Rallied by thy neighbor: how minority spatial concentration increases voter turnout

Rafael Ahlskog* Michal Grahn† Stuart J. Turnbull-Dugarte‡

First view at *Journal of Politics*

Abstract

Spatial concentration is often thought to increase political engagement among minority groups by fostering intragroup contact and strengthening political group consciousness. This study evaluates this relationship with a focus on lesbians, gays, and bisexuals (LGB), extending existing research beyond ethnoracial minorities. Using Swedish population-wide register data, we identify over 20,000 LGB individuals and nearly 8 million comparable heterosexual peers and track their validated voter turnout across four parliamentary elections (1994–2022). To estimate the causal effect of neighborhood LGB concentration on turnout, we apply a triple-difference design leveraging fine-grained geolocation data. We find that increases in local LGB concentration are associated with higher turnout among LGB individuals relative to heterosexual neighbors experiencing the same neighborhood changes. The results provide rare causal evidence that minority spatial concentration can mobilize electoral participation, contributing to research on political geography, urban politics, and minority political behavior.

Keywords: political geography, segregation, LGBTQ+ politics, sexuality politics, electoral behavior.

Data and replication materials: Replication files are available in the JOP Dataverse (https://dataverse.harvard.edu/dataverse/jop). The empirical analysis has been successfully replicated by the JOP replication analyst.

Financial support: Rafael Ahlskog acknowledges support from the Swedish Research Council (grants: 2019-00244 & 2023-01343) and ESSGN (HORIZON-MSCA-DN-2021 101073237). Michal Grahn acknowleges support from the Swedish Research Council (grants: 2022-01716, 2022-05227 & 2025-04059) and FORTE (2023-01574). Stuart J. Turnbull-Dugarte acknowledges support from the Swedish Research Council (2025-04059) and FORTE (2023-01574).

Co-author statement: The authors contributed equally to this publication and are listed in alphabetical order.

*Uppsala University. Email: rafael.ahlskog@statsvet.uu.se

†Uppsala University. Email: michal.grahn@statsvet.uu.se, corresponding author.

‡University of Southampton. Email: s.turnbull-dugarte@soton.ac.uk

Introduction

Spatial concentration – or segregation – of minority groups is often seen as a sign of discrimination and alienation (Fong and Shibuya, 2000; Ghaziani, 2014). Yet living near others from the same group can also create political advantages. Proximity increases everyday contact, which can make shared concerns more visible and strengthen a sense of political belonging (Bhatti and Hansen, 2016; Cho, Gimpel, and Dyck, 2006; Fraga, 2016; Baybeck and Huckfeldt, 2002). Geographic concentration can also support group-specific local networks and organizations that lower the costs of participation and increase political confidence (Cho, Gimpel, and Dyck, 2006; Galandini and Fieldhouse, 2019; McAvay and Vasilopoulos, 2024). In addition, when minority groups are geographically concentrated, local politics may become more responsive to their interests, either through policy change or by facilitating the recruitment of minority candidates (Fraga, 2016; Everitt, Ie, Bird, Wagner, and Lalancette, 2025; Baisley and Albaugh, 2025; Debus and Wurthmann, 2024).

A growing literature studies these neighborhood effects for ethnoracial minorities, but most existing evidence is correlational, and relatively few studies identify causal effects (McAvay and Vasilopoulos, 2024; Andersson, Lajevardi, Lindgren, and Oskarsson, 2022; Aggeborn, Andersson, Dehdari, and Lindgren, 2024). It is also unclear whether similar dynamics apply beyond ethnoracial groups. This note addresses that question by examining whether spatial concentration can mobilize political participation among lesbians, gays, and bisexuals (LGB).

Like ethnoracial minorities, many LGB individuals historically clustered in low-income urban neighborhoods in response to discrimination, and these "gayborhoods" became important sites of early LGBTQ+ political mobilization (Ghaziani, 2014; Hertzog, 1996; Bailey, 1999; Ayoub and Kollman, 2021). These neighborhoods fostered dense within-group contact and supported the development of community organizations that remain central to LGB social life today (Poston, Compton, Xiong, and Knox, 2017). Yet despite this history, the relationship between LGB spatial concentration and voter participation has not been tested using causal methods.

LGB people also differ from ethnoracial minorities in ways that make them a particularly demanding case for neighborhood-based theories of political engagement. Over recent decades, LGB individuals have experienced substantial socioeconomic gains and now vote at higher rates than heterosexuals, while increasingly residing in affluent and highly educated neighborhoods (Antecol, Jong, and Steinberger, 2008; Grahn, 2024; Turnbull-Dugarte and Townsley, 2020; Morales, 2018). Moreover, unlike ethnoracial minorities, LGB individuals rarely constitute local majorities. These features limit opportunities for sustained intra-group contact and, in turn, the scope for neighborhood-based mobilization, raising the theoretical bar for detecting contextual effects.

Empirically, we use population register data from Sweden, a country with high voter turnout, to identify LGB individuals and comparable heterosexual peers using validated family records of same- and different-sex partnerships and parenthood (Grahn, 2024). We construct detailed measures of neighborhood LGB presence using precise geolocation data and observe *validated* individual-level turnout across four parliamentary elections. Using a difference-in-difference-in-differences design (Olden and Møen, 2022), we show that living near other LGB individuals increases turnout among LGB people relative to heterosexual neighbors who experience the same neighborhood changes. A one percentage-point increase in the local share of LGB individuals is associated with a 1.56 percentage-point greater increase in turnout among LGB individuals. Given Sweden's already high turnout levels, this effect is substantively meaningful and likely conservative compared to lower-turnout contexts.

Together, these findings show that spatial concentration can mobilize political participation even among minority groups that are smaller in size and therefore less likely to experience sustained intra-group contact through residential clustering. By providing causal evidence from such a demanding case, this study extends theories of minority neighborhood effects beyond ethnoracial groups and underscores the continued political relevance of local social context for minority political participation(McAvay and Vasilopoulos, 2024).

Research Design

Identifying LGB individuals

Sexual orientation is not administratively recorded in Swedish population registers. To identify LGB individuals, we therefore rely on verified family records containing validated information on civil status and parenthood (see Grahn, 2025; Grahn, 2024)[1]. Specifically, we identify individuals who have been married to, or entered a registered partnership with, a same-sex partner since such unions became legally possible in 1995. In addition, we use the same records to identify same-sex parents following the legalization of same-sex adoption in 2003 and access to in vitro fertilization for same-sex couples in 2004. Using this approach, we identify 20,526 unique LGB individuals who, at any point between 1995 and 2021, were either partnered with a same-sex partner or had children with one.

This strategy necessarily captures only a subset of the broader LGB population.[2] Nonetheless, the resulting sample far exceeds the size of those typically used in prior research, which has largely relied on survey data. We then use this identifier to track LGB individuals across each election year included in the analysis, further expanding the number of observed person–election observations.

Because cohabitation and parenthood are themselves strong predictors of political behavior, particularly voter turnout (Dahlgaard, Bhatti, Hansen, and Hansen, 2022), it is essential to construct an appropriate counterfactual group. We therefore identify a heterosexual control sample using the same criteria applied to same-sex couples and parents. Specifically, we select individuals who have been married to or had children with a different-sex partner, yielding a comparison group of 7,927,647 unique individuals. By comparing LGB individuals to an otherwise similar group defined by partnership and parental status, we aim to isolate the effect of LGB spatial concentration on LGB voter participation.

[1] See the sections on data collection and ethical approval in the Online appendix (p. 8) for more details.

[2] See Kühne, Kroh, and Richter (2019) for a comparison of inferences drawn from partner-inferred versus self-identified measures. For political outcomes, Turnbull-Dugarte (2022) reports comparable sexuality gaps in electoral preferences across measurement approaches, suggesting that partner-inferred measures, while limited in coverage, yield valid inferences for the population they identify.

Measuring spatial concentration

Our aim is to construct individualized measures of local neighborhood context using validated geolocation data. For each election year in which population-wide individual-level turnout data are available (1994, 2010, 2018, and 2022), we define a local residential environment around each individual using an adapted K-nearest neighbors approach. Residential locations are drawn from population registers and are available as coordinates rounded to 250 $\times$ 250 meter grids, or 1,000 $\times$ 1,000 meter grids in sparsely populated areas. For each individual, we compute the share of nearby residents classified as LGB within a local area containing at least K other individuals, using a jackknifed mean to avoid mechanical self-inclusion. This measure captures local sexual minority concentration in a way that reflects individuals' immediate residential surroundings.

Our main specification uses $K = 1{,}000$, with robustness checks at $K = 5{,}000$ and $K = 10{,}000$ (see the Appendix, Table A2). The neighborhood measure is scaled in percentage points, such that a one-unit increase corresponds to a one percentage-point increase in the local share of LGB residents. On average, LGB individuals live in neighborhoods with roughly twice the proportion of LGB residents as matched heterosexuals (for example, 0.65% versus 0.32% in 2022), a difference that is stable over time (see the Appendix, Figure A1, p. i).

Identification strategy

In Figure 1, we plot mean turnout rates for individuals in our LGB and control samples compared to the rest of the population. Consistent with Grahn (2024), contemporary Swedish LGB individuals vote at significantly higher rates than comparable heterosexuals.[3] This raises a central question: is spatial clustering among LGB people one of the mechanisms behind this elevated electoral engagement?

Our empirical strategy for estimating the effect of having LGB neighbors on electoral engagement relies on a triple-difference (DDD) estimator. The DDD design iso-

[3] This is a context of generally high turnout. Voter turnout in the four elections studied ranged between 84% and 87%.

lates the effect of LGB neighbors by comparing how changes in neighborhood LGB concentration affect turnout among LGB individuals relative to heterosexual neighbors who experience the same neighborhood changes. We begin by estimating two separate difference-in-differences (two-way fixed effects) models, one for LGB individuals and one for a heterosexual control group, including individual and year fixed effects. In both models, the coefficient of interest captures the association between neighborhood LGB concentration and individual voter behavior. This setup leverages within-individual changes in neighborhood composition, whether driven by residential mobility or local demographic change, while accounting for individual- and year-specific confounders.

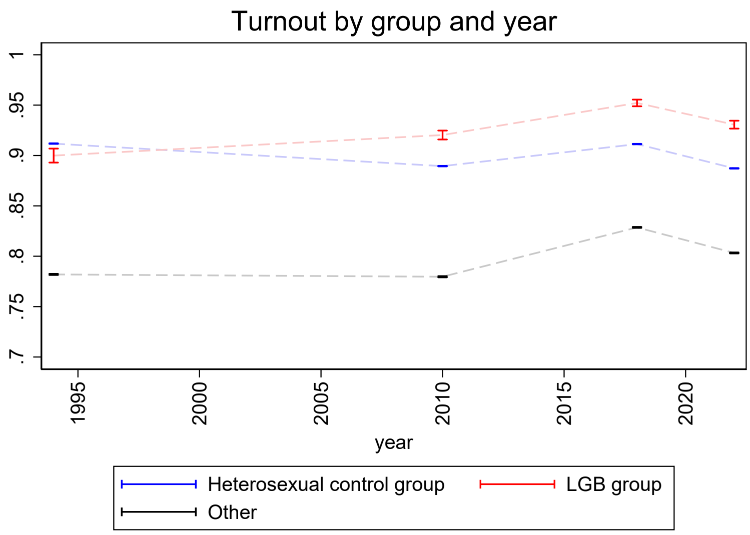

Figure 1: Turnout by group over time

However, this DiD approach alone may yield biased estimates because neighborhood LGB concentration constitutes a bundled treatment. Even within a two-way fixed effects framework, spatial clustering of LGB individuals may coincide with other neighborhood characteristics that also shape political engagement. For example, contemporary LGB individuals often reside in neighborhoods with higher average education and income levels. Any observed mobilization effects could therefore reflect these contextual features rather than the presence of other LGB individuals per se.

This is where the triple-difference estimator enters. To address the bundled treatment problem, we rely on the assumption that neighborhood characteristics correlated with LGB concentration affect political engagement similarly for LGB individuals and heterosexual controls. We refer to this as the *stable non-LGB composition effects assumption*, namely that contextual factors such as neighborhood education or income levels influence voter behavior in comparable ways regardless of sexual orientation. Under this assumption, any systematic difference in the DiD effect of neighborhood LGB concentration between LGB individuals and heterosexual controls admits a causal interpretation (Olden and Møen, 2022). The difference between the two DiD estimates (the DDD estimand) therefore constitutes our parameter of interest.[4] In sum, identification rests on differences between LGB individuals and heterosexual controls in how turnout responds to changes in neighborhood LGB composition. Tests of the stable composition effects assumption are presented in the Appendix (see Table A2, p. 5).

Results & Discussion

The DDD estimate is illustrated in Figure 2, where the quantity of interest is highlighted in red. The Appendix section with the main results (pp. i–iii) presents all key estimates and their interpretation. Figure 2 displays the two (confounded) DiD estimates separately for LGB individuals and the heterosexual control group (HC). The quantity of interest is the difference between these two point estimates, yielding a highly statistically significant DDD effect of 0.0156 ($p < .001$). This implies that a one percentage-point increase in neighborhood LGB composition is associated with a 1.56 percentage-point greater increase in turnout among LGB individuals relative to those in the heterosexual control group. As shown in Table A1 (p. iii; specifications 1 and 2), the naive version of this estimate is nearly twice as large, indicating that a less rigorous approach would have been substantially confounded.

Several sensitivity analyses are reported in the Appendix (see Table A2, p. 5). These show, first, that (a) interacting controls for other neighborhood characteristics, such as income and education, does not alter the results, supporting the stable non-LGB com-

[4] Specifically, we implement this design by interacting group status (LGB vs. heterosexual control) with neighborhood LGB composition. This interaction term captures the DDD estimate.

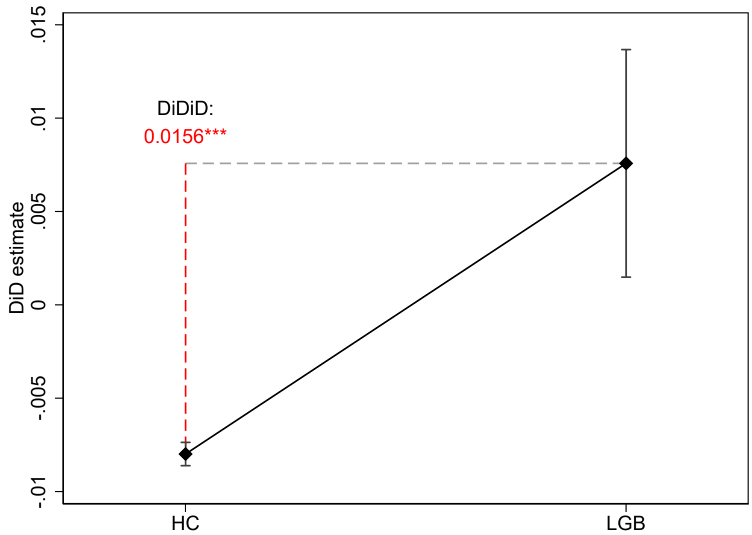

Figure 2: Identified effect of LGB spatial concentration on political engagement

Note: The graph displays the DiD estimates for the heterosexual control group and the LGB group. The difference between these estimates represents the identified effect (the DDD). Results are based on specification 5 in Table A1 in the Appendix (p. iii). Relevant descriptive statistics are presented in Table A3 (p. vii)

position effects assumption; (b) results are consistent across different neighborhood sizes ($K = 5{,}000$ and $K = 10{,}000$); and (c) results are unlikely to be driven primarily by partner mobility, such as cohabitation or separation, as roughly two thirds of the estimated effect remains when the very closest neighbors are excluded from the calculation. Finally, when excluding individuals with a perfect turnout record (those who “always vote”), the estimated DDD effect increases substantially. This suggests that while our main specification provides an accurate estimate of the average treatment effect in a high-turnout context such as Swedish parliamentary elections, it may underestimate the effect of LGB spatial concentration in lower-turnout settings where there is greater scope for electoral mobilization.

This study provides the first causal evidence that spatial concentration can mobilize political participation among sexual minorities. Drawing on comprehensive Swedish population register data, we show that LGB individuals who live near other LGB people are significantly more likely to vote, even after accounting for individual characteristics, time trends, and key neighborhood-level confounders. In short, LGB individuals are rallied by their fellow LGB neighbors.

More broadly, these findings demonstrate that spatial concentration can foster political engagement even among minority groups that are smaller in size and therefore less likely to experience sustained intra-group contact through residential clustering. By providing causal evidence from such a demanding case, this study extends theories of minority neighborhood effects beyond ethnoracial groups and underscores the continued political relevance of local social context for democratic participation. Geography, we show, remains politically consequential even in a digital age.

References

Aggeborn, Linuz, Henrik Andersson, Sirus H. Dehdari, and Karl-Oskar Lindgren. 2024. “Granting Immigrants the Right to Vote in National Elections: Empirical Evidence from Swedish Administrative Data”. *British Journal of Political Science* 54(3): 712–729.

Andersson, Henrik, Nazita Lajevardi, Karl-Oskar Lindgren, and Sven Oskarsson. 2022. “Effects of Settlement into Ethnic Enclaves on Immigrant Voter Turnout”. *Journal of Politics* 84(1): 578–584.

Antecol, Heather, Anneke Jong, and Michael Steinberger. 2008. “The Sexual Orientation Wage Gap: The Role of Occupational Sorting and Human Capital”. *Industrial and Labor Relations Review* 61(4): 518–543.

Ayoub, Phillip M. and Kelly Kollman. 2021. “(Same)-sex in the city: Urbanisation and LGBTI rights expansion”. *European Journal of Political Research* 60(3): 603–624.

Bailey, Robert W (1999). *Gay Politics: Urban Politics*. New York: Columbia University Press.

Baisley, Elizabeth and Quinn M. Albaugh. 2025. “Wrong Place or Wrong Party? LGBTQ2S+ Candidates and District Competitiveness”. *Electoral Studies* 96.

Baybeck, Brady and Robert Huckfeldt. 2002. “Urban contexts, spatially dispersed networks, and the diffusion of political information”. *Political Geography* 21: 195–220.

Bhatti, Yosef and Kasper M. Hansen. 2016. "The Effect of Residential Concentration on Voter Turnout among Ethnic Minorities". *International Migration Review* 50(4): 977–1004.

Cho, Wendy K. Tam, James G. Gimpel, and Joshua J. Dyck. 2006. "Residential Concentration, Political Socialization, and Voter Turnout". *Journal of Politics* 68(1): 156–167.

Dahlgaard, Jens Olav, Yosef Bhatti, Jonas Hedegaard Hansen, and Kasper M. Hansen. 2022. "Living Together, Voting Together: Voters Moving in Together Before an Election Have Higher Turnout". *British Journal of Political Science* 52(2): 631–648.

Debus, Marc and Constantin Wurthmann. 2024. "LGB+ identity and its implications for the policy positions of parliamentary candidates". *European Political Science Review* 16(4): 483–502.

Everitt, Joanna, Kenny William Ie, Karen Bird, Angelia Wagner, and Mireille Lalancette. 2025. "Examining the Effects of 2SLGBTQI+ Candidates on 2SLGBTQI+ Voter Turnout in Canada". *Political Research Quarterly*.

Fong, Eric and Kumiko Shibuya. 2000. "The spatial separation of the poor in Canadian cities". *Demography* 37(4): 449–459.

Fraga, Bernard L. 2016. "Candidates or Districts? Reevaluating the Role of Race in Voter Turnout". *American Journal of Political Science* 60(1): 97–122.

Galandini, Silvia and Edward Fieldhouse. 2019. "Discussants that mobilise: Ethnicity, political discussion networks and voter turnout in Britain". *Electoral Studies* 57: 163–173.

Ghaziani, Amin (2014). *There Goes the Gayborhood?* Princeton: Princeton University Press.

Grahn, Michal. 2024. "Still proud at the polls? LGBT+ rights don't dilute the sexuality turnout gap". *European Journal of Political Research* 63(3): 629–666.

Grahn, Michal. 2025. "From the Closet to Spotlight: The Rising Tide of Lesbian, Gay and Bisexual Political Candidacies". *Journal of European Public Policy* 32(1): 2382–2408.

Hertzog, Mark (1996). *The Lavender Vote*. New York: NYU Press.

Kühne, Simon, Martin Kroh, and David Richter. 2019. "Comparing Self-Reported and Partnership-Inferred Sexual Orientation in Household Surveys". *Journal of Official Statistics* 35(4): 777–805.

McAvay, Haley and Pavlos Vasilopoulos. 2024. "Do Neighborhoods Empower or Disenfranchise? Coethnic Concentration, Spatial Disadvantage, and Voter Registration in France". *Journal of Politics* 86(4): 1277–1290.

Morales, Danielle Xiaodan. 2018. "Residential segregation of same-sex partnered households in the US: New evidence from US census 2010". *International Journal of Sociology and Social Policy* 38(11/12): 973–981.

Olden, Andreas and Jarle Møen. 2022. "Triple Difference Estimator". *Econometrics Journal* 25(3): 531–553.

Poston, Dudley L. Jr, D'Lane R. Compton, Qian Xiong, and Emily A. Knox. 2017. "The Residential Segregation of Same-Sex Households from Different-Sex Households in Metropolitan USA, circa-2010". *Population Review* 56(2).

Turnbull-Dugarte, Stuart J. 2022. "Who wins the British lavender vote? (Mostly) Labour". *Politics, Groups, and Identities* 10(3): 388–409.

Turnbull-Dugarte, Stuart J. and Joshua Townsley. 2020. "Political engagement and turnout among same-sex couples in Western Europe". *Research & Politics* 7(4).

Biographical statements

Rafael Ahlskog and Michal Grahn are Associate Professors at the Department of Government, Uppsala University, Sweden, 753 20. Stuart Turnbull-Dugarte is an Associate Professor at the Department of Politics and International Relations, University of Southampton, United Kingdom, SO17 1BJ.

Online Appendix file for Ahlskog, Grahn & Turnbull-Dugarte (2026) "Rallied by thy neighbor: how minority spatial concentration increases voter turnout" *Journal of Politics*

Sample and description

In Figure A1, we plot the average neighborhood LGB composition by group and election year. We note a consistency in the spatial concentration of LGB individuals over time, and there are even hints of it increasing, particularly between the 1990s and the 2000s (as measured by the slight increase in the gap between the LGB group and the heterosexual controls). LGB spatial concentration shows no signs of abating.

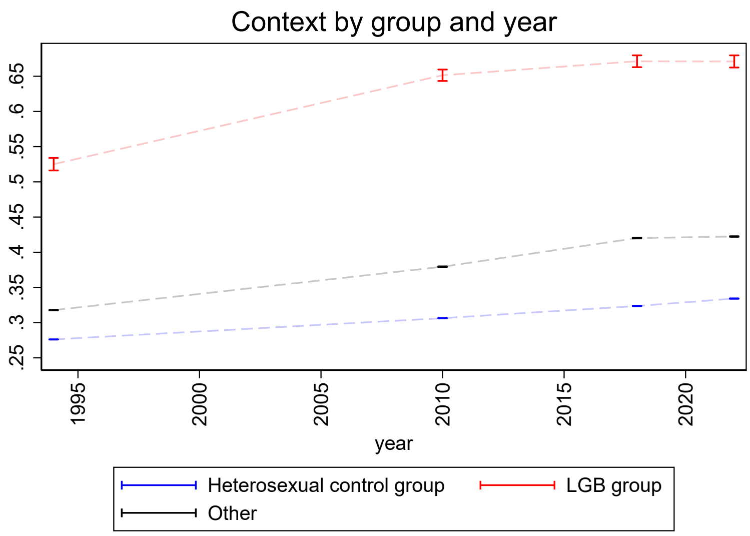

Figure A1: Averages of neighborhood composition per group and year

Note: Y axis shows the percentage of LGB individuals.

Main results

Table A1 presents the main estimates of interest. Models 1 and 2 report naive correlational estimates without individual or time fixed effects, estimated separately for the matched heterosexual controls and the LGB sample. These estimates are statistically significant in both groups ($p < .001$), with the estimate for LGB individuals approximately 3 percentage-points higher than that for the controls. This difference represents the naive version of our main effect of interest.

In Models 3 and 4, Table A1, we introduce individual and time fixed effects for each group. The resulting estimates remain statistically significant ($p < .001$ for LGB individuals; $p < .05$ for controls), though the magnitudes shift: the association between neighborhood LGB concentration and turnout becomes slightly negative for heterosexual controls and slightly positive for LGB individuals. This suggests that once we account for stable individual traits and general time trends, the residual effect of living in a neighborhood with a high concentration of LGB individuals differs meaningfully by group.

Model 5, Table A1, explicitly tests this difference by including an interaction between group status and neighborhood LGB concentration – the triple difference estimator. The interaction term yields a statistically significant effect of 0.0156 ($p < .001$), indicating that a one percentage-point increase in neighborhood LGB composition is associated with a 1.56 percentage-point greater increase in turnout among LGB individuals compared to heterosexual controls. Given that a percentage point increase in LGB concentration generally translates to around two standard deviations of the actual distribution of LGB concentration, this point estimate represents the response to a large change in context.

Robustness analyses

Table A2 presents a series of robustness checks, including alternative neighborhood sizes and a test of the stable non-LGB composition effects assumption. Models 1 and 2 show that the main triple difference estimate remains consistent when using neighborhoods defined by the 5,000 and 10,000 nearest neighbors.

We also test the stable non-LGB composition effect assumption. In Models 3 and 4, we add controls for the interaction with neighborhood-level education and income to assess whether the results are driven by broader sociodemographic factors correlated with LGB concentration. If the assumption holds, the triple difference interaction term

Table A1: Main results

VARIABLES	(1) HC	(2) LGB	(3) HC	(4) LGB	(5) ALL
Neighborhood	0.00297***	0.0323***	-0.00799***	0.00758*	-0.00799***
	(0.000240)	(0.00209)	(0.000318)	(0.00311)	(0.000318)
Neighborhood × LGB					0.0156***
					(0.00313)
Observations	18,334,846	53,561	17,563,274	52,646	17,615,920
R-squared	0.000	0.005	0.556	0.513	0.556
Ind. FE	NO	NO	YES	YES	YES
Year FE	NO	NO	YES	YES	YES

Robust standard errors in parentheses
*** p<0.001, ** p<0.01, * p<0.05

should remain stable when these covariates are included, even if the absolute diff-in-diff estimates within each group change. The resulting estimates – 0.0168 and 0.0145 – are similar in magnitude and not significantly different from the main specification (0.0156). Since education and income capture a wide range of other neighborhood characteristics, this supports the claim that our triple difference strategy isolates the effect of LGB concentration rather than confounding contextual factors.

Model 5, Table A2, addresses the concern that changes in neighborhood composition may reflect relationship dissolution (e.g., a partner moving out), which could in turn affect turnout. To test this, we construct a version of the neighborhood measure that excludes the closest neighbors – those residing in the same 250×250 meter grid – to remove cohabiting partners from the exposure calculation. Removing all of the closest neighbors, rather than e.g. only the closest identified LGB neighbors, ensures that we are not inadvertently including partners missed by our operationalization of LGB status. The resulting estimate, 0.0106 ($p < .01$), remains statistically significant, though somewhat attenuated. This may indicate that part of the effect is driven by separations, or alternatively, that the most immediate neighbors exert the strongest mobilizing influence – consistent with proximity-based contact theories – even if we cannot pinpoint the precise spatial threshold.

Finally, Model 6, Table A2 addresses concerns about ceiling effects (considering the high turnout among LGB voters) by testing a model where all consistent voters (always-voters) are dropped. The estimated triple difference estimate increases substantially – seven-fold – in this subgroup. While this figure should not be taken at face value considering that the model now introduces various types of biases that are difficult to disentangle (selecting on the outcome of interest), it could be an indication that our main results, while still accurate in the context of Swedish parliamentary elections, would provide an underestimate of similar mobilization effects in countries with substantially lower turnout.

Table A2: Robustness checks

VARIABLES	(1) ALL	(2) ALL	(3) ALL	(4) ALL	(5) ALL	(6) SV
Neighborhood	-0.00960***	-0.00921***	-0.0109***	-0.00738***	-0.00687***	-0.04197***
	(0.000390)	(0.000420)	(0.000325)	(0.000318)	(0.000347)	(0.00162)
Neighborhood × LGB	0.0174***	0.0161***	0.0168***	0.0145***	0.0106***	0.11353***
	(0.00348)	(0.00377)	(0.00329)	(0.00313)	(0.00353)	(0.02042)
Observations	17,615,920	17,615,920	17,613,347	17,615,415	17,615,920	3,715,374
R-squared	0.556	0.556	0.556	0.556	0.556	0.2607
Ind. FE	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES
Buffer	NO	NO	NO	NO	YES	NO
Neighborhood control	NO	NO	EDUCATION	INCOME	NO	NO
Area size	5'000	10'000	1'000	1'000	1'000	1'000

SV = sometimes-voters. Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Descriptives

Table A3 contains descriptive statistics per variable, year and group. As should be expected under a model where LGB individuals sort into areas where other LGB individuals reside, we can observe slightly larger proportions of LGB neighbors of LGB individuals when the area included is smaller (i.e. the closest K=1000 neighbors as opposed to K=10000 neighbors), and the same does not apply to either matched controls or others.

Table A4 contains population densities for all years and groups. Two things stand out. First, LGB individuals live in more densely populated areas on average. This makes sense considering that a) it is likely that urbanicity is positively associated with more liberal norms, and thus with coming out, and b) this difference in norms also leads to LGB individuals sorting into areas that are more rather than less densely populated. The second thing that stands out is that densities have *decreased* over time, despite the population growing during this period. This might seem like a paradox at first glance, but makes sense considering that the bulk of new housing growth has been in suburban expansion (i.e. spatial expansion rather than "infill"). Since these figures represent densities in the areas where people live, and not the average densities across the entire landmass, we should therefore expect densities to drop somewhat.

Table A3: Descriptives

		LGB group			Heterosexual controls			Other		
Variable	*Year*	*Mean*	*SD*	*N*	*Mean*	*SD*	*N*	*Mean*	*SD*	*N*
Turnout										
	1994	89.992%	30.013%	7174	91.184%	28.353%	3840204	78.1961%	41.291%	1955096
	2010	92.032%	27.081%	14370	88.947%	31.355%	4839023	77.9667%	41.447%	1743675
	2018	95.218%	21.338%	15957	91.136%	28.423%	4901567	82.8629%	37.683%	2280198
	2022	93.062%	25.410%	16129	88.724%	31.630%	4778525	80.3289%	39.751%	2619136
LGB neighborhood, $K = 1000$										
	1994	0.525%	0.408%	8140	0.276%	0.232%	4507695	0.3178%	0.275%	2156818
	2010	0.651%	0.527%	16100	0.306%	0.340%	5339373	0.3794%	0.394%	1971122
	2018	0.671%	0.560%	17071	0.324%	0.359%	5189645	0.4202%	0.432%	2464965
	2022	0.671%	0.582%	17502	0.334%	0.362%	5119879	0.4223%	0.439%	3949867
LGB neighborhood, $K = 5000$										
	1994	0.510%	0.389%	8140	0.280%	0.201%	4507695	0.3190%	0.248%	2156818
	2010	0.622%	0.513%	16100	0.312%	0.310%	5339373	0.3781%	0.367%	1971122
	2018	0.630%	0.535%	17071	0.328%	0.321%	5189645	0.4157%	0.394%	2464965
	2022	0.628%	0.546%	17502	0.337%	0.320%	5119879	0.4187%	0.394%	3949867
LGB neighborhood, $K = 10000$										
	1994	0.507%	0.376%	8140	0.283%	0.193%	4507695	0.3205%	0.240%	2156818
	2010	0.609%	0.488%	16100	0.316%	0.296%	5339373	0.3780%	0.351%	1971122
	2018	0.622%	0.512%	17071	0.334%	0.310%	5189645	0.4172%	0.381%	2464965
	2022	0.622%	0.528%	17502	0.343%	0.310%	5119879	0.4215%	0.382%	3949867
Neighborhood education										
	1994	0.431	0.904	8157	0.002	0.815	4508351	0.0001	0.827	2180932
	2010	0.365	0.919	16109	-0.031	0.837	5341389	-0.0103	0.881	1985907
	2018	0.330	0.904	17081	-0.053	0.838	5192556	0.0121	0.910	2479605
	2022	0.300	0.884	17510	-0.040	0.832	5122386	0.0007	0.901	3967589
Neighborhood income										
	1994	-0.019	0.338	8158	0.020	0.332	4509536	-0.0469	0.338	2182192
	2010	0.011	0.430	16109	0.000	0.415	5342197	-0.0763	0.449	1986229
	2018	0.030	0.332	17081	0.002	0.340	5193214	-0.0582	0.370	2479998
	2022	0.063	0.341	17515	0.022	0.357	5123157	-0.0408	0.399	3968638

Table A4: Population densities per km^2

Year	Mean	SD	Min	Max	N
	LGB				
Year	Mean	SD	Min	Max	N
1994	3408	3376	0.110	14007	8140
2010	3469	3586	0.072	16272	16100
2018	2785	2959	0.040	14118	17071
2022	2407	2553	0.057	12427	17502
	Heterosexual controls				
Year	Mean	SD	Min	Max	N
1994	1552	1941	0.007	14006	4507695
2010	1703	2287	0.007	16272	5339373
2018	1477	1920	0.007	14118	5189645
2022	1370	1695	0.008	12427	5119879
	Others				
Year	Mean	SD	Min	Max	N
1994	2011	2298	0.007	14007	2156818
2010	2260	2644	0.009	16272	1971122
2018	2082	2275	0.008	14118	2464965
2022	1886	1969	0.008	12427	3949867

Note on data accessibility

This study is based on Swedish population registry data maintained by Statistics Sweden (SCB). The dataset includes extensive, verified individual-level information covering the entire Swedish population over time. Access is strictly regulated and contingent on ethical approval, payment of a substantial fee, and compliance with geolocation restrictions. As a result, the research team is unable to make the data publicly available for replication.

Ethical approval

This study received ethical approval from the Swedish Ethical Review Authority. The decision number is 2023-01939-01.