

Shifts in U.S. Social Media Use, 2020–2024: Decline, Fragmentation, and Enduring Polarization

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Using nationally representative data from the 2020 and 2024 *American National Election Studies* (ANES), this paper describes how U.S. social media use has shifted across platforms, demographics, and politics. Overall platform reach declined, driven by growth in the share of Americans—especially the youngest and oldest cohorts—who report using no social media. Visiting and posting activity on Twitter/X and Facebook have fallen by nearly 50% since 2020, with the decline on Twitter/X driven primarily by reduced participation among Democratic users. While Facebook, YouTube, and Twitter/X lost ground, TikTok and Reddit grew modestly, consistent with a more fragmented digital public sphere. Platform audiences aged and became slightly more educated and racially diverse. Politically, most platforms shifted toward Republican users while remaining, on balance, Democratic-leaning. Twitter/X experienced the largest change: among posters, the partisan balance swung over 70 percentage points from Democrats to Republicans. Across platforms, political posting remains closely tied to affective polarization, as the most partisan respondents are also the most active. As casual users disengage while polarized partisans remain vocal, online discourse becomes narrower and more ideologically extreme.

Keywords: Social media; Political polarization; Digital public sphere; Online political communication; Platform fragmentation; American National Election Studies (ANES)

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Date submitted: 2025-12-12

Introduction

The social media ecosystem appears to be in flux. Twitter’s rebranding to X has come to symbolize a broader reorganization of online publics—political reshuffling, user attrition, and uncertainty about the role of legacy platforms. Simultaneously, the shift from text-based, networked feeds toward algorithmically curated short-form video has accelerated, with TikTok setting the pace for the wider ecosystem (Zulli and Zulli, 2022; Gillespie, 2014; Kaye et al., 2021). At the same time, everyday communication is increasingly migrating from large, open networks to semi-private spaces such as group chats and messaging apps. Commentators describe a digital public sphere in transition: smaller and more fragmented, less dominated by traditional social networking sites, and increasingly oriented toward broadcast-style media—with some even suggesting that we may be approaching the end of the social media era.

Despite this abundant commentary, representative evidence remains limited. Much existing work relies on commercial analytics or opt-in web surveys that capture broad signals but cannot reliably describe population-level patterns (Blank and Lutz, 2017; Hargittai, 2020). The *American National Election Studies* (ANES) provides rare, comparable measures of platform use in 2020 and 2024 (ANES, 2021, 2025), including detailed items on frequency and political posting for Facebook and Twitter/X. These data make it possible to trace, with national representativeness, how U.S. social media use has shifted across platforms, demographic groups, and political orientations during a politically turbulent period.

This paper provides a descriptive overview of these shifts. It first documents the modest but clear decline in overall platform reach and the growing share of Americans who report using no social media at all, with the largest increases among the youngest and oldest cohorts. It shows that visiting and posting on Twitter/X and Facebook collapse to nearly half of their 2020 levels, with the reduction on Twitter/X being driven primarily by a loss of Democratic user activity. It then examines how platform audiences differ in age, gender, and education, and how those compositions changed between 2020 and 2024. Finally, it turns to politics, showing that posting on Twitter/X moved from Democratic-leaning to a Republican-leaning — and that political posting on both Facebook and Twitter/X remains strongly associated with affective polarization.

Taken together, these patterns portray a social media environment undergoing gradual contraction and segmentation. As participation becomes more uneven and politically polarized users remain the most active contributors, visible online discourse continues to amplify partisan extremes even as much of the broader public quietly disengages.

Methods

The analyses draw on the 2020 and 2024 *American National Election Studies* (ANES) Time Series surveys. Both waves are nationally representative of U.S. citizens aged 18+, based on address-based probability samples administered online and face-to-face in English and Spanish. The 2020 survey included 8,280 pre-election and 7,449 post-election respondents; the 2024 survey included 5,521 pre-election and 4,964 post-election reinterviews.

The ANES sampling frame covers U.S. citizens residing in households across all 50 states and the District of Columbia. By design, it excludes non-citizens, institutionalized populations (e.g., prisons or long-term care facilities), active-duty military abroad, and individuals without fixed addresses. In practice, non-English/non-Spanish speakers and those lacking reliable internet access are also underrepresented. Findings therefore describe social media use among U.S. citizens rather than all adults living in the United States.

To ensure comparability across years, all analyses employ the ANES post-election full-sample weights (V200010b for 2020; V240107b for 2024). These weights begin from design (base) weights reflecting unequal selection probabilities and are subsequently adjusted for nonresponse and calibrated via ANES's standard raking procedures to population benchmarks on key demographic margins. The same weights are applied to all estimates, including platform-specific subgroups (e.g., Facebook/Twitter/X visitors, high-frequency users, and political posters).

Variables

Demographics. Respondent sex (V201600/V241550), age (V201507x/V241458x), race/ethnicity (V201549x/V241501x), and education (V201511x/V241465x) were harmonized into common categories: *White non-Hispanic*, *Black*, *Hispanic*, *Asian*, and *Other/Mixed* for race; and *High school or less*, *Some college*, *Bachelor's*, and *Postgraduate* for education.

Social media use. Platform visitation was measured with dichotomous indicators for whether respondents used Facebook, Twitter/X, Instagram, Reddit, YouTube, Snapchat, or TikTok (V202541a-g in 2020; V242577a-g in 2024). Respondents who answered all items and reported no use were coded as *non-users*.

Political activity on social media. For Facebook and Twitter/X, the ANES asked about frequency of use and political posting (V202542/V202545 and V242578 / V242581).

Users, visits, and posts. To capture how partisanship varies with activity, the analysis distinguishes three engagement tiers: (1) all users, (2) visit-weighted users, and (3) post-weighted users. Partisanship was measured via presidential vote choice, recoded into Democrat, Republican, or Other, and summarized as the net difference (*Dem – Rep*) in percentage points.

For engagement weighting, survey weights were multiplied by frequency-derived intensity scores. Visit frequency categories (“multiple times per day” to “less than once a week”) were mapped to approximate monthly visit counts (35, 21, 7, 3, 1, 0.5, 0.2); posting frequencies (“multiple times per day” to “never”) to 20, 10, 5, 2, 0. These adjusted weights approximate the partisan balance of (a) platform audiences, (b) engagement, and (c) visible content, illustrating how composition shifts from broad users to the most active participants.

Affective polarization. Affective polarization was defined as the absolute difference between respondents’ feeling-thermometer ratings of Republicans and Democrats:

$$|FT_{\text{Rep}} - FT_{\text{Dem}}|.$$

For visualization, respondents were grouped into eight equal-width bins (0–100), and weighted mean use and posting frequencies were computed within each bin for 2020 and 2024. Confidence intervals were estimated via nonparametric bootstrap.

Political affiliation. Political affiliation is operationalized using presidential vote choice, coded as Democrat, Republican, or Other; this measure is used for all analyses and figures.

Party identification (standard ANES three-category coding, `pid3`) is reported for reference but is not used in the main analyses.

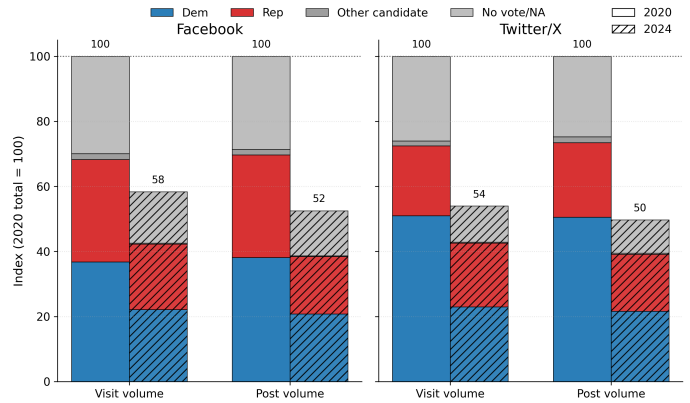
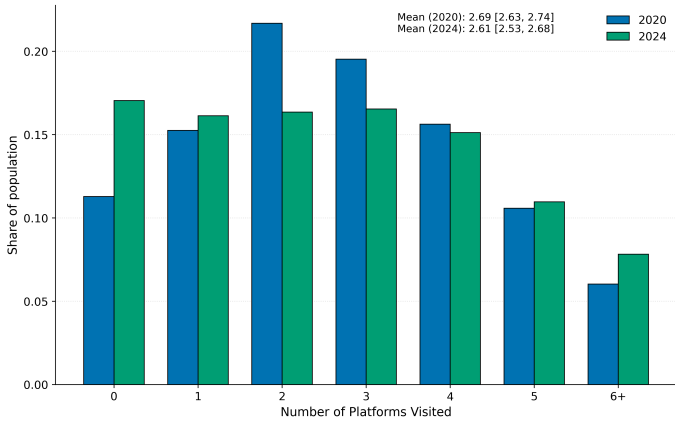
Analytical approach

Analyses were conducted in Python using `pandas`, `numpy`, and `matplotlib`. Weighted point estimates and 95% confidence intervals were computed using post-election sample weights, with sampling uncertainty adjusted via Kish's effective sample size correction to account for unequal weighting. To reduce sensitivity to extreme weights, robustness checks applied 1–2% winsorization of the weight distribution.

All analyses are descriptive and aim to trace compositional change rather than causal relationships. Harmonized coding across waves enables consistent longitudinal comparisons of the demographic and political composition of major social media platforms.

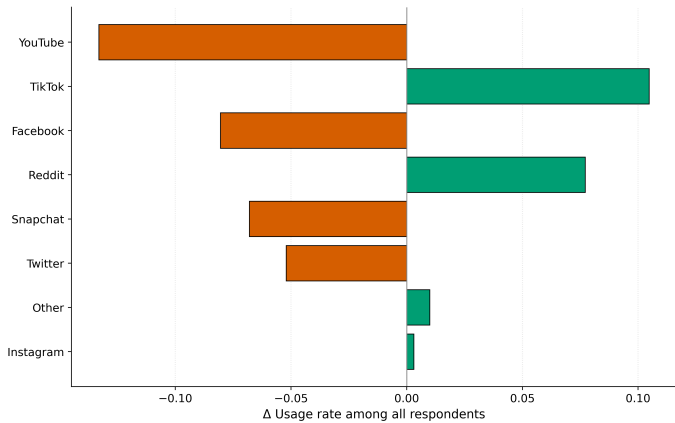
Results

Declining Use of Social Media

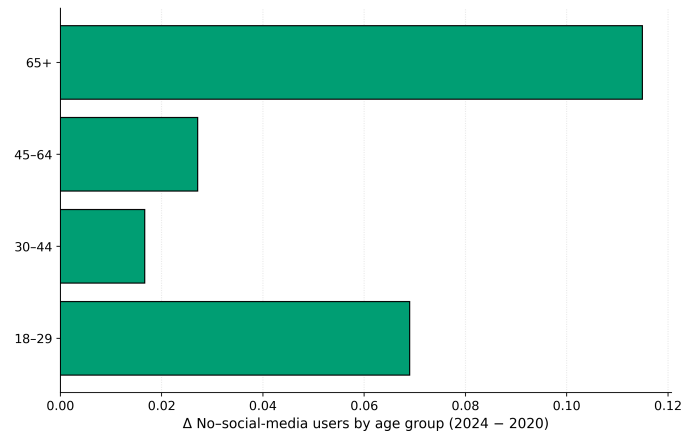


(a) Number of platforms used (ANES 2020 vs. 2024, weighted).

(b) Normalized change in overall visiting and posting activity on X/Twitter and Facebook, split by vote (2020–2024).



(c) Net change in platform reach (2024–2020, share of all respondents).



(d) Change in non-use by age group (2024–2020, 95% CI).

Figure 1. Shifts in overall social media use, 2020–2024 (ANES, weighted population estimates with 95% CIs). The share of respondents reporting no platform use increased clearly between 2020 and 2024, while most major platforms—YouTube, Facebook, Snapchat, and Twitter/X—lost reach. TikTok and Reddit expanded modestly, indicating consolidation around short-form video and discussion-based platforms.

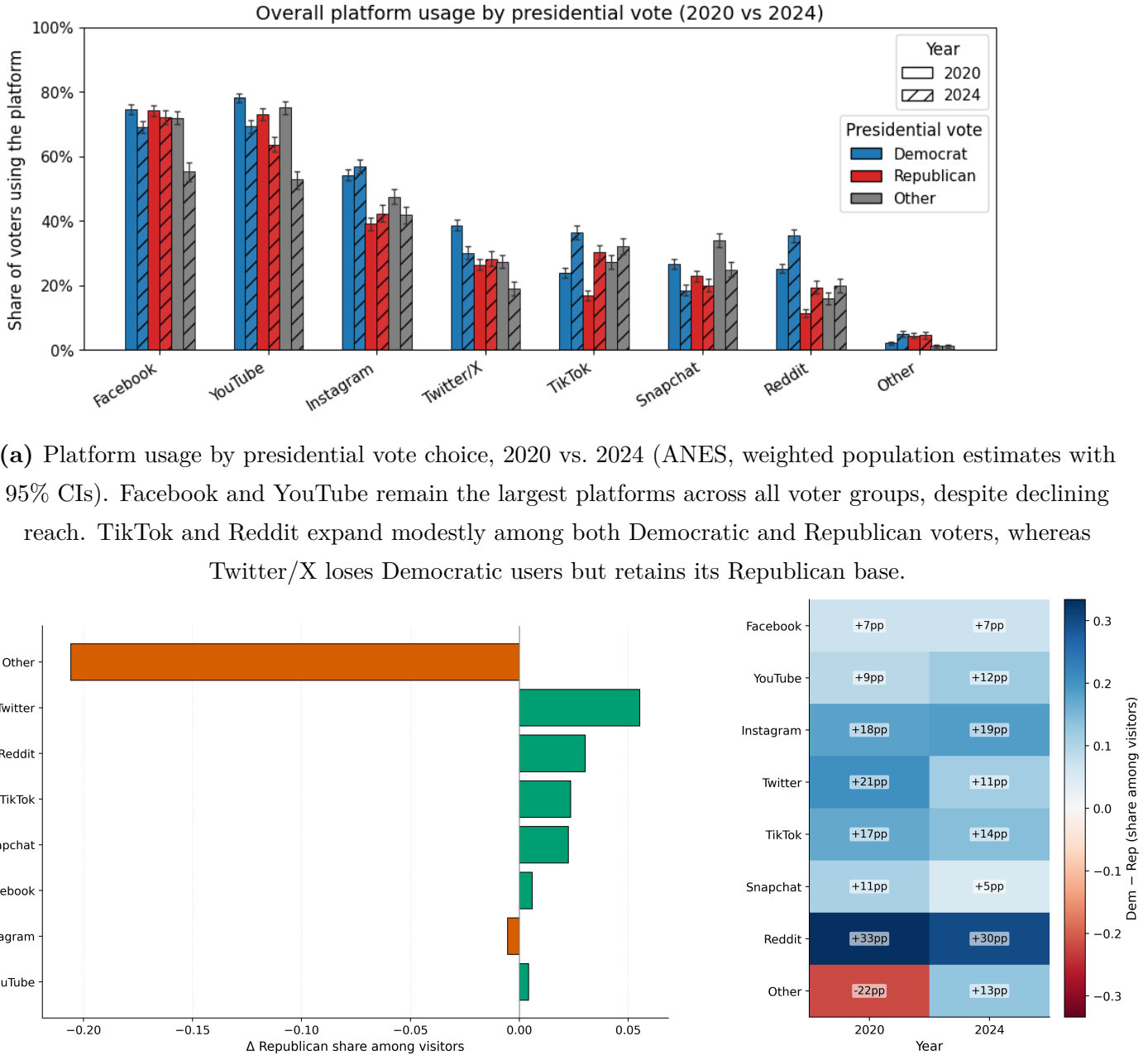
Between 2020 and 2024, the average number of social media platforms used declined slightly, from 2.69 [2.63, 2.74] to 2.61 [2.53, 2.68] (Fig. 1a). This reduction is modest but notable, driven primarily by a growing share of respondents who report using no social media at all. At the same time, the right tail of heavy multi-platform users expanded slightly, suggesting that both non-use and high-intensity use have increased, while mid-level participation (two to three platforms) has contracted. The overall pattern points to a widening polarization in participation between users that employ many platforms and those opting out entirely.

To assess shifts in activity, we construct aggregate activity indices by summing visit-weighted and post-weighted survey weights within platform, year, and presidential vote group, normalized to 2020 levels. Fig. 1b reveals a near-50% drop in post-volume on X/Twitter and Facebook (the two platforms for which visit and posting data are available.) On X/Twitter, posting volume declines sharply among Democratic voters and non-voters, while remaining comparatively stable among Republican voters. Figure A1 in the Appendix examines the distribution of activity within platforms and shows that use has not become more concentrated among high-frequency users over time, whereas posting has become slightly more evenly distributed.

The growth in non-use are especially pronounced at the age extremes (Fig. 1d). The share of adults aged 65 and older reporting no social media use increased by roughly 12 percentage points, while non-use among those aged 18–29 rose by around 7 points. Middle-aged groups (30–44 and 45–64) show marginal increases. This pattern underscores that both younger and older cohorts are withdrawing from social media.

Platform-specific trends (Fig. 1c) reinforce this picture. Traditional social network platforms and long-form video sites have declined: YouTube, Facebook, Snapchat, and Twitter/X all show reduced reach, while TikTok and Reddit record modest gains and Instagram remains stable. Despite the emergence of new entrants such as Threads and Bluesky, the “Other” category has not grown significantly (“Other platforms” refers to the ANES residual “Other (specify)” option in the platform-visit battery – i.e., any social media not listed). Taken together, these shifts indicate a gradual reorganization of the ecosystem, with short-form video and discussion-oriented platforms gaining ground as legacy networks lose momentum.

Partisan Reconfiguration: Twitter/X Posting Flips Republican



(b) Change in Republican share among platform visitors, 2024–2020.

(c) Democratic–Republican vote lean (percentage-point difference).

Figure 2. Directional shifts in partisan balance across major platforms, 2020–2024 (ANES, weighted). Twitter/X and Reddit show the strongest Republican gains, while Democratic overrepresentation persists on TikTok and Reddit.

Figure 2a shows that, despite their declining reach, Facebook and YouTube remain the dominant platforms across voter groups. Twitter/X use has fallen sharply among Democratic voters and is now surpassed by TikTok. Smaller platforms continue to attract only relatively limited audiences.

Examining changes in the Republican share of users, Figure 2 reveals that nearly all major platforms have shifted toward Republicans, though at varying rates. The Republican share rises most steeply on Twitter/X and, to a lesser extent, Reddit and TikTok. While Figure 1c indicated that the “Other” category has not grown in its user base, Figure 2 suggests substantial internal realignment, with a roughly 20 percentage-point move toward Democratic users.

Despite these shifts toward more Republican users, Figure 2c shows that all major social media platforms remain, on balance, Democratic-leaning. Reddit and TikTok retain the largest Democratic advantages, while Twitter/X now approaches partisan parity. Overall, partisan asymmetries across platforms have narrowed: the formerly strong Democratic skew of the social media landscape has weakened, producing a more ideologically balanced environment in terms of user base.

While mainstream platforms have become relatively more Republican, the “Other” category has moved in the opposite direction, from strongly Republican-leaning to Democratic-leaning. This pattern points to a twin movement: Republican users shifting from ideologically homogeneous venues such as TruthSocial into mainstream platforms such as Twitter/X, whereas Democrats have retreated toward emerging, smaller networks such as Bluesky, Mastodon, and Threads. The result is a more fragmented digital ecosystem, with partisan groups redistributing across old and new spaces.

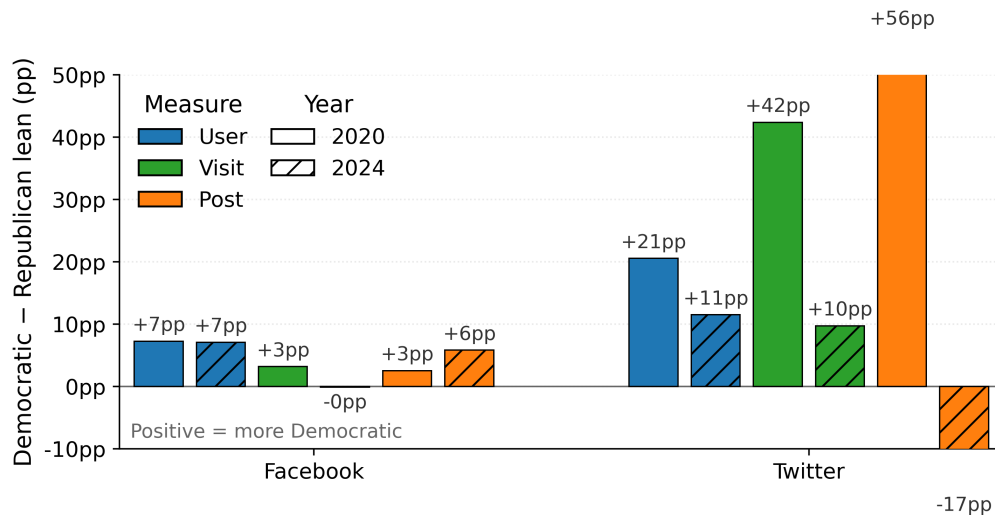


Figure 3. Shift in partisan composition of users, visits, and posts on Facebook and Twitter/X, 2020–2024 (ANES, weighted). Data on posting and use frequency are available for Twitter/X and Facebook only. Values show the difference between the shares of Democratic and Republican voters (Dem – Rep, percentage points). User-level estimates represent the average partisan balance among all platform users, while visit- and post-weighted measures emphasize the composition of more active participants.

The focus on users alone however conceals who actually dominates platform activity, which depends on engagement and posting frequency, rather than mere membership. Figure 3 disaggregates the partisan balance of Facebook and Twitter/X (detailed data are only available for these platforms) by intensity – comparing all users, frequent visitors, and frequent posters (see Methods). Facebook remains comparatively stable but exhibits a modest Republican shift among use and posting.

Twitter/X, by contrast, undergoes a dramatic reversal. In 2020, Democrats outnumbered Republicans across all engagement levels and overwhelmingly dominated posting activity – with a roughly 56 percentage-point Democratic advantage among posts. By 2024, this pattern has flipped: while the user base remains slightly Democratic-leaning, visit-weighted estimates show radically reduced Democratic presence, and post-weighted estimates reveal a complete inversion, with a modest Republican majority. This represents an approximately 73 percentage-

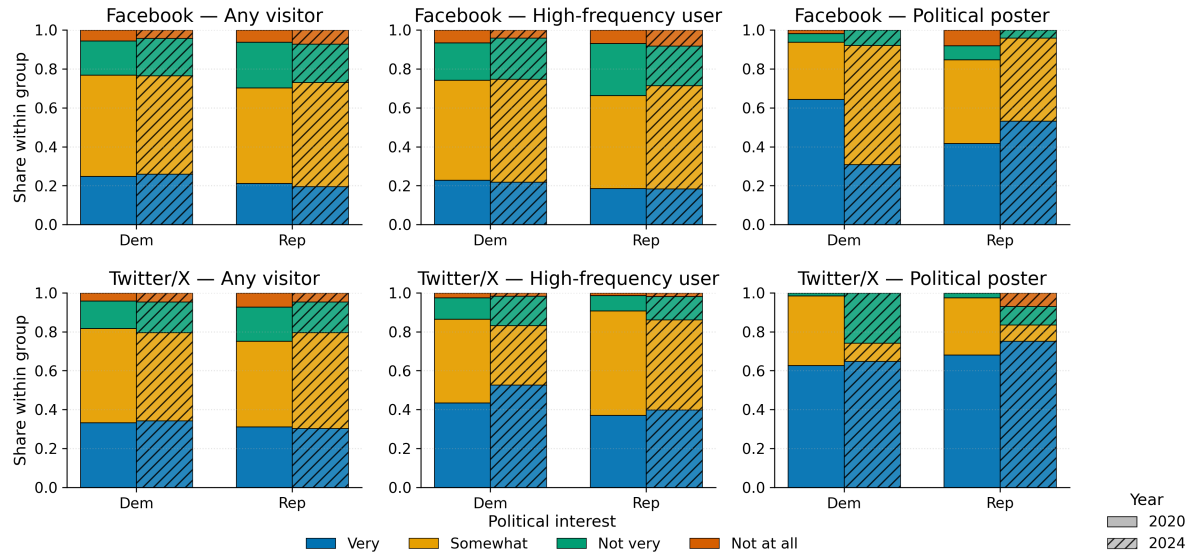


Figure 4. Political interest by platform, activity tier, party, and year. The figure shows the weighted within-group distribution of self-reported political interest among Democratic and Republican presidential voters at three activity levels for Facebook and Twitter/X: any visitor, high-frequency user, and political poster. Colors indicate the four interest categories (Very, Somewhat, Not very, Not at all). Bars are normalized to sum to one within each party \times tier \times year cell.

point swing. Democrats continue to visit the platform but post far less frequently, suggesting a shift from expressive to largely passive participation.

Figure 4 shows the weighted distribution of political interest across platforms, activity tiers, parties, and years. Across both platforms and years, political interest rises clearly with participation intensity. Moving from any visitor to high-frequency user and, especially, to political poster is associated with a larger share of respondents who report being *very* interested in politics and a corresponding decline in the *not very* and *not at all* categories. This indicates that more active users tend to be more politically interested.

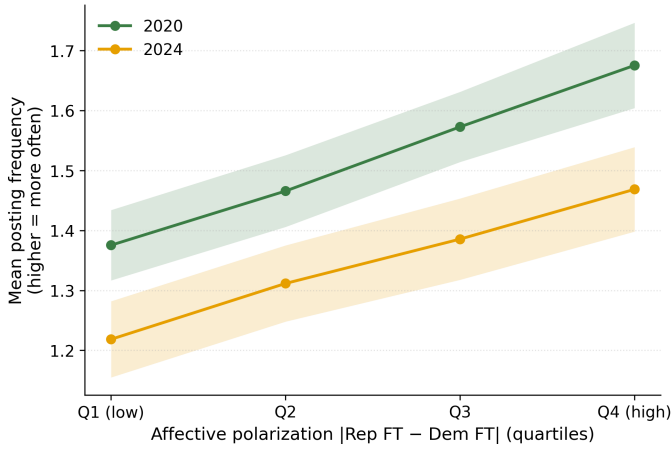
The strength of this gradient differs across platforms. On Facebook, any visitors and high-frequency users look fairly similar: in both parties and both years, the modal category remains *somewhat* interested, and the increase in the *very interested* share is limited. The

sharper shift occurs only at the political-poster tier. On Twitter/X, by contrast, the gradient is steeper. Even high-frequency users are more politically interested than the corresponding visitor base, and political posters are much more concentrated in the highest-interest categories.

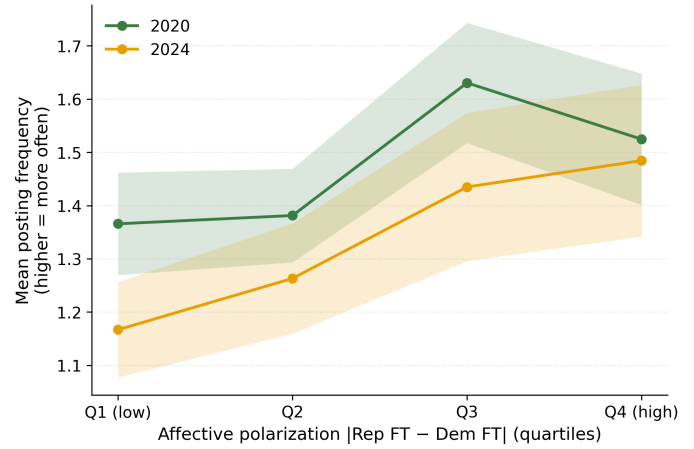
Year-to-year change is modest among casual users but more visible among political posters. On Facebook, the distributions for any visitors and high-frequency users change little between 2020 and 2024. Among political posters, however, Democratic and Republican voters move in different directions: Democratic posters become less concentrated in the *very interested* category and more concentrated in *somewhat interested*, whereas Republican posters shift toward the *very interested* category. On Twitter/X, visitors also remain fairly stable, but high-frequency users in 2024 — especially Democrats — show a somewhat larger *very interested* share. Among political posters, the *very interested* category remains dominant, particularly among Republicans, but *somewhat interested* Democrats in the 2024 distributions have declined, being replaced primarily by lower-interest respondents.

Overall, intensive platform activity remains disproportionately driven by politically interested users, but the pattern of selection differs by platform. On Facebook, the main break is between political posters and everyone else, whereas on Twitter/X political interest rises more steadily with activity intensity.

Affective Polarization and Posting



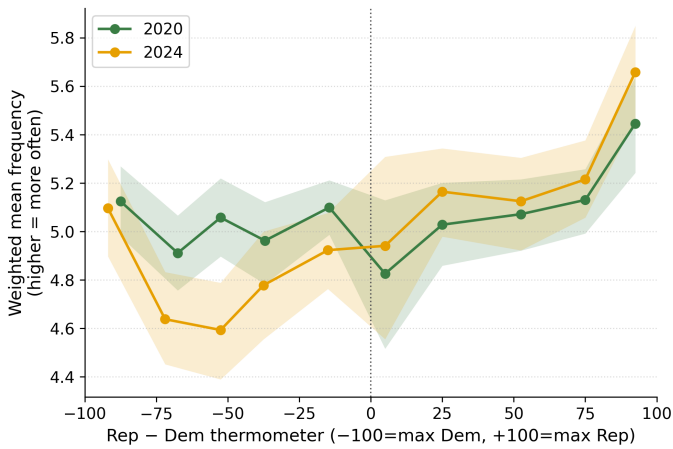
(a) Facebook: political posting frequency by affective polarization, 2020 vs. 2024 (ANES, weighted).



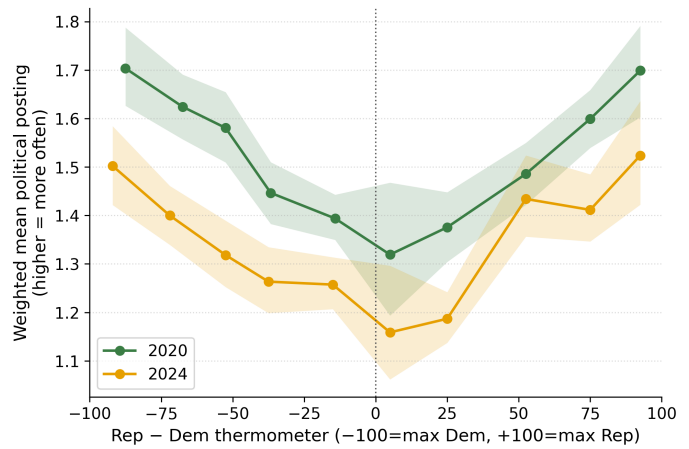
(b) Twitter/X: political posting frequency by affective polarization, 2020 vs. 2024 (ANES, weighted).

Figure 5. Posting frequency rises sharply with affective polarization on both platforms. Respondents expressing stronger in-party warmth and out-party hostility post more often about politics. Average posting rates decline in 2024 for all groups, but the positive slope remains—especially on Twitter/X, where polarization is most predictive of activity.

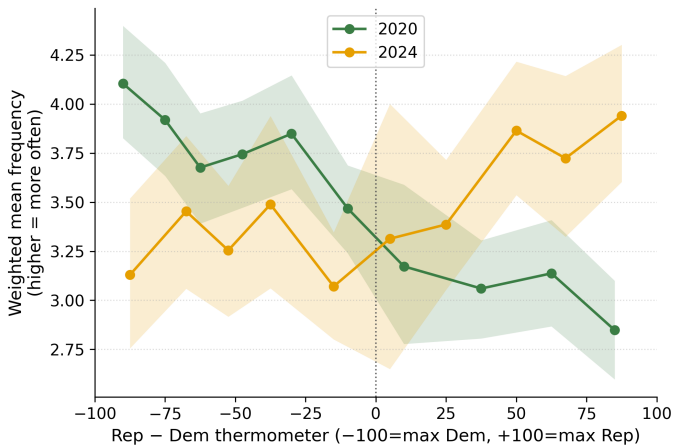
Figures 5a and 5b show that political posting remains strongly linked to affective polarization. On both Facebook and Twitter/X, individuals with warmer feelings toward their own party and colder feelings toward the opposing one post more frequently about politics. Between 2020 and 2024, overall posting intensity declines across the board, yet the positive gradient steepens, particularly on Twitter/X. Even as fewer people share political content, those who continue to do so are increasingly drawn from the most polarized segments of the population. As a result, visible political discourse on both platforms becomes dominated by extreme partisans, potentially itself representing a causal mechanism through which social media drive societal polarization (Törnberg, 2022).



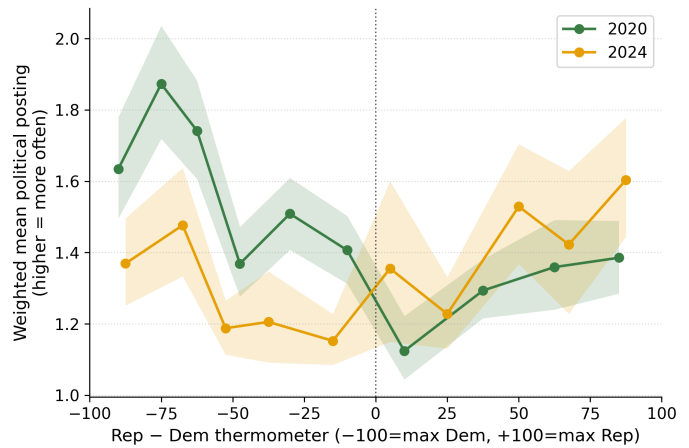
(a) Facebook: frequency of use by Republican affect (party thermometer difference). Strong Republicans remain the heaviest users; the overall level of use declines modestly in 2024 but the upward gradient persists.



(b) Facebook: posting frequency by Republican affect. Posting declines overall in 2024, yet the tilt toward strong Republicans is stable—those highest in Republican affect continue to post most.



(c) Twitter/X: frequency of use by Republican affect. The platform flips from Democrat-skewed in 2020 to Republican-skewed in 2024, with use rising steadily with Republican affect.



(d) Twitter/X: posting frequency by Republican affect. Posting was highest among Democrats in 2020 but peaks among strong Republicans in 2024; centrists and less polarized users post least.

Figure 6. Association between partisan affect and platform engagement (ANES 2020 vs. 2024, weighted). Facebook shows stable Republican-leaning engagement patterns, whereas Twitter/X shifts from a Democratic to a Republican gradient in both use and posting. Polarized users continue to dominate visible political activity even as overall participation declines.

Figures 6 further illustrate how partisan affect correlates with engagement. On Facebook, both usage and political posting are relatively symmetrical: individuals higher in partisan affect are consistently more active.

In contrast, Twitter/X exhibits a clear reversal. In 2020, use and posting were concentrated among affectively polarized Democrats, but by 2024 the relationship flips, with engagement now rising with Republican affect. Moderates and respondents expressing ambivalent feelings toward both parties remain the least active on either platform.

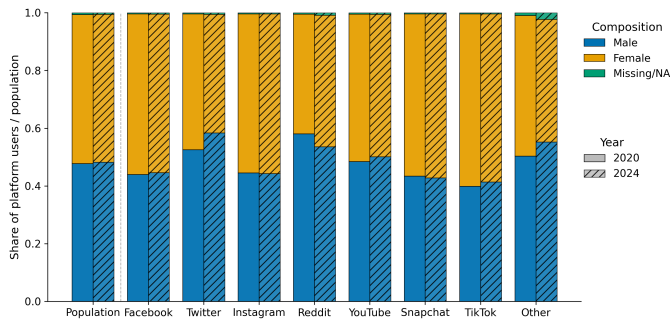
Taken together, these results highlight a structural asymmetry in the evolving social media landscape. Overall participation declines, yet the link between affective polarization and posting intensity strengthens – meaning that the visible public sphere increasingly reflects partisan extremes. The shift of Twitter/X toward Republican-aligned participation amplifies this dynamic: while its user base has become more balanced, those who remain active are disproportionately the most polarized Republican partisans. The result is an online environment with fewer participants but more intense partisan conflict.

Demographic Composition by Platform

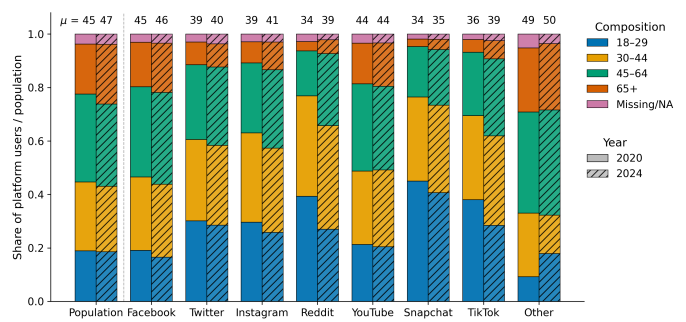
Figure 7 summarizes platform composition by gender, age, race/ethnicity, and education in 2020 and 2024. While the demographic profiles of the platforms shift somewhat, their distinctive compositional “signatures” remain largely intact.

Gender composition is especially stable (Figure 7a). Twitter/X and Reddit remain the most male-skewed platforms in both years, with Twitter/X becoming more male, whereas Reddit saw a growing share of women. Instagram, Snapchat, and TikTok continue to have female-skewed user bases. Facebook is also somewhat female-skewed, while YouTube sits closest to gender parity. The changes from 2020 to 2024 are relatively small and do not alter the relative ordering of platforms.

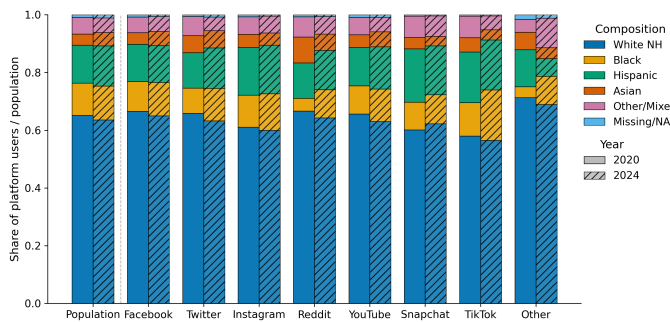
Age composition shows somewhat more movement (Figure 7b), but the overall pattern is still one of continuity. Most platforms age between 2020 and 2024, with especially visible increases in mean age on Reddit, TikTok, and Instagram, and little change on YouTube. The share of users aged 18–29 declines across most platforms, most notably on Reddit, TikTok,



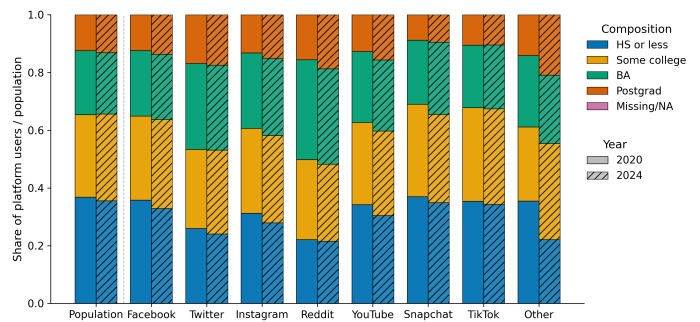
(a) Gender composition by platform. Twitter/X and Reddit remain male-skewed, while Instagram, Snapchat, and TikTok overrepresent women.



(b) Age composition by platform. Most platforms age modestly, with declines among 18–29 users and growth among middle-aged groups.



(c) Race and ethnicity composition. Small declines in White users and slight increases among Hispanic and Black users.



(d) Education composition. Shares of college-educated users rise modestly, especially on Twitter/X and Reddit.

Figure 7. Demographic composition of major social media platforms, 2020 vs. 2024 (ANES, weighted population shares within platform–year; 95% CIs). Across gender, age, race/ethnicity, and education, platform audiences show gradual aging, a mild educational up-tilt, and slight racial diversification, but overall demographic stability.

Instagram, and Snapchat, with much of the offset coming from growth among users aged 45–64. Among the major platforms, Facebook remains the oldest, while Snapchat and TikTok remain the youngest despite this aging trend.

Racial and ethnic composition shifts only slightly (Figure 7c). Across most platforms, the White non-Hispanic share declines modestly, typically accompanied by small increases

among Black and Hispanic users, although the exact mix varies by platform. These changes are limited in magnitude and do not substantially alter the broader ordering of platforms by diversity.

Educational composition also changes gradually (Figure 7d). Most platforms show a mild upward shift in attainment, usually through small declines in the share with a high school degree or less and corresponding increases in the BA and postgraduate shares. Twitter/X and Reddit remain the most highly educated platforms in both years, whereas Facebook and TikTok continue to have more mixed educational profiles.

Taken together, Figure 7 points to slow compositional drift rather than demographic realignment. Platform audiences become somewhat older and, in most cases, slightly more educated, while the core differences between platforms—such as Reddit’s male and highly educated profile, or TikTok’s relatively young user base—remain in place.

Conclusion

The U.S. social media landscape is quietly reshaping itself. Between 2020 and 2024, overall platform use slipped, driven by a rise in the population – especially the youngest and oldest – who no longer use social media at all. The old incumbents – Facebook, YouTube, and Twitter/X – have lost ground, while TikTok and Reddit have expanded modestly. The users who remain are slightly older, better educated, and more racially diverse than four years ago.

The political balance of social media has shifted just as noticeably. The once-clear Democratic lean of major platforms has declined. Twitter/X, in particular, has seen a radical flip: a space dominated by Democrats in 2020 is now more Republican-aligned, especially among its most active users and posters. Reddit’s remains a Democratic stronghold, but its liberal edge has softened.

Across platforms, overall political posting has declined, yet its link with affective polarization persists. Those expressing the strongest partisan animus continue to post most frequently, meaning that visible political discourse remains dominated by the most polarized voices. This leads to a distorted representation of politics, which existing research suggests can itself function as a driver of societal polarization (Törnberg, 2022; Bail, 2022).

Overall, the data depict a social media ecosystem in contraction and segmentation. As casual users disengage while polarized partisans remain highly active, the tone of online political life may grow more conflictual even as participation declines. The digital public sphere is becoming smaller, sharper, and louder: fewer participants, but stronger opinions. What remains online is a politics that feels more divided – not because more people are fighting, but because the fighters are the ones left posting.

Code Availability

All code and replication materials are openly available at the project’s GitHub repository: <https://github.com/cssmodels/anesanalysis>.

Acknowledgments

The author thanks the editor and the anonymous reviewers for their constructive comments and suggestions, which helped improve the manuscript. This research was supported by the Dutch Research Council (NWO) under grant VI.Vidi.231S.089.

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