substantive impact was revealed on the question of whether the citizen actually met the incumbent representative.

19. This approach was utilized for all of the predicted probabilities cited in this study. Probabilities were calculated using *CLARIFY* (G. King, Tomz, & Wittenberg, 2000).

20. Ornstein, Mann, and Malbin (2002) supply ample evidence of this trend.

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