European or National?
Common and National Swings in Facebook Engagement with European Parties and Leaders, 2013 to 2020

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Abstract

When engagement with a party's Facebook page rises or falls from one month to the next, is that part of a Europe-wide movement, a national one, a movement shared by parties of the same family across borders, or specific to the page? Using 14,510 page-months from 173 party and leader pages in 20 European countries, January 2013 to September 2020, collected through CrowdTangle, I split the variance of each page's deviations from its own trend into these four parts with nested fixed effects. In the main specification, the country-month accounted for about 26% of the variance, about 15 points above a random-label baseline; Europe-wide months for about 11% (between 3% and 17% across specifications); the party family for 3%, no more than random labels give; and the page for 60%. Pages co-moved with their own country and with Europe, but not with the same family abroad, and radical right surges were not synchronised across borders. National election windows went with interactions nearly three times as high as usual and account for about a fifth of the country component. The clearest Europe-wide months were the European Parliament elections of May 2014 and May 2019 and, less robustly, March 2018, March to April 2020 and September 2015. Apparent surges in May and June 2015 coincide with a break in CrowdTangle's capture of photo posts and disappear when it is allowed for.

Keywords: Facebook; engagement; variance decomposition; nationalisation; party families; radical right; European Parliament elections; political parties; party leaders; CrowdTangle

1 Introduction

Studies of parties on Facebook usually explain differences between parties, posts or campaigns, not the scale at which engagement moves over time. A month in which a party's page draws more attention than usual may reflect something shared across Europe, such as a crisis that raises interest in politics everywhere, or a national event such as an election, or a wave that lifts parties of one ideological family across borders, or simply something about that party.

The question echoes work on the nationalisation of electoral politics (Caramani 2004) and on European Parliament elections as largely national contests with some pan-European swings (Reif and Schmitt

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1980; Hix and Marsh 2011). It also bears on a common claim about the populist radical right: that its parties form a transnational wave (Mudde 2007).

I ask three questions. **RQ1.** How much of the month-to-month variation in engagement with European party and leader pages is common to Europe, common to the country, common to the party family across countries, or specific to the page? **RQ2.** Do radical right parties' surges co-move across countries more than those of other families? **RQ3.** Which months were common across Europe, and how much of the country component reflects national elections?

2 Data and method

Pages and posts. The posts come from CrowdTangle lists of official party and party leader pages that I built for my doctoral research and exported in October 2020 (CrowdTangle Team 2020; Hotham 2021): 856,699 posts from 186 pages (112 party, 74 leader) in 20 countries from January 2010 to September 2020. I drop 123,177 posts from before 2013, when coverage was thinner, and then 13 pages with fewer than 36 months with posts (357 page-months). The panel has 14,510 page-months from 173 pages (104 party, 69 leader) in 20 countries over 93 months, with 712,142 posts. A page-month exists only if the page posted in that month.

Outcomes. The main outcome is the log of total interactions (reactions, comments and shares, plus one) in the page-month. I also report the log of the number of posts and the log of interactions per post (plus one), and, as checks, interactions on non-photo posts and on link posts only.

A break in the data. CrowdTangle's capture of photo posts changed in May 2015. It recorded 570 to 826 photo posts a month in January to April 2015 and 1,874 to 3,346 a month from May to December 2015. Photo posts' share of all interactions rose from 10% in April 2015 to 34% in June and 39% over May to December, against 9% in 2014. Photo posts rose in 19 of the 20 countries and at least tripled in 14; 96 of 147 pages active in early 2015 at least tripled their recorded photo posts between February to April and May to July. This is a lasting step in each page's series, not a common surge, so the main specification allows each page a step at May 2015. The number of posts is directly affected, so the posts outcome should be read with care.

Party families. The data code parties as populist, far right and far left using the PopuList (Rooduijn et al. 2024). I group pages into seven broad families: radical right (PopuList far right, or ParlGov family "right-wing"), radical left (PopuList far left, or ParlGov "communist/socialist"), and otherwise the ParlGov family of the party (Döring et al. 2024): social democrats; conservatives and Christian democrats; liberals; greens; and other. Following this rule, Debout la France, far right in PopuList 3.0, is radical right. The PopuList classification of Nova Slovenija as far right is debatable. Four Northern Irish and Welsh parties not matched to ParlGov were coded by hand. A leader's page takes the family of the leader's party. The groups have 37 conservative or Christian democratic pages, 32 social democratic, 28 liberal, 25 radical left, 24 radical right, 14 green and 13 other; the radical right is present in 12 countries. The "other" group is heterogeneous: Nordic centre and agrarian parties and leaders (Sweden, Finland, Norway), the Lithuanian Farmers and Greens, two pirate parties, regionalist parties in Spain and Wales, and a Slovenian pensioners' party.

Deviations. I compare each page with itself. In the main specification I remove, for each page, an intercept, a linear trend and a step from May 2015 onwards, so that neither the long rise in engagement nor the capture break is counted as common movement.

Variance decomposition. I regress the deviations on nested sets of fixed effects, always with page fixed effects: calendar month (the Europe-wide component), country by month, and party family by month. The Europe share is the within-page R^2 of month effects; the country and family shares are the extra R^2 from country-month and family-month effects; the rest is the page component. Country and family can be entered in either order, so I average the two orders, which is a Shapley split conditional on the Europe-wide month entering first. Group-month effects fit some variance mechanically, especially for small groups: Latvia's single page (0.6% of page-months) is fitted exactly by its country-month. I therefore compare each share with a baseline from 200 permutations in which the country or family labels are shuffled across pages, keeping group sizes. This baseline gauges mechanical fit; it is not a formal test. I also correlate each page's deviations with the mean deviation of the other pages in its country, of same-family pages in other countries, and of all pages in other countries.

Cross-border family co-movement. To test whether a family moves together across borders beyond its countries, I remove the country-month mean from each page's deviation. For each page I then correlate this residual with the mean residual of same-family pages in other countries, and average by family. I compare these with 500 permutations of family labels across pages, and with the foreign series shifted by a random 12 to 48 months.

Common months and elections. I estimate month effects as the mean, across countries, of the country mean deviation, and express each month relative to a centred 13-month average, so that a high value marks a month above its surrounding months. Election windows are the month before, the month of, and the month after a national parliamentary election, from ParlGov (41 elections in the period, combining the page-level election file with the ParlGov list used in earlier work, plus Latvia's 2014 election added by hand). I add these indicators to a model with page and month fixed effects, with standard errors clustered by page and, as a check, by country (20 clusters). Percentages are $100(e^b - 1)$.

3 Results

3.1 Country and Europe, not family

In the main specification, Europe-wide months accounted for 11% of the variance in log interactions, the country-month for 26%, the family-month for 3%, and the page for 60% (Figure 1, left). The family share was no larger than chance: shuffling family labels across pages gave 3.5% on average. The country share was well above its random baseline of 11.0%, an excess of about 15 points.

The family result held in every specification in Table 1 (3.1% to 4.3%, within 0.3 points of baselines of 3.2% to 4.0%). The country share exceeded its baseline in all of them, by 12 to 16 points in most, but by only about 5 points when only link posts are counted. The Europe share is the least stable: 11% in the main specification, 16% without the step, and between 3% (link posts from May 2015) and 17% (page means with a step) across specifications. A three-way Shapley split, which shares the Europe-wide component between the nested country and family terms, gives family 7% and Europe 4%, but only because family-month effects also capture Europe-wide months.

For interactions per post, the shares were 16% Europe, 22% country, 3% family and 59% page; for the number of posts, 8%, 21%, 4% and 68%, though the posts series is the one most affected by the capture break.

The leave-one-out correlations tell the same story. The median page's deviations correlated 0.48 with the other pages in its country, 0.31 with pages in other countries, and 0.25 with pages of its own family in

Table 1. Decomposition of monthly log interactions and local month effects across specifications. Shares are percentages of within-page variance (Europe; country and family averaged over both orders); in brackets, the mean share from 100 to 200 permutations of the labels across pages. Month columns: per cent above the centred 13-month average of the cross-country mean, with the number of the 20 countries above their own trend.

Specification	Pages	Europe	Country	Family	May 15	Jun 15	Sep 15	May 19
Main: trend + step May 2015	173	11.5	25.6 (11.0)	3.1 (3.5)	−1 (15)	+4 (12)	+20 (17)	+85 (19)
Trend, no step	173	15.9	23.4 (10.5)	3.1 (3.3)	+44 (19)	+45 (20)	+37 (20)	+85 (18)
Trend + steps May 2015, Mar 2016	173	11.2	26.1 (11.0)	3.2 (3.5)	−9 (10)	−1 (8)	+15 (15)	+85 (19)
Trend, from May 2015	173	7.5	24.5 (10.7)	3.1 (3.4)	+13 (11)	+17 (8)	+25 (17)	+85 (20)
Trend, non-photo posts	173	11.6	23.5 (11.1)	3.2 (3.5)	+14 (14)	+21 (17)	+20 (15)	+89 (17)
Trend, link posts	167	11.7	16.9 (11.9)	3.7 (3.8)	+12 (17)	+29 (19)	+7 (17)	+29 (13)
Trend, link posts, from May 2015	161	3.3	17.9 (12.5)	4.3 (4.0)	+3 (10)	+23 (13)	+8 (11)	+30 (15)
Page mean + step May 2015	173	16.8	22.7 (10.2)	3.2 (3.2)	−39 (5)	−31 (4)	+3 (8)	+84 (20)
Monthly changes[a]	173	8.1	27.8 (11.7)	3.7 (3.7)				

[a] Changes between consecutive months, page means removed, May 2015 change dropped; month effects not comparable and omitted.

other countries. Entered together in a regression with page fixed effects, the country mean (0.65, SE 0.03; country-clustered 0.05) and the mean of other countries (0.38, SE 0.09; 0.13) both predicted a page's deviation, while the same-family mean abroad did not (−0.09, SE 0.07; 0.11). These standard errors ignore that the regressors are themselves estimated means.

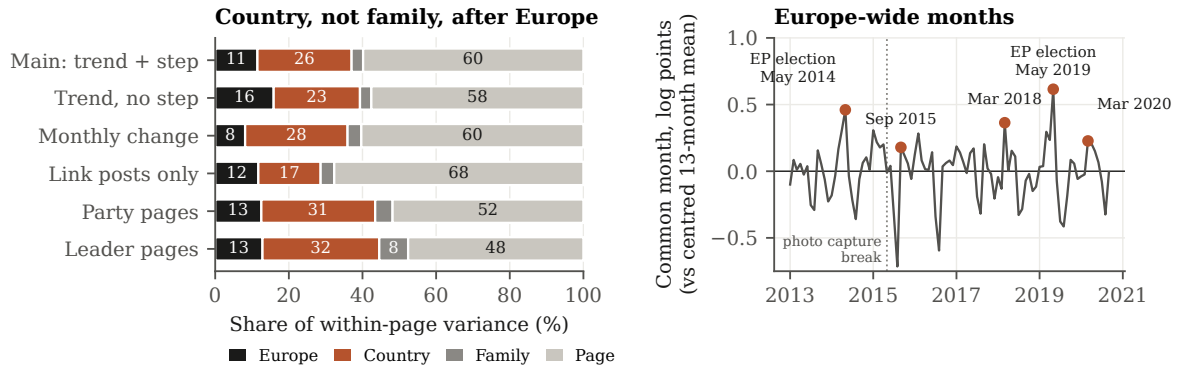


Figure 1. Left: share of the within-page variance of monthly log interactions due to Europe-wide months, country-months, family-months and the page, averaging the two orders of country and family. The main specification removes page-specific trends and a step at May 2015; party and leader rows use it too. Right: Europe-wide month effect in the main specification, the mean across 20 countries of pages' deviations, relative to a centred 13-month average; the dotted line marks the photo capture break. 14,510 page-months, 173 pages.

3.2 No cross-border radical right wave

Radical right pages did not surge together across borders more than other groups (Figure 2). Net of their own country-month, their mean correlation with the radical right abroad was −0.02, against −0.001 for randomly formed groups of the same size (permutation $p = 0.64$), and it was no higher than that of the other families ($p = 0.66$). Grouping pages as populist or not gave the same result ($p = 0.43$). The result does not depend on how families are coded. Treating Nova Slovenija as Christian democratic, using ParlGov families only, using PopuList flags only, or keeping the original flags for Debout la France and the Latvian leader, the family share ranged from 2.96% to 3.23% against baselines of 3.44% to 3.55%, and the radical right's cross-border p ranged from 0.30 to 0.67. Shifting the foreign series in

time gave similar values (radical right 0.007 on average). Among the 14 family tests in Figure 2, one fell below 0.05 (greens, $p = 0.04$, page means removed). The heterogeneous "other" group came closest in the main specification ($p = 0.15$, and 0.14 to 0.22 across codings); in the first version of the analysis, without the step, its p was 0.04. Four of its 13 pages are Nordic centre parties and leaders, which may share a rhythm, but the evidence is weak.

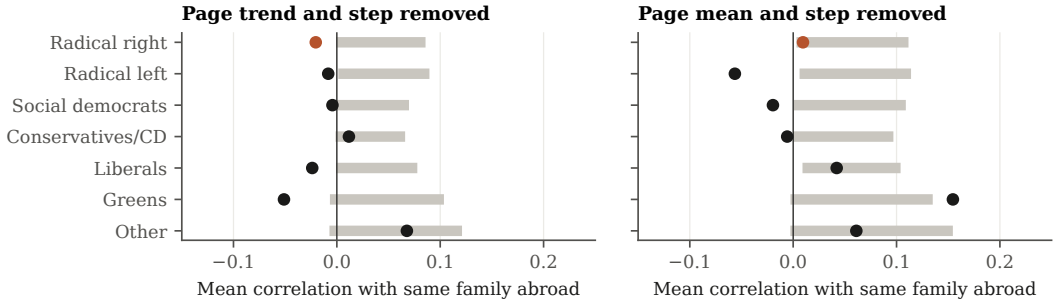


Figure 2. Mean correlation of each page's deviation, net of its country-month mean, with the mean of same-family pages in other countries (dots), against the range from the mean to the 95th percentile of 500 (left) or 300 (right) permutations of family labels across pages (bars). Left: page-specific trends and a step at May 2015 removed; right: page means and the step removed.

3.3 Common months

The clearest Europe-wide month was May 2019, the month of the European Parliament election, when interactions were about 85% above the surrounding months (0.62 log points) and 19 of 20 countries were above their own trend (Figure 1, right). This held in every level specification, though it was smaller, about 30%, for link posts. The next was May 2014, also a European Parliament election month (58%, 18 countries). Less robust were March 2018 (44%, 12 countries), March and April 2020 at the start of the Covid-19 pandemic (26% and 23%, 18 and 14 countries) and September 2015 (20%, 17 countries). January 2015 and February 2016, the month Facebook introduced reactions, were also among the ten highest months. With page trends alone, May and June 2015 appeared to be Europe-wide surges of about 45%, above trend in 19 and 20 countries; with the step at May 2015 they were −1% and +4% (Table 1). These apparent surges were the capture break, not a common surge in engagement. The data do not show what moved engagement in any of these months.

3.4 Elections, parties and leaders

Election windows account for part of the country component. Compared with the same page in other months and other pages in the same month, interactions were about 149% higher in the month before a national election (0.91 log points, SE 0.06; country-clustered SE 0.16), about 187% higher in the election month (1.05, SE 0.05; 0.10), and close to normal in the month after (−0.07, SE 0.05). The election indicators accounted for 6 points of the within-page variance, about 23% of the country component of 26%. Election-window months made up 8% of page-months but held 29% of the squared country component. Without them, the country share was still 20%.

Party and leader pages split alike (Europe 13% for both, country 31% and 32%, family 5% and 8%, the latter inflated by smaller groups), with similar election-month rises (1.06, SE 0.07, and 1.07, SE 0.09). Leaders' pages correlated 0.43 (median) with their own party's page and 0.38 with the other parties in

their country.

4 Discussion

Engagement with European parties on Facebook had a national rhythm with a weaker European pulse: about a quarter of the variation was national, between a thirtieth and a sixth European depending on the specification, and party families added nothing beyond chance. The pattern resembles what research on voting has found for European elections: largely national contests, with some shared swings (Reif and Schmitt 1980; Hix and Marsh 2011).

The absence of a cross-border radical right rhythm is notable given the family's image as a transnational phenomenon (Mudde 2007). Radical right pages draw more engagement per post than other parties (Hotham 2026a), but their surges were timed by national politics, not by each other: the issues may be transnational while the moments that mobilise audiences are national.

Common months could reflect shared events, Europe-wide attention, or changes on the platform or in the data, such as changes to the News Feed (Hotham 2026b). The May 2015 break in CrowdTangle's capture of photo posts shows how easily such a change can look like a European surge. Smaller changes of this kind may remain, and the Europe share is sensitive to them.

The design has clear limits. The pages are a selection, with 23 in Britain and one in Latvia, and country-month effects fit small countries closely by construction, which the permutation baselines address only on average. Some family assignments are debatable, though results held across codings. A page-month exists only when a page posted. Interactions are not reach, and they come from users who may be inside or outside the country. The correlations describe co-movement, not influence between parties.

5 Conclusion

Across 173 pages in 20 countries, monthly swings in Facebook engagement were mostly national or page-specific, with a smaller and less certain share common to Europe and almost nothing shared by party families across borders, including the radical right. Election windows made up about a fifth of the national component, and the European Parliament elections of 2014 and 2019 were the clearest common months.

Data and code

The posts were exported from CrowdTangle in October 2020. CrowdTangle's terms do not permit sharing the raw posts. The analysis code, the list of pages with their family coding and page-month aggregate data are available from the author.

Provenance and AI use

The data were exported from CrowdTangle in October 2020 for my doctoral research. This paper builds on my doctoral thesis (Hotham 2021). The analysis and writing were completed in 2026.

I designed the study and am responsible for the analysis and conclusions. I wrote the text, with drafting and editing assistance from Claude (Anthropic), which also helped prepare the analysis code. I reviewed and checked all text and results.

Ethics

Not applicable: the study involves no human participants. The data are public posts by the official Facebook pages of political parties and party leaders, analysed only as counts of interactions and posts aggregated by page and month. No post content is quoted or reproduced, and no data on individual users are used.

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