

**Radical Means, Familiar Ends:
Identity Continuity and Symmetry Breaking under
Political Uncertainty**

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Abstract

A recurring argument holds that when voters must choose between a far left and a far right, most choose the right, because the right promises to keep or restore a familiar way of life while the left promises a break with it. The argument joins four claims: uncertainty raises support for radical options, the right gains more of that support, perceived continuity explains the difference, and the difference is general. In 280 parliamentary elections in 30 European countries from 1989 to 2023, the far right outpolled the far left in 61.2% of the 258 elections in which either received votes, a share that rose from 48.7% in the 1990s to 72.5% after 2010; where both exceeded 2% of the vote, the ratio of their shares had a median of 1.28 and an interquartile range from 0.63 to 2.11. We model choice among a radical left, a nonradical option and a radical right with social reinforcement, a directional bias and a cost of radical options, and let uncertainty act on the cost (entry) and, through an interaction with perceived continuity, on the bias (selection). The symmetric state loses stability at $\beta J = 1 + e^{\beta \Delta}/2$, continuously below a tricritical point at $(\beta \Delta, \beta J) = (\ln 4, 3)$ and discontinuously above it. Any observed distribution of votes, and therefore any ratio, is a stable equilibrium of the model with no social feedback at all. With feedback, uncertainty that only lowers the cost of radical options moves the electorate toward whichever side already leads, and a coupling of radical support to itself produces entry cascades that reverse only when uncertainty falls below its starting level. In finite populations a small bias selects one side in the long run while the time needed to leave a one-sided state grows exponentially with population size. We give designs that separate these mechanisms: about 5,000 participants, or 884 making six choices each, detect a ratio of odds ratios of 2 for the uncertainty-by-continuity interaction; a randomized-exposure group experiment estimates the social multiplier; and expected free energy and maxmin expected utility make opposite predictions about learnable and irreducible uncertainty.

1. The claim and its parts

In an essay of August 2025, Garry Kasparov argued that people who feel forced to choose between two extremes swing to the right; the subtitle states that “the majority will always tack right” (Kasparov 2025). His explanation is that the far right presents itself as preserving or restoring something, a demographic balance or a nation’s earlier glory, while the far left is seen as seeking to overthrow and to depart from tradition altogether. His examples are the Nazi party’s lead over Ernst Thälmann’s communists in the Weimar Reichstag, the Alternative für Deutschland’s lead over the Left Party, and Marine Le Pen’s qualification for the second round of the French presidential elections of 2017 and 2022, which Jean-Luc Mélenchon missed both times.

The argument joins four claims that require different evidence. The first concerns entry: uncertainty raises support for radical options. The second concerns direction: the right gains more of that support than the left. The third concerns mechanism: the right’s advantage comes from its perceived continuity with a valued past. The fourth concerns generality: the advantage holds across countries and periods, perhaps with a stable size. The essay states no ratio; any fixed ratio would add a fifth, quantitative claim.

The third claim contains a puzzle. A movement can propose to dismantle courts, constitutions or international commitments while presenting itself as the guardian of an older continuity of nation, religion, status or way of life. What it proposes to change and what its supporters believe it will preserve are separate coordinates. Boym called the corresponding attitude restorative nostalgia, a longing that seeks to rebuild the lost home, and distinguished it from a reflective nostalgia that dwells on the longing itself (Boyam 2001). In such cases radical institutional means serve ends that supporters experience as familiar.

We make five contributions. We assemble the evidence for each of the four claims (Section 2). We check the descriptive part of the second and fourth claims in European parliamentary elections since 1989 (Section 3): the far right has led the far left in most elections and increasingly often, but the ratio of their votes is widely dispersed and the far left leads in a substantial minority, including the most polarized cases. We build a three-state choice model that separates entry from selection and derive what vote shares can and cannot reveal about the mechanism (Sections 5 and 6). We compute exact results for finite populations, where a small bias selects a side in the long run and hysteresis can be told apart from lag only by varying the speed of change (Section 7). And we give experimental designs with power calculations and a comparison of decision theories in which uncertainty can favour either the familiar or the novel (Section 8).

2. Evidence on the four claims

2.1 Uncertainty and the appeal of radical groups

Uncertainty–identity theory holds that uncertainty about oneself, one’s place and how one should behave motivates identification with groups, and particularly with groups whose identity is distinctive and clearly defined and whose norms prescribe behaviour (Hogg 2007). The same process can make extreme groups attractive, groups with directive leadership and ideological belief systems that proscribe dissent (Hogg 2014), and experiments have examined identification with radical groups when self-uncertainty is combined with threat (Hogg et al. 2010). A related literature on compensatory control finds that reduced personal control increases the preference for simple, clear and consistent interpretations of the social world, even when they entail adverse outcomes (Landau et al. 2015).

These mechanisms do not choose a side. Extremists of the left and of the right share psychological features: distress, a simplistic perception of the social world, overconfidence and intolerance of other groups and opinions (van Prooijen and Krouwel 2019). In a sample of over 700 United States citizens, partisan extremity was associated with lower cognitive flexibility regardless of political orientation (Zmigrod et al. 2020). The psychology of uncertainty supports the first claim, entry, and is silent on the second.

2.2 Uncertainty, threat and ideological direction

A meta-analysis of 88 samples from 12 countries, with 22,818 cases, found that several variables related to uncertainty and threat predict political conservatism, among them perceived system

instability, dogmatism and intolerance of ambiguity, low tolerance of uncertainty, and needs for order, structure and closure (Jost et al. 2003). The association depends on what is threatened and on the political domain. In 60,378 participants from 56 countries and territories, economic threats tended to go with left-wing economic beliefs and threats of violence with right-wing cultural beliefs, with exceptions and with differences across countries that few national characteristics explained (Brandt et al. 2021). In data from 51 nations, valuing conformity, security and tradition predicted right-wing cultural attitudes but, on average, left-wing economic attitudes (Malka et al. 2014). In 19 European countries, openness to experience was associated with left-wing orientation in Western Europe and right-wing orientation in Eastern Europe (Thorisdottir et al. 2007). What appears to offer security depends on domain and context, so the second claim cannot be derived from the psychology of uncertainty alone.

2.3 Collective nostalgia and lost status

The third claim has its strongest support in work on collective nostalgia. In a representative sample of 1,934 native Dutch adults, national nostalgia predicted support for populist radical right parties through endorsement of their nativist ideology (Smeekes et al. 2021). In preregistered analyses of Dutch panel data, nostalgia for group-based contents such as traditions was more consistently related to radical right support than nostalgia for personal contents such as childhood (Versteegen 2024). Nostalgic deprivation, the perception that one's group has lost status relative to its own past, predicted support for the radical right among White respondents in Britain and the United States (Gest et al. 2018), and a nine-item scale combining a temporal comparison, a judgement of injustice and collective anger predicted radical right support better than established measures of relative deprivation and nostalgia (Grosche and Rothmund 2025). Subjective social status has declined since 1987 for men without a college education in many developed democracies, and lower subjective status is associated with support for the populist right (Gidron and Hall 2017).

The same literature limits the claim. In surveys across 19 European countries, nostalgic deprivation predicted support for populist platforms among both left-wing and right-wing respondents, in Eastern and Western Europe (Ferwerda et al. 2025). Conservatives and liberals both experience collective nostalgia, for a more homogeneous and for a more open society respectively (Stefaniak et al. 2021), and experimentally induced nostalgia for a more open society weakened anti-immigration sentiment (Wohl et al. 2020). The politically consequential construct is closer to the conviction that a group once held a rightful place, that the place was taken, and that a particular movement can restore it. Familiarity alone does not determine which movement benefits; the content of the remembered past does.

2.4 Crises and electoral asymmetry

In 20 advanced economies and more than 800 general elections from 1870 to 2014, far-right parties increased their vote share by about 30% relative to its previous level after systemic financial crises, with no similar pattern after normal recessions or non-financial macroeconomic shocks (Funke et al. 2016). In the interwar period, support for right-wing extremists followed cumulative growth

performance and rose most in countries with short democratic histories, low hurdles to representation and defeat in the First World War (de Bromhead et al. 2013). In 15 Western European countries, regions more exposed to Chinese imports shifted toward nationalist, isolationist and radical-right parties (Colantone and Stanig 2018). In the United States, trade exposure moved counties with an initial White majority toward conservative Republicans and counties with an initial majority-minority population toward liberal Democrats, both at the expense of moderates (Autor et al. 2020). The same shock produced movements toward both extremes, sorted by the group composition of the place it hit. Reviews of the political economy of populism reach similar conclusions about the interaction of economic shocks with culture and identity (Guriev and Papaioannou 2022; Rodrik 2021; Norris and Inglehart 2019).

Status quo bias, the greater attractiveness of an option once it is designated as the default, is well documented (Samuelson and Zeckhauser 1988; Eidelman and Crandall 2012), but it does not say which contemporary movement occupies the position of the default in a voter's mind.

2.5 Radicalization as several processes

Radical opinion and radical action are different outcomes; most people who hold radical opinions never act on them (McCauley and Moskalenko 2017). The significance-quest account of violent extremism combines a motivation (to matter), an ideology that names violence as a means, and a network that validates the ideology (Kruglanski et al. 2014). A systematic review of 127 studies, with 206 samples and over 100 putative factors, found mostly cross-sectional evidence and modest effects for many factors (Wolfowicz et al. 2021). Supporting a radical candidate need not follow a conversion: in a candidate-choice experiment, only a small fraction of Americans prioritized democratic principles over partisanship and policy, and fewer did so as polarization increased (Graham and Svobik 2020). This paper concerns electoral support for radical options, the first pyramid of McCauley and Moskalenko, and makes no claim about violence.

Table 1: The four claims and the state of the evidence.

claim	evidence for	qualification
entry: uncertainty raises radical support	uncertainty–identity theory; compensatory control; post-crisis gains	concerns both extremes
direction: the right gains more	far-right gains after financial crises and import shocks	threat type, policy domain, country and group composition change the direction
mechanism: perceived continuity	national and group-based nostalgia; nostalgic deprivation	the content of the remembered past varies with ideology

claim	evidence for	qualification
generality: everywhere, or with a stable size	none found	the ratio varies widely across elections (Section 3)

3. Far right and far left in European elections, 1989 to 2023

The second and fourth claims have a descriptive part that can be checked. We classified parties with the PopuList 4.0, an expert-informed classification of populist, far-left and far-right parties in 31 European countries since 1989 that records borderline cases and the years in which each classification applies (Rooduijn et al. 2024, 2026), and took vote shares in national parliamentary elections from the ParlGov database (Döring and Manow 2026). Its far right comprises radical-right parties, which accept democracy but oppose elements of liberal democracy and combine nativism with authoritarianism, and extreme-right parties, which reject democracy (Mudde 2007); its far left comprises radical-left parties, which reject the socioeconomic structure of contemporary capitalism, and extreme-left parties (March 2011). PopuList parties were linked to ParlGov by the identifiers in the PopuList and, for three parties without one, by name. Two electoral alliances were assigned the classification of their dominant member (Fidesz with the Christian Democrats in Hungary, the Communist-led CDU in Portugal), and three elections were excluded because classified parties ran inside cross-ideological lists whose shares cannot be divided (Italy 1994 and 1996, and France 2022, where the joint left list is recorded under *La France insoumise*). Malta has no classified party with recorded votes. The result is 280 elections in 30 countries, from June 1989 to June 2023. The main analysis counts borderline cases as classified; a strict analysis excludes them.

The far right received more votes than the far left in 158 of the 258 elections in which either received votes, 61.2%, and in 66.0% under the strict classification. The share rose from 48.7% in 1989 to 1999 to 57.7% in 2000 to 2009 and 72.5% in 2010 to 2023. The change came from the far right: its mean vote share rose from 6.16% to 13.97% between the first and last periods while the far left's moved from 5.87% to 6.50%. The far right led in 85.0% of elections in the 11 post-communist countries and in 46.2% elsewhere.

The ratio varies widely. In the 97 elections in which both the far right and the far left received at least 2%, the ratio of far-right to far-left vote had a median of 1.28 and an interquartile range from 0.63 to 2.11; it ranged from 0.09 to 11.7, and 40.2% of these elections had the far left ahead. Only 23.7% had a ratio between 1.5 and 2.5. When both exceeded 10%, the configuration closest to a choice between two strong extremes, the far right led in 13 of 23 elections; the far left led in the Greek elections of 2012 and 2015, with 41.8% against 12.1% in January 2015. The far left led in the most recent election in the data in 6 countries (Cyprus, Greece, Iceland, Luxembourg, Norway and Portugal) and at least once since 2010 in 12. In the first round of the French presidential election of 2022, Le Pen received 23.15% and Mélenchon 21.95% of valid votes (Conseil constitutionnel 2022), a ratio of 1.05; adding Éric Zemmour's votes to the far right raises it to 1.38, and adding the Communist and Trotskyist candidates to the far left lowers the bloc ratio to 1.18.

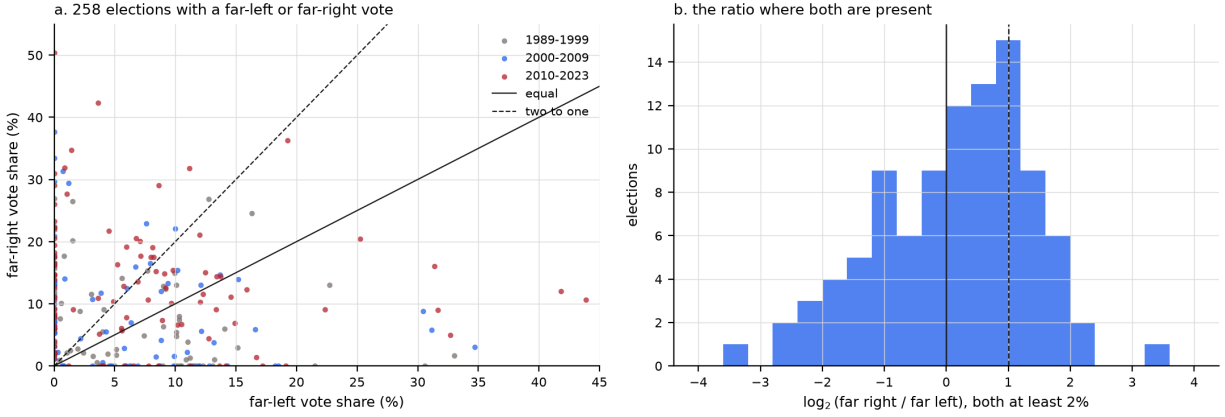


Figure 1: Far-right and far-left vote shares in European parliamentary elections, 1989 to 2023. (a) Each point is an election, coloured by period; the lines mark equal shares and a ratio of two to one. (b) Distribution of the base-2 logarithm of the far-right to far-left ratio in the 97 elections in which both received at least 2%; the solid line marks equality and the dashed line a ratio of two. Classification from the PopuList 4.0, vote shares from ParlGov.

The descriptive asymmetry is real and has grown over three decades, but it has no stable size, and it reverses in a substantial minority of elections. These are vote shares in multiparty systems, which differ from a forced choice between two extremes; electoral rules, party supply and turnout shape them. They say nothing about the third claim, and Section 6.1 shows that no distribution of votes could.

4. Formal precedents

Formal models of collective opinion and choice are numerous (Castellano et al. 2009). In threshold models, individuals act once enough others have acted, and small differences in the distribution of thresholds produce very different cascades (Granovetter 1978). Galam’s model of local discussion contains an explicit preservation bias: groups adopt their local majority, and a tied group favours the status quo (Galam 2002). With groups of four, the proportion p supporting a reform evolves as

$$p_{t+1} = p_t^4 + 4p_t^3(1 - p_t),$$

whose unstable fixed point is $p_c = (1 + \sqrt{13})/6 = 0.768$. A reform supported by 60% of a population falls to 47.52% after one round of discussion and to 27.6% after two. The asymmetry is assumed in the tie rule, and the population that rejects the reform need not be on the right. Bounded-confidence and relative-agreement models show how confident extremists can pull uncertain moderates toward one or both extremes (Hegselmann and Krause 2002; Deffuant et al. 2002); models with homophily and reinforcement produce echo chambers from moderate initial conditions (Baumann et al. 2020); and polarization can show tipping points and hysteresis (Macy et al. 2021).

The model below belongs to the statistical mechanics of discrete choice. Logit choice (McFadden 1974) with a term for conformity to the average choice of others produces multiple self-consistent equilibria above a threshold of social interaction (Blume 1993; Brock and Durlauf 2001). Inferring social effects from the distribution of behaviour in a population runs into the reflection problem (Manski 1993), and positive social interactions create a social multiplier by which aggregate relationships overstate individual ones (Glaeser et al. 2003). In finite populations with noise, long-run equilibrium selection favours particular equilibria (Kandori et al. 1993; Young 1993). With three states per agent, the model is the mean-field Blume–Capel model (Blume 1966; Capel 1966), and with an additional coupling of the squared states it is the Blume–Emery–Griffiths model (Blume et al. 1971). Methods to estimate Blume–Capel networks from -1 , 0 and $+1$ responses, including answers to a voting-advice application, were published in 2026 (Waldorp et al. 2026).

The model class is old. What follows contributes a separation of entry from selection in this class, an explicit uncertainty-by-continuity term, results on what vote shares can and cannot identify, exact finite-population computations of selection and hysteresis, and designs that test each component.

5. A three-state model of entry and selection

5.1 Institutional distance and promised continuity

Table 2: Two coordinates of a political offer. The lower left cell is institutionally radical and symbolically restorative.

	promises continuity of a valued collective identity	promises a break with it
limited institutional change	preservation of existing arrangements	gradual reform toward a different identity
extensive institutional change	transformation of institutions to restore an identity or order	transformation of institutions to found a new identity or order

The classification is analytical and is not a classification of parties: a movement can occupy different cells for different voters, and continuity is a perception. The model treats institutional radicalism and promised continuity as properties of the options as perceived by a chooser.

5.2 Choice rule

Each individual chooses $s \in \{-1, 0, +1\}$, standing for a specified radical-left option, a nonradical option and a specified radical-right option. Abstention and indecision are distinct from the non-radical option and are recorded separately in the designs of Section 8; the analytical benchmark omits them. Let P_L , P_0 and P_R be the population shares, and define the directional imbalance and the total radical share

$$m = P_R - P_L, \quad q = P_R + P_L.$$

An entirely nonradical population and a population divided equally between the two extremes both have $m = 0$; the two quantities measure different things. The value of option s is

$$V(s) = s(Jm + h) - \Delta s^2,$$

where $J \geq 0$ is social reinforcement from the choices of others, h a directional bias (toward the right when positive), and Δ the cost of either radical option relative to the nonradical one. Choices follow the logit rule

$$P(s \mid m) = \frac{\exp[\beta V(s)]}{\sum_{r=-1}^1 \exp[\beta V(r)]},$$

so only the products βJ , βh and $\beta \Delta$ are identified without a normalization of the utility scale. In the results, these products are the parameters.

Table 3: Parameters of the model.

symbol	meaning
U	a defined measure or manipulation of uncertainty
$\Delta C = C_R - C_L$	the right option's advantage in perceived continuity
b	baseline directional preference
λ	preference for continuity independent of uncertainty
δ	a rightward effect of uncertainty independent of continuity
κ	the uncertainty-by-continuity interaction
η	the effect of uncertainty on the cost of radical options
βJ	reinforcement from the choices of others (side)
βK	reinforcement of radical choices by the radical share (entry)

5.3 How uncertainty enters

Uncertainty can act on entry, through the cost of radical options, and on selection, through the directional bias:

$$\beta\Delta(U) = \beta\Delta_0 - \eta U, \quad \beta h(U, \Delta C) = b + \lambda \Delta C + \delta U + \kappa U \Delta C.$$

The two equations state two hypotheses. If $\eta > 0$, uncertainty lowers the relative attractiveness of the nonradical option; the sign of η is to be estimated, since uncertainty could also make radical options less attractive. If $\kappa > 0$, uncertainty increases the advantage of whichever option seems to preserve a valued continuity; $\delta \neq 0$ allows an effect of uncertainty in a fixed direction, which is the hypothesis that uncertainty intrinsically favours the right. A pure continuity account has $\delta = 0$, a pure directional account $\kappa = 0$.

The interaction has a decision-theoretic reading. Suppose a chooser evaluates option k by the worst expected payoff in a set of plausible values $[\mu_k - U w_k, \mu_k + U w_k]$, as in maxmin expected utility (Gilboa and Schmeidler 1989), and suppose the width w_k of an option's set narrows with its perceived continuity, $w_k = w_0 - c C_k$, because a familiar programme has better-known consequences. Then the value of option k is $\mu_k - U w_0 + c U C_k$, and the bias, which is half the difference in values between the right and left options, contains the term $\frac{1}{2}\beta c U \Delta C$: an interaction $\kappa = \beta c/2 > 0$ with $\delta = 0$. In the α -maxmin generalization, which weights the worst and best payoffs by α and $1 - \alpha$ (Ghirardato et al. 2004), the interaction becomes proportional to $2\alpha - 1$ and changes sign for ambiguity-seeking choosers. This gives the continuity mechanism a measurable moderator: individual ambiguity attitudes, elicited with Ellsberg-type choices (Ellsberg 1961; Trautmann and van de Kuilen 2015), should predict the size and sign of each person's κ . Preference for bets in domains where one feels competent is a related, documented source of the same pattern (Heath and Tversky 1991). The same reading applies to entry: if uncertainty widens the set of outcomes expected from established institutions more than from radical options, it lowers Δ .

"Uncertainty" names several constructs that should not be merged: unpredictability (one cannot forecast what will happen), threat (something valued may be harmed), identity uncertainty (one does not know where one belongs), and lack of control (one's actions seem ineffective). A known danger is threatening without being uncertain, and an unpredictable but controllable environment can encourage learning. Each construct can enter η , δ and κ differently, and Section 8.3 shows that two kinds of uncertainty can move choices in opposite directions.

5.4 Dynamics

With individuals revising their choices at unit rate and observing the current imbalance, the mean-field dynamics are

$$\dot{m} = \mathbb{E}[s \mid m] - m, \quad \mathbb{E}[s \mid m] = \frac{2e^{-\beta\Delta} \sinh x}{1 + 2e^{-\beta\Delta} \cosh x}, \quad x = \beta(Jm + h),$$

and q relaxes to $2e^{-\beta\Delta} \cosh x / (1 + 2e^{-\beta\Delta} \cosh x)$. Section 6.5 adds a coupling of radical support to itself, $V(s) = s(Jm + h) - (\Delta - Kq)s^2$, under which the radical share also feeds back on its own cost.

6. Analytical results

6.1 What a single election cannot reveal

Proposition 1. Let (P_L, P_0, P_R) be any distribution with positive shares, $m = P_R - P_L$ and $\text{Var}(s) = q - m^2$. For every βJ with $0 \leq \beta J < 1/\text{Var}(s)$, the parameters

$$\beta h = \frac{1}{2} \ln \frac{P_R}{P_L} - \beta J m, \quad \beta \Delta = -\frac{1}{2} \ln \frac{P_R P_L}{P_0^2}$$

make the distribution a stable equilibrium of the dynamics.

Proof. Under the logit rule, $\ln(P_R/P_L) = 2\beta(Jm + h)$ and $\ln(P_R P_L/P_0^2) = -2\beta\Delta$, which the stated parameters satisfy by construction. The derivative of $\mathbb{E}[s \mid m]$ with respect to m is $\beta J \text{Var}(s)$, so the fixed point is stable when $\beta J \text{Var}(s) < 1$. $\square$

Every observed distribution, and therefore every ratio P_R/P_L , is an equilibrium of a population without social feedback ($J = 0$), with $\beta h = \frac{1}{2} \ln(P_R/P_L)$. A ratio of two to one requires only $\beta h = \frac{1}{2} \ln 2$; it implies neither tipping nor a bifurcation. The same distribution is also a stable equilibrium for every reinforcement up to the bound, so a snapshot of vote shares identifies neither the strength of social feedback nor how close a population is to a threshold. Applied to the French first round of 2022 with Mélenchon, Le Pen and all other candidates as the three options, any βJ below 2.22 reproduces the result. The proposition is a version of the reflection problem (Manski 1993) for this model: identification of social effects requires variation that the snapshot does not contain (Brock and Durlauf 2001). We verified the reconstruction numerically for 800 random distributions and values of βJ , each reproduced to machine precision as a stable equilibrium.

6.2 Stability of the symmetric state

Proposition 2. With $h = 0$, $m = 0$ is an equilibrium with radical share $q_0 = 2e^{-\beta\Delta}/(1 + 2e^{-\beta\Delta})$. It is stable if and only if $\beta J q_0 < 1$, that is,

$$\beta J < \beta J_c = 1 + \frac{1}{2}e^{\beta\Delta}.$$

At βJ_c the symmetric state loses stability in a pitchfork bifurcation that is supercritical when $q_0 > 1/3$ ($\beta\Delta < \ln 4$) and subcritical when $q_0 < 1/3$ ($\beta\Delta > \ln 4$). The two regimes meet at the tricritical point $(\beta\Delta, \beta J) = (\ln 4, 3)$.

Proof. At $m = 0$ the derivative of $\mathbb{E}[s \mid m]$ is $\beta J q_0$, and $1/q_0 = 1 + \frac{1}{2}e^{\beta\Delta}$. Expanding $\mathbb{E}[s]$ in x gives $q_0 x + q_0(\frac{1}{6} - \frac{q_0}{2})x^3 + O(x^5)$; the cubic coefficient is negative, giving stable branches that grow continuously from $m = 0$, when $q_0 > 1/3$, and positive, giving unstable branches and a discontinuous transition, when $q_0 < 1/3$. At $q_0 = 1/3$, $e^{\beta\Delta} = 4$ and $\beta J_c = 3$. $\square$

This is the mean-field tricritical point of the Blume–Capel model (Blume 1966; Capel 1966; Blume et al. 1971). Its political reading: when radical options are cheap ($\beta\Delta < \ln 4$, so that more than a third

of the symmetric population is radical), one side's dominance emerges gradually as reinforcement increases; when they are costly, dominance appears abruptly and coexists with the symmetric state over a range of reinforcement. At $\beta\Delta = 2$, one-sided states appear at $\beta J = 4.06$, have the same free energy as the symmetric state at 4.18, and the symmetric state loses stability at 4.69 (Figure 2a).

Table 4: Equilibria at $\beta\Delta = 1$ and $h = 0$, where $q_0 = 0.424$ and the threshold is $\beta J_c = 2.359$. The shares are model outputs and estimate no electorate.

reinforcement	stable state	left	nonradical	right
$\beta J = 2.0$	symmetric	21.2%	57.6%	21.2%
$\beta J = 2.6$	left-dominant	59.3%	37.5%	3.2%
$\beta J = 2.6$	right-dominant	3.2%	37.5%	59.3%

At $\beta\Delta = 1$, with $q_0 = 0.424$ and $\beta J_c = 1 + e/2 = 2.359$, a population with reinforcement $\beta J = 2$ remains symmetric, and one with $\beta J = 2.6$ ends dominated by one side, with the side determined by history and chance. A small directional bias favours one branch without removing the other (Figure 2b).

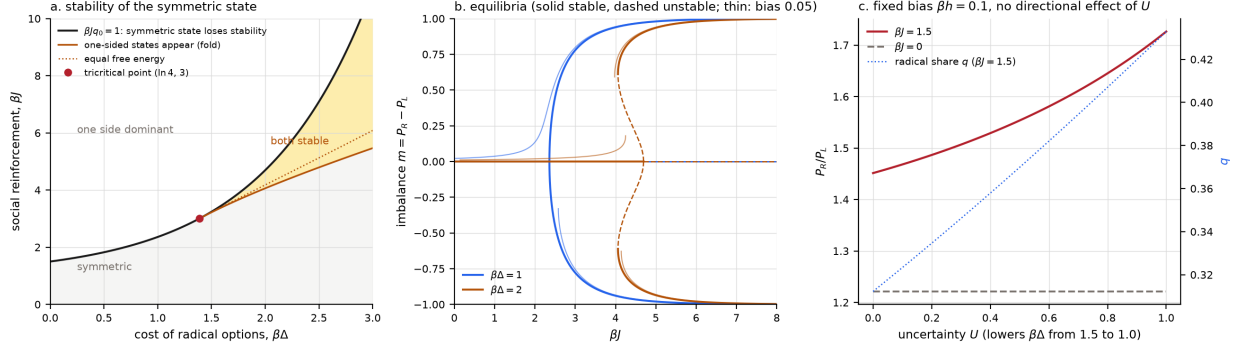


Figure 2: The three-state model. (a) Stability of the symmetric state in the plane of the cost of radical options and social reinforcement: below the black line the symmetric state is stable; above it one side dominates; in the shaded region above the tricritical point both are stable, with the dotted line marking equal free energy. (b) Equilibrium imbalance against reinforcement at $\beta\Delta = 1$ (continuous transition) and $\beta\Delta = 2$ (discontinuous); thin lines show the stable branches with a bias $\beta h = 0.05$. (c) Right-to-left ratio as uncertainty lowers $\beta\Delta$ from 1.5 to 1.0 at a fixed bias $\beta h = 0.1$, with and without reinforcement, and the radical share with reinforcement.

6.3 Amplification of a small bias

Proposition 3. At any stable equilibrium with $K = 0$,

$$\frac{\partial m}{\partial(\beta h)} = \frac{\text{Var}(s)}{1 - \beta J \text{Var}(s)}.$$

Proof. Differentiate $m = \mathbb{E}[s \mid m]$ with respect to βh , using $\partial \mathbb{E}[s] / \partial x = \text{Var}(s)$. $\square$

The response to a bias is the response without feedback, $\text{Var}(s)$, multiplied by $M = 1/(1 - \beta J \text{Var}(s))$, the social multiplier (Glaeser et al. 2003), which diverges at the stability boundary. Near the threshold, a small advantage in perceived continuity can move the population a long way. This is the formal content of the intuition that a small familiarity advantage becomes decisive, and it holds only near the threshold.

6.4 The effect of uncertainty on direction

Proposition 4. Let βh and $\beta \Delta$ depend on U , and $K = 0$. At a stable equilibrium,

$$\frac{d}{dU} \ln \frac{P_R}{P_L} = \frac{2}{1 - \beta J \text{Var}(s)} \left[\frac{\partial(\beta h)}{\partial U} - \beta J m P_0 \frac{\partial(\beta \Delta)}{\partial U} \right].$$

Under the specification of Section 5.3 this is $2(\delta + \kappa \Delta C + \beta J m P_0 \eta)/(1 - \beta J \text{Var}(s))$.

Proof. Write $m = F(x, \beta \Delta)$ with $x = \beta(Jm + h)$. Then $\partial F / \partial x = \text{Var}(s)$ and $\partial F / \partial(\beta \Delta) = -m P_0$, so $dm(1 - \beta J \text{Var}(s)) = \text{Var}(s) d(\beta h) - m P_0 d(\beta \Delta)$. Substituting into $d \ln(P_R/P_L) = 2(\beta J dm + d(\beta h))$ gives the result. $\square$

Without feedback, the uncertainty effect on the log-odds of right over left is $2(\delta + \kappa \Delta C)$, which changes sign at $\Delta C^* = -\delta/\kappa$ when $\kappa > 0$. This is the central test of the continuity hypothesis: the effect of uncertainty should move toward whichever option represents continuity. Moving continuity to the left option need not reverse the winner, nor even the sign of the uncertainty effect, if δ is large; what the hypothesis requires is that the effect change systematically with ΔC .

With feedback, the reversal point moves to $\Delta C^* = -(\delta + \beta J m P_0 \eta)/\kappa$, by an amount proportional to the existing imbalance. A reversal test run in interacting groups confounds the continuity mechanism with the group's history; the test belongs in isolated individuals, where $J = 0$ by design.

Uncertainty that only lowers the cost of radical options ($\eta > 0$, $\delta = \kappa = 0$) moves the log-odds toward the side that already leads. With $\beta J = 1.5$, a fixed bias $\beta h = 0.1$ and $\beta \Delta$ falling from 1.5 to 1.0, the right-to-left ratio rises from 1.45 to 1.73 while the radical share rises from 0.31 to 0.43; without feedback the ratio stays at 1.22 (Figure 2c). An aggregate pattern in which crises favour the far right is therefore consistent with a mechanism in which uncertainty favours neither side and feedback amplifies a pre-existing lean. Distinguishing these requires knowing m before the shock and estimating J ; an observed post-crisis shift alone cannot separate them. The formula agrees with finite differences of the computed equilibria to a relative error below 10^{-9} .

6.5 Entry cascades

The model so far has no feedback on entry: the radical share responds smoothly to its cost. A second kind of reinforcement, in which radical choices become more attractive as more people make them regardless of side, corresponds to $V(s) = s(Jm + h) - (\Delta - Kq)s^2$.

Proposition 5. At $m = 0$ and $h = 0$, the radical share solves $\ln \frac{q}{1-q} = \ln 2 - \beta\Delta + \beta Kq$. For $\beta K > 4$ this equation has two folds, at the shares where $\beta Kq(1 - q) = 1$,

$$q_{\pm} = \frac{1}{2} \left(1 \pm \sqrt{1 - 4/\beta K} \right),$$

and for values of $\beta\Delta$ between those at the two folds a low and a high radical share are both stable. The symmetric state is stable against a directional perturbation if and only if $\beta Jq < 1$.

Proof. At $m = 0$ the cost becomes $\beta\Delta - \beta Kq$, and the fixed-point condition for q gives the stated equation. Its right-hand side minus its left-hand side has derivative $\beta K - 1/(q(1 - q))$, which vanishes at $q_{\pm}$ and has two zeros only when $\beta K > 4$. At $m = 0$ the Jacobian of $(m, q) \mapsto (\mathbb{E}[s], \mathbb{E}[s^2])$ is diagonal with entries βJq and $\beta Kq(1 - q)$. $\square$

With $\beta K = 6$ the folds lie at $q_- = 0.211$ and $q_+ = 0.789$, where $\beta\Delta$ equals 3.278 and 4.108. If uncertainty lowers the cost as $\beta\Delta = 4.6 - 2U$, a population with no side reinforcement stays at a low radical share until $U = 0.661$, jumps to a high share, and returns only when uncertainty falls below $U = 0.246$ (Figure 3, grey). With side reinforcement $\beta J = 2$ the low state is directionally stable ($\beta Jq_- = 0.42$), but the high state is not, so the entry cascade triggers symmetry breaking and the population lands in a radical, one-sided state. That state persists until $\beta\Delta$ reaches 4.966, which corresponds to $U = -0.183$, below the level at which the sweep began (Figure 3, red). In a slow simulated sweep the jumps occurred at 0.666 and 0.241 without side reinforcement and the return at -0.194 with it.

This is the formal sense in which radicalization can be a bifurcation in uncertainty: a smooth increase in uncertainty produces a discontinuous increase in radical support, and in the presence of side reinforcement the same discontinuity selects a side. The return path differs from the outward path, and with side reinforcement the radical state outlasts the uncertainty that produced it. The parameter values are illustrative; whether βK exceeds 4 in any real population is an empirical question that vote shares cannot answer (Proposition 1 applies to K as well, since Δ absorbs Kq in any snapshot).

7. Finite populations

7.1 Escape times and selection by a small bias

In a population of N agents, each revising at unit rate by the logit rule with the mean choice of the other $N - 1$ agents, the game has the exact potential $\Phi = J(M^2 - Q)/(2(N - 1)) + hM - \Delta Q$, with M and Q the sums of s_i and s_i^2 . The aggregate process on the counts (n_L, n_R) is then a reversible Markov chain whose stationary distribution is proportional to the multinomial coefficient times

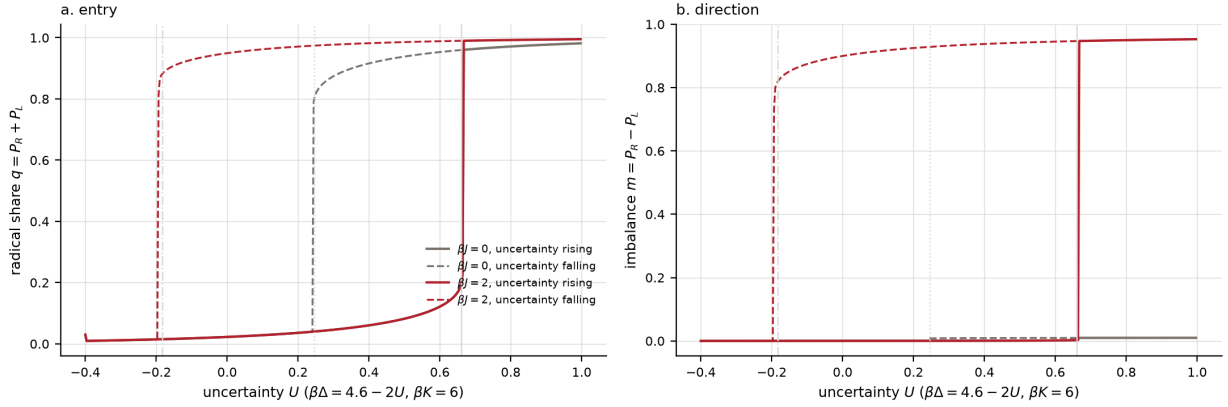


Figure 3: Entry cascades with a coupling of radical support to itself ($\beta K = 6$). Uncertainty lowers the cost of radical options as $\beta\Delta = 4.6 - 2U$, first rising from -0.4 to 1 and then falling back, slowly enough to approximate equilibrium. (a) Radical share; (b) imbalance, with a bias $\beta h = 0.01$ toward the right. Grey: no side reinforcement; red: $\beta J = 2$. Vertical lines mark the predicted jump up, the return without side reinforcement, and the end of the one-sided state with it.

$e^{\beta\Phi}$ (Blume 1993). We computed its stationary distribution and mean first-passage times by solving sparse linear systems for N up to 200, at $\beta J = 3$ and $\beta\Delta = 1$, where the one-sided states have $|m| = 0.779$ and the free-energy barrier between them is $\beta\Delta F = 0.1159$ per agent.

The mean time to leave a one-sided state grows as $e^{N\beta\Delta F}$: it is 145 revisions per agent at $N = 20$, 1.44 million at $N = 100$ and 1.5×10^{11} at $N = 200$, and the growth rate of its logarithm between $N = 160$ and 200 is 0.1158 (Figure 4a). A population large enough to be stable on the time scale of elections, once one-sided, remains so.

A small bias decides which side the population occupies in the long run. With $\beta h = 0.02$, the right-dominant region holds 95.6% of the stationary distribution at $N = 100$ and 99.8% at $N = 200$; with $\beta h = 0.01$ the share is 82.4% at $N = 100$ (Figure 4b). At $N = 100$ and $\beta h = 0.02$, the population leaves the left-dominant state after 3.2×10^5 revisions per agent on average and the right-dominant state after 7.4×10^6 . The logarithm of the ratio of stationary weights grows with N at the rate predicted by the difference of the two barriers, 0.0311 per agent for $\beta h = 0.02$. This is long-run equilibrium selection (Kandori et al. 1993; Young 1993). It gives one definite meaning to the claim that one side always wins: over sufficiently long times, a population with any persistent bias spends almost all its time on the favoured side. The same computation shows the cost of that reading: even the disfavoured state lasts hundreds of thousands of revisions per agent, and over any horizon that matters politically the side that a population occupies is decided by its history.

7.2 Hysteresis and lag

A population with multiple stable states responds to a control that rises and then falls along different paths. So does a population with a single stable state that adjusts slowly. The two can be separated by the dependence of the loop area on the speed of the sweep (Jung et al. 1990). We

drove the bias as $\beta h(t) = -0.35 \cos(2\pi t/T)$, beyond the folds at $|\beta h| = 0.230$, and measured the area of the loop traced by m in the second cycle.

With $\beta J = 3$ (bistable) the mean-field loop area approaches the static area between the two stable branches, 0.699, from above; at $T = 10^4$ it is 0.731, and the excess falls with the period with exponent 0.63, close to the two-thirds law for dynamical hysteresis (Jung et al. 1990). With $\beta J = 1.5$ (one stable state) the area falls in proportion to $1/T$, from 0.194 at $T = 10$ to 0.00069 at $T = 10^4$ (Figure 4c). At a single sweep speed, both systems produce loops; across speeds, only the bistable one keeps a loop of finite area.

In finite populations the loop closes again when the sweep is slower than the time to escape a one-sided state near the folds, where the barrier is low. Computed from the master equation, the loop area for $N = 40$ peaks at 0.83 at $T = 100$ and falls to 0.27 at $T = 10^4$; for $N = 80$ it falls from 0.89 to 0.47. Hysteresis is observable only in a window of sweep periods between the relaxation time and the escape time, and that window widens with population size. An experimental test of history dependence therefore needs at least two sweep speeds and a control condition without interaction.

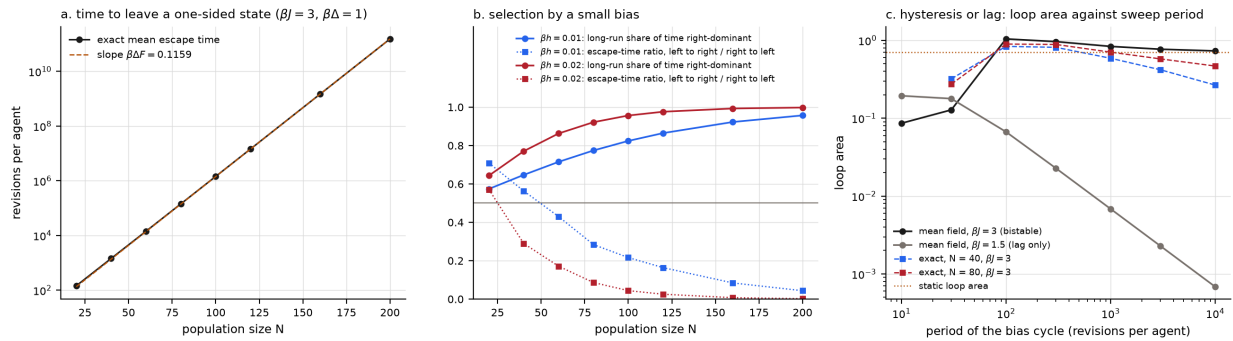


Figure 4: Finite populations at $\beta J = 3$ and $\beta \Delta = 1$, computed from the exact chain. (a) Mean time to leave a one-sided state against population size; the dashed line has the slope of the free-energy barrier. (b) Long-run share of time in the right-dominant state, and the ratio of mean escape times from the left- and right-dominant states, for biases $\beta h = 0.01$ and 0.02 . (c) Area of the loop traced by the imbalance when the bias is cycled with period T : mean field with two stable states and with one, and exact finite populations of 40 and 80.

Early-warning indicators such as rising variance and autocorrelation are sometimes proposed for social transitions (Scheffer et al. 2009). Selecting systems because they underwent a transition inflates the rate at which such indicators appear to work, and replicated experiments avoid the problem (Boettiger and Hastings 2012). A claim that a society approaches a threshold should be tested prospectively and with false-positive benchmarks.

8. Testing the mechanism

8.1 An individual choice experiment

The first experiment tests the psychological component without social interaction, so that $J = 0$ by design and Proposition 4 reduces to $2(\delta + \kappa \Delta C)$. Participants face a fictional polity with a radical-left programme, a nonradical programme and a radical-right programme, and can abstain. Two factors are randomized: uncertainty (U low or high, manipulated as unpredictability of the polity's future without changing its expected prosperity or the threat it faces) and the continuity cue ($\Delta C \in \{-1, 0, +1\}$: the left programme, neither, or the right programme is presented as restoring a valued arrangement of the polity's past). The substantive policy text is held fixed when its historical framing changes. Measures taken before choice separate recognition, anticipated identity continuity, expected predictability, restoration of group status and general approval of each programme. A first study should use one policy domain and replicate across others, since left and right do not denote the same bundle of positions everywhere.

The target is the interaction κ , expressed as $\theta = 4\kappa$, the ratio of odds ratios (on the log scale) between the effect of uncertainty on right-versus-left choice when continuity is assigned to the right programme and when it is assigned to the left. Because only radical choosers inform the direction of choice, the required sample scales inversely with the radical share q . With balanced cells and symmetric baseline shares, the variance of $\hat{\theta}$ is $96/(Nq)$ for the three-level cue and $64/(Nq)$ for a cue with two levels, so a neutral condition costs 50% more participants for the interaction test; it is needed to test linearity in ΔC and to estimate δ at $\Delta C = 0$.

Table 5: Participants needed, between subjects with one choice each, for 80% power at a two-sided 5% level in the test of $\kappa = 0$, with a three-level continuity cue.

ratio of odds ratios	radical share 0.15	radical share 0.3	radical share 0.5
1.25	100,883	50,442	30,265
1.5	30,555	15,277	9,166
2	10,455	5,228	3,137

For a scenario with $b = 0.1$, $\lambda = 0.25$, $\delta = 0.1$, $\beta\Delta_0 = 1.55$, $\eta = 0.3$ and a ratio of odds ratios of 2, which gives radical shares between 0.30 and 0.41 across cells, the Fisher information of the structural model gives 5,038 participants, close to the symmetric approximation of 5,170. In 2,000 simulated experiments of that size, maximum likelihood recovered κ without bias and rejected $\kappa = 0$ in 78.6% of them, against 4.7% when $\kappa = 0$. If each participant makes one choice in each of the six cells, with participant-level variation in both the bias and the cost and participant-clustered standard errors, 884 participants give 80% power; the test's size was 5.8% in 4,000 simulated null experiments. A generic sample of a few hundred, common in this literature, cannot detect interactions of this size (Figure 5a).

A randomized frame identifies the frame's causal effect, but it does not show that perceived continuity mediates it; that requires designs that manipulate the mediator directly or test its necessity. The maxmin reading of Section 5.3 adds a moderator test: participants' ambiguity attitudes, elicited separately, should predict the size and sign of their individual uncertainty-by-continuity effects.

8.2 A group experiment

The second experiment asks whether interaction adds anything beyond independent choice. Groups make repeated decisions about a fictional polity. Two factors are randomized at the group level: whether members see the previous choices of the other members (exposure) and to which programme the continuity cue is assigned. The estimand is the social multiplier, the ratio of the cue's effect on the group's imbalance with exposure to its effect without it. Randomizing exposure solves the problems that afflict observational studies of influence: friends share opinions in part because they chose one another, and members of a group share circumstances that move them together (Manski 1993).

We simulated groups of 8 members over 10 rounds with $\beta\Delta = 0.5$, a cue of strength $\beta\lambda = 0.15$, group-level shocks of standard deviation 0.3 and individual preferences of standard deviation 0.5. A naive regression of each member's choice on the others' previous choices gives a slope of 0.26 in groups that see nothing of each other's choices, where the true effect is zero, and 0.73 in exposed groups with $\beta J = 1$, where the linearized effect is 0.50. The randomized estimator recovers the multiplier: in groups of 4, 8, 16 and 32 at $\beta J = 1$ it gives 1.68, 1.73, 1.76 and 1.81, approaching the large-group limit of the same model, 1.81. The textbook formula $1/(1 - \beta J \mathbb{E}[\text{Var}(s)])$, which ignores the shocks that move groups away from the symmetric point, gives 1.99 (Figure 5b). Inference about J from a measured multiplier therefore requires the full model with its heterogeneity and group size, fitted by simulation. The interaction of exposure and cue is detected with 74.0% power with 200 groups and 95.8% with 400 when $\beta\lambda = 0.3$, and reaches 73.3% with 800 groups when $\beta\lambda = 0.15$ (Figure 5c). Randomization and inference are at the group level: hundreds of decisions by one group are one replication.

Two further features distinguish feedback from simpler alternatives. Under feedback, modest individual preferences become disproportionately large group imbalances, and groups with matched conditions but different histories end in different states, as in experimental markets where social influence increased both inequality and unpredictability of outcomes (Salganik et al. 2006). Committed minorities of about 25% tipped established conventions in a controlled experiment (Centola et al. 2018), which shows that such tests can be run. Hysteresis requires sweeps of the cue in both directions at two or more speeds (Section 7.2). The tasks concern fictional governance decisions; they involve no real parties, recruitment or campaigning.

8.3 Information sampling and active inference

A predictive-processing account of ideology holds that shared ideological expectations let group members predict and coordinate with one another, and that sharing the work of error minimiza-

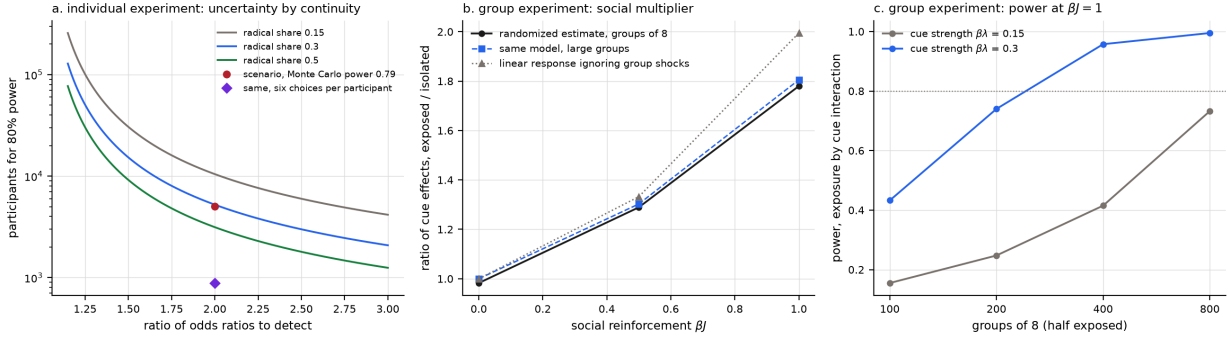


Figure 5: Design calculations, all simulated. (a) Participants needed to detect the uncertainty-by-continuity interaction with 80% power, by the ratio of odds ratios and the radical share; the circle marks the structural scenario of the text and the diamond the same scenario with six choices per participant. (b) The social multiplier estimated from randomized exposure in groups of 8, its large-group limit, and the linear-response formula that ignores group shocks. (c) Power of the test of the exposure-by-cue interaction against the number of groups, for two cue strengths.

tion can produce polarization and extremism (Wheeler et al. 2020). Active-inference models have reproduced echo chambers through confirmation-seeking sampling (Albarracín et al. 2022) and social conformity through cues that encode obligations (Constant et al. 2019). It is tempting to conclude that agents who minimize free energy prefer the familiar under uncertainty. The framework does not imply it.

In active inference, a policy π is scored by its expected free energy, which for a choice whose outcome o depends on unknown parameters θ is

$$G(\pi) = -\mathbb{E}_{Q(o|\pi)} [\ln C(o)] - I(o; \theta | \pi),$$

the negative of the expected log preference for outcomes minus the expected information gain about the parameters (Friston et al. 2017; Da Costa et al. 2020; Schwartenbeck et al. 2019); policies are chosen with probability proportional to $E(\pi) \exp(-\gamma G(\pi))$, where E encodes habits and γ precision (Parr et al. 2022). The information term, which appears in the expected free energy but does not follow from free-energy minimization alone (Millidge et al. 2021), makes uncertain options attractive when choosing them would be informative.

We compared three decision rules for a choice between a familiar and a novel programme with the same predictive probability of a good outcome, 0.6. Each programme delivers a good outcome with probability $\epsilon + (1 - 2\epsilon)\theta$, where θ is its unknown quality with a Beta distribution whose concentration ν is the size of its track record (learnable uncertainty), and ϵ is the noise with which outcomes report quality (irreducible uncertainty). The familiar programme has $\nu = 200$ and $\epsilon = 0$. Expected utility at a horizon of one choice depends only on the predictive probability and is unaffected by either kind of uncertainty. Maxmin expected utility, evaluated at the lower end of the 80% credible interval of θ , penalizes a short track record and favours outcome noise, which

narrows the range of possible outcome probabilities. Expected free energy rewards a short track record, because the expected information gain from choosing the novel programme is 0.109 nats with $\nu = 4$ against 0.012 with $\nu = 40$, and penalizes outcome noise, which makes outcomes uninformative.

Table 6: Direction in which each rule moves choice when the novel programme’s uncertainty increases, at a fixed predictive probability of a good outcome.

manipulation of the novel programme	expected utility (horizon 1)	maxmin expected utility	expected free energy
shorter track record (learnable uncertainty)	no change	familiar favoured	novel favoured
noisier outcomes (irreducible uncertainty)	no change	novel favoured	familiar favoured

With a choice precision of 4, the log-odds of choosing the familiar programme are -0.43 under expected free energy and 2.13 under maxmin when the novel programme has $\nu = 4$ and no outcome noise, and -0.04 and 0.44 when it has $\nu = 40$ (Figure 6). The rules disagree in sign on both manipulations, which a two-by-two information-sampling experiment can test directly. Under active inference, a familiarity advantage under uncertainty must come from irreducible uncertainty about outcomes, from habits E , or from a fall in precision γ that shifts control toward habits (FitzGerald et al. 2014); each route predicts a different pattern of sampling. Humans seek more information when more future choices remain (Wilson et al. 2014), so a horizon manipulation separates an intrinsic value of information, present in expected free energy at a horizon of one, from the instrumental value of information in Bayes-adaptive choice. Better prediction of votes alone would not favour active inference over ordinary choice models; its claim to explain political closure rests on predictions about which information people seek and how they update.

8.4 What would refute each component

The psychological component is refuted if an adequately powered individual experiment with successful manipulations finds no uncertainty-by-continuity interaction, and weakened if measured approval or expected benefit of the programmes accounts for the interaction once anticipated continuity is controlled. If uncertainty shifts choices rightward equally across continuity conditions, a directional account ($\delta > 0$, $\kappa = 0$) is supported over the continuity account. If uncertainty changes the nonradical share without changing the direction of radical choice, entry is supported and selection is not. The collective component is refuted if randomized exposure produces no multiplier beyond one, or if independently estimated influence fails to predict group trajectories that a model without multiple stable states predicts equally well. The active-inference extension adds nothing

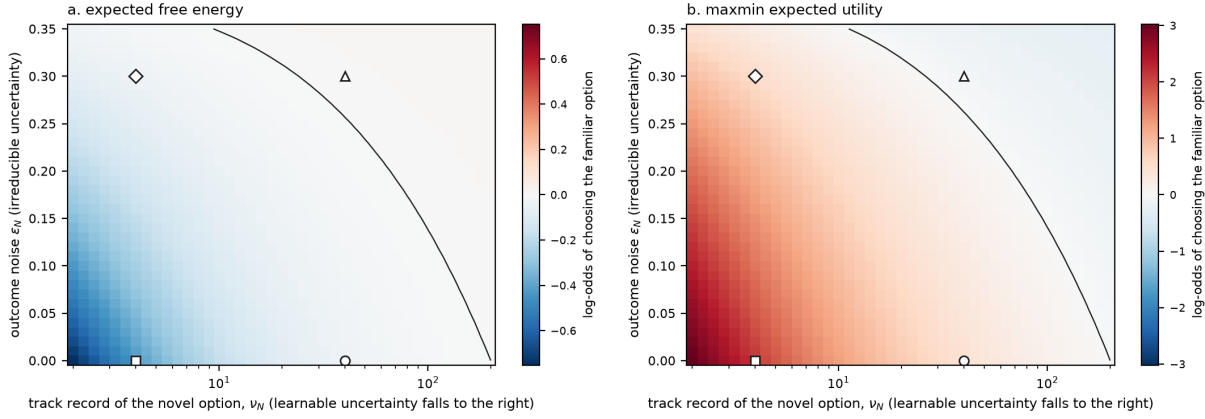


Figure 6: Log-odds of choosing a familiar over a novel programme with the same predictive probability of a good outcome, as functions of the novel programme’s track record (horizontal) and outcome noise (vertical). (a) Expected free energy; (b) maxmin expected utility over the 80% credible interval of quality. Black lines mark indifference; markers show the four cells of a two-by-two design. Expected utility at a horizon of one is indifferent everywhere.

if it improves fit only through flexibility, without predicting information sampling and updating better than maxmin and Bayes-adaptive alternatives. The framing as a whole needs revision if anticipated continuity cannot be measured apart from policy agreement, expected benefit or liking for a group.

9. Scope and limits

The model is a mean-field benchmark: every agent responds to the same population average, preferences are homogeneous except where stated, and politics is reduced to three options. Party supply, electoral rules, turnout, strategic voting and the multidimensionality of political conflict are outside it. Heterogeneous networks change thresholds and can sustain two antagonistic communities, which a single positive feedback on the population mean does not explain (Baumann et al. 2020; Macy et al. 2021). All parameter values in Sections 6 to 8 are illustrative; none was estimated, and no experiment reported here was run. The decision-theoretic readings of κ are hypotheses about one source of the interaction among several.

The election analysis is descriptive. Its classifications are expert judgements that differ across versions of the PopuList; borderline cases include large parties, which is why we report a strict variant. ParlGov records some alliances without dividing their votes; we assigned two alliances and excluded three elections, and smaller misassignments may remain. Parliamentary vote shares in multiparty systems differ from choices between two extremes, and nothing in these data bears on mechanism.

The argument we began with contains a correct observation and an unsupported generalization. The far right has outpolled the far left in most European elections since 2010, and financial crises have been followed by far-right gains. The ratio between the two extremes is not stable, the direc-

tion of the effect of a shock depends on which group it hits and what that group remembers, and no distribution of votes can show that continuity is the mechanism or that a society has crossed a threshold. The model identifies the observations that could: how the effect of uncertainty on direction changes when continuity changes sides, how much interaction amplifies an induced preference, and whether loops in response to rising and falling uncertainty persist when the change is slowed.

The simulation code, the frozen election data and a record of the run that produced every number and figure are in the repository; `simulation/run_all.py` reproduces them and runs 32 checks of the analytical results against computation.

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