

The Foreclosure of Contestability: Algorithmic Curation and Democratic Revisability

1. rész

Abstract: Misinformation and polarising forms of platform power are commonly treated as failures within an otherwise available public sphere. This first part of a three-part inquiry proposes foreclosure as a diagnostic concept for a different condition. Democratic capacities persist in protected institutions and deliberately constructed forums, yet the prevailing architecture of the public sphere fails to reproduce them reliably or connect them to institutions capable of collective decision. An architecture forecloses a condition when its ordinary operation no longer reproduces that condition, when the arrangements securing it remain local or provisional or depend on resources that do not govern the architecture, and when no reliable mechanism carries local instances to the scale at which democratic practice binds. The third clause identifies non-composability and separates the concept from communicative degradation, colonisation, blocked circulation between periphery and centre, and second-order democratic disorder. I attribute the causal mechanism to an optimisation regime characterised by behavioural feedback, institutionally selected objectives, individuated informational environments, and rapid revision, and state five conditions for revising the diagnosis or its causal account. A genealogy of public-sphere theories and comparison with rival causal accounts then narrow the claim. Optimisation functions as an infrastructural mechanism whose effects vary with media systems and with the institutions that own and regulate them.

Keywords: Deliberative democracy, digital public sphere, algorithmic curation, foreclosure, non-composability, optimisation, platform power, collective will-formation.

Összefoglalás: A dezinformációt és a platformhatalom polarizáló formáit rendszerint egy egyébként rendelkezésre álló nyilvános szféra működési zavaraiént kezelik.

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[1] *Constitutional Court of Romania* (2024): Ruling No. 32 of 6 December 2024. <https://www.ccr.ro/wp-content/uploads/2025/02/RU-LING-No-32-2024.pdf>

Egy háromrészes vizsgálat első tanulmánya ezzel szemben a foreclosure fogalmát javasolja egy eltérő állapot diagnosztikai megragadására. A demokratikus képességek fennmaradnak védett intézményekben és tudatosan létrehozott fórumokon, miközben a nyilvános szféra uralkodó architektúrája nem képes ezeket megbízhatóan újratermelni, illetve összekapcsolni a kollektív döntéshozatalra képes intézményekkel. Egy architektúra akkor zár le egy feltételt, ha rendes működése már nem termeli újra azt, ha az ezt biztosító intézményi megoldások lokálisak vagy ideiglenesek maradnak, illetve olyan erőforrásoktól függenek, amelyek nem irányítják magát az architektúrát, továbbá ha nincs olyan megbízható mechanizmus, amely a lokális megvalósulásokat eljuttatná arra a szintre, ahol a demokratikus gyakorlat kötelező erővel bír. A harmadik feltétel a nem-komponálhatóságot (non-composability) azonosítja, és ezzel elválasztja a fogalmat a kommunikációs degradációtól, a kolonizációtól, a periféria és a centrum közötti elakadt cirkulációtól, valamint a másodrendű demokratikus zavaroktól. Az oksági mechanizmust egy olyan optimalizációs rezsimnek tulajdonítom, amelyet viselkedési visszacsatolás, intézményileg kiválasztott célok, individualizált információs környezetek és gyors felülvizsgálat jellemez, továbbá öt feltételt adok meg a diagnózis vagy oksági magyarázata felülvizsgálatára. A nyilvánosság elméleteinek genealógiája és a rivális oksági magyarázatok összevetése tovább szűkíti az állítást. Az optimalizáció infrastrukturális mechanizmusként működik, amelynek hatásai a médiarendszerektől, valamint az azokat birtokló és szabályozó intézményektől függően változnak.

Kulcsszavak: Deliberatív demokrácia, digitális nyilvános szféra, algoritmikus kuráció, foreclosure, nem-komponálhatóság, optimalizáció, platformhatalom, kollektív akaratképzés.

Introduction

Concerns about how digital technology affects democratic politics have fastened on misinformation, manipulation, and the distortion of a political will already formed and expressed through elections. The annulment of the Romanian presidential election in December 2024 is a paradigmatic case, and its reasoning shows why: the Constitutional Court of Romania [1] identified irregularities in campaign financing and coordinated inauthentic digital amplification, all of them faults in the transmission of a will taken to have formed elsewhere.

Far less has been said about how the same technology, platforms and generative tools alike, could shape the formation of that will, and at the limit prevent it from forming at all, although the contemporary public sphere runs almost entirely on algorithmic curation.

Ranking and recommendation models, trained on behavioural data and retrained as more of it accumulates, decide what reaches whom. On the dominant digital platforms these models follow objectives set by their companies and framed around their benefit. Engagement, retention and predicted relevance yield market position, and market position yields wealth and the political standing that accompanies it. All three are measurable, and technological companies pursue them with considerable precision. Whatever public purposes the same technologies might serve, if any, are specified weakly or left unspecified.

Democracy has always depended on a “meaningful public conversation” [2] and democratic politics assumes a public whose members recognise a shared set of consequences and form judgements about them [3]. Available technologies of communication and the law governing them set the scale and form of that process [4; 5]. That dependence is old and structural. Algorithmic curation, brought by new digital technologies, transfers control over those conditions. Curatorial objectives are set under a form of authority that precedes the techniques used to serve them. Authority over digital influence matters twice. First, who sets its purposes, and second, by what means can citizens contest them?

Digital infrastructures act well before anyone votes. They shape which political alternatives come into view, which events acquire salience, and how citizens encounter their opponents. Theories of deliberation, preference aggregation, and governmental accountability all presuppose that prior formation of judgement. Democratic theory reproduces the same displacement when it attends only to votes and decisions. It begins too late. It must also take in the environment in which citizens learn what warrants judgement and the channels that give dispersed judgements public consequence, aggregating into the so-called popular will, the root of legitimacy of any political regime.

Deliberative democracy offers the fullest treatment of that process. On this view, collective decisions draw part of their authority from processes in which citizens test claims, revise positions, and demand reasons from one another [6; 7; 8; 9].

[2] Harari, Y. N. (2024): *Nexus: A brief history of information networks from the Stone Age to AI*. Random House.

[3] Dewey, J. (1946): *The public and its problems*. Gateway Books. (Original work published 1927).

[4] John, R. R. (1995): *Spreading the news: The American postal system from Franklin to Morse*. Harvard University Press.

[5] Starr, P. (2004): *The creation of the media: Political origins of modern communications*. Basic Books.

[6] Cohen, J. (1989): Deliberation and democratic legitimacy. In: Hamlin, A.–Pettit, P. (Eds.): *The good polity: Normative analysis of the state*. pp. 17–34. Blackwell.

[7] Gutmann, A.–Thompson, D. (1996): *Democracy and disagreement: Why moral conflict cannot be avoided in politics, and what should be done about it*. Belknap Press of Harvard University Press.

[8] Habermas, J. (1992): Further reflections on the public sphere. In: Calhoun C. (Ed.): *Habermas and the public sphere*. pp. 421–461. MIT Press.

[9] Habermas, J. (1996): *Between facts and norms: Contributions to a discourse theory of law and democracy*. W. Rehg, Trans. MIT Press. (Original work published 1992).

[1] *Constitutional Court of Romania* (2024): Ruling No. 32 of 6 December 2024. <https://www.ccr.ro/wp-content/uploads/2025/02/RULING-No-32-2024.pdf>

[9] Habermas, J. (1996): *Between facts and norms: Contributions to a discourse theory of law and democracy*. W. Rehg, Trans. MIT Press. (Original work published 1992).

[10] Habermas, J. (1989): The structural transformation of the public sphere: An inquiry into a category of bourgeois society (T. Burger, Trans.): MIT Press. (Original work published 1962).

[11] Fraser, N. (1990): Rethinking the public sphere: A contribution to the critique of actually existing democracy. *Social Text*, 25/26, 56–80.

[12] Gallie, W. B. (1956): Essentially contested concepts. *Proceedings of the Aristotelian Society*, 56, pp. 167–198.

[13] Connolly, W. E. (1974): *The terms of political discourse*. D. C. Heath.

[14] Koselleck, R. (2004): *Futures past: On the semantics of historical time*. Columbia University Press. (Original work published 1979).

[15] Sartori, G. (1987): *The theory of democracy revisited: Part one. The contemporary debate*. Chatham House Publishers.

[16] Crouch, C. (2020): *Post-democracy after the crisis*. Polity.

[17] Brown, W. (2015): *Undoing the demos: Neoliberalism's stealth revolution*. Zone Books.

[18] Jäger, A. (2026): *Hyperpolitics: Extreme politicization without political consequences*. Verso.

Deliberation so understood is among the central features distinguishing democratic political regimes from authoritarian ones. Political judgement, as I use the term, is the activity by which citizens interpret circumstances and weigh competing claims. The public sphere is where such judgements become visible, meet scrutiny and opposition, and attach to organised demands and institutional decisions [10; 11]. Collective will-formation is that attachment. Popular will denotes the politically consequential outcome attributed to the demos and invoked to legitimise public power [9]. These stipulations settle usage. They do not settle the disputes underneath it.

The people, demos, popular sovereignty, and political will can, like democracy, be treated as contested concepts in Gallie's sense: competent users disagree, persistently and reasonably, about how the terms should be applied [12; 13]. Koselleck saw that concepts carrying this much normative prestige invite appropriation, so opposed political projects claim the same vocabulary and fill it differently [14]. Sartori placed democracy among the “honorific words” of political language. General approval tends to obscure meaning and lets regimes claim the name without preserving the thing it denotes [15]. I do not adjudicate these disputes here. The working definitions used below ask whether the communicative requirements they presuppose are still available in the digital public sphere under algorithmic curation. The object is a weakening in their ordinary reproduction.

Crouch describes democratic institutions persisting as effective power shifts towards wealthy business elites and an isolated political class [16]. Brown traces erosion of the demos and popular sovereignty as neoliberal reason recodes political life economically [17]. Jäger's *Hyperpolitics* adds a third diagnosis: extreme politicisation without consequence [18]. Together these accounts capture politics detached from collective power. They do not isolate the failure addressed here, the communicative capacities that survive locally but fail to compose at political scale.

Foreclosure is the name I use for that pattern. Democratic capacities survive in many forms, from mini-publics and participation platforms to universities, courts, and civic associations. Deliberation and democracy have not (yet) disappeared. This survival establishes possibility and leaves open whether the capacities are ordinarily reproduced. The difficulty is isolation. No dependable route runs from dispersed local achievement into collectively binding politics, whether national or international. The consequence for popular sovereignty is direct, although its severity depends on the standard by which democracy is judged. A *demos* can continue to authorise governments at elections yet hold little authority over the conditions under which alternatives become visible, judgements form, and dispersed demands acquire collective force. Without that authority, the *demos* holds political power in name only. Without real sovereignty, democracy remains just an ideal never fulfilled.

Only a thin evaluative commitment is needed here. Democratic standards disagree about how much popular control over public communication democracy demands, but they converge on a lower bound. A political order whose conditions of judgement formation are set by an authority the *demos* cannot reach, and revised without its authorisation, has lost a form of control that each standard treats as belonging to self-government. Foreclosure carries democratic weight under that lower bound whatever a fuller standard adds. Competing standards disagree over the weight of that loss and the remedies it licenses. Here, terms such as damage, failure, and deficit refer only to this lower bound. One qualification belongs with it. The lower bound states a necessary condition on democratic control over communicative infrastructure and falls short of a sufficient one, since a measure duly authorised by the *demos* can itself impair the conditions of judgement formation. Authorisation and impairment are separate questions.

Foreclosure offers a conceptual and causal criterion for reading changes across attention and affective conflict, and again across epistemic validation, surveillance, and the structure of mediation, without treating them as one pathology. The mechanisms differ. The constant is whether the requirements of political judgement and collective will-formation are ordinarily reproducible and institutionally composable. Optimisation, infrastructural power, and deliberative systems are established concepts. Taken together around non-composability, these concepts identify authority over optimisation objectives as the operative mechanism.

First, foreclosure separates non-composability from neighbouring diagnoses: the displacement of politics to other sites, the degradation of communicative quality, blocked circulation between periphery and centre, and second-order democratic disorder. Second, it yields a comparative expectation. Foreclosure should vary in intensity with media systems, party structures, intermediary strength, and control over distribution, producing uneven effects across settings exposed to similar algorithmic curation. That variation exposes the proposition to evidence.

Three parts make up this inquiry into the democratic consequences of algorithmically curated public communication. The present article develops the concept of foreclosure, specifies its causal mechanism, and distinguishes it from neighbouring diagnoses.

[19] Sartori, G. (1970): Concept misinformation in comparative politics. *American Political Science Review*, 64., (4.), pp. 1033–1053.

[20] Lacan, J. (2006): *Écrits: The first complete edition in English*. W. W. Norton. (Original work published 1966).

[21] Žižek, S. (1989): *The sublime object of ideology*. Verso.

[22] Butler, J. (1997): *The psychic life of power: Theories in subjection*. Stanford: Stanford University Press.

Part Two conducts one of the five falsification tests, asking whether European regulation has durably replaced the optimisation objective governing curation, and specifies how the other four could be tested across the communicative capacities on which political judgement and collective will-formation depend. Part Three turns from diagnosis to normative evaluation and reconstruction, compares democratic standards, and develops revisability as a requirement of democratic control over communicative infrastructures. The three parts move from diagnosis, through empirical specification and a targeted regulatory test, to normative judgement and reform.

Section 2 of this paper defines foreclosure and fixes the architecture in question. It distinguishes non-composability from colonisation and second-order disorder, specifies the threshold properties of algorithmic control, answers the artificiality objection, and states five failure conditions. Section 3 attributes causation to an optimisation regime, reconstructs the conceptual decisions leading to that attribution, and weighs rival explanations. Section 4, the last of this part, fixes the scope of the causal proposition.

Foreclosure

DEFINITION AND UNIT OF ANALYSIS

I use “foreclosure” stipulatively. The definition does not reproduce ordinary or established academic usage. Because the surrounding political vocabulary is contested, stipulation preserves precision while keeping the category empirically discriminating [19]. The term retains the ordinary sense of a structural preclusion, in which a possibility can be closed off without becoming logically impossible, and the definition supplies its theoretical content. Its psychoanalytic lineage [20; 21; 22] carries none of the analysis. That lineage addresses the exclusion of a signifier or a subject position. The object is a structural condition of the public sphere.

Let A denote the dominant architecture structuring the public sphere, and C a structural condition that a democratic public sphere requires. A forecloses C when three requirements hold together. First, the ordinary operation of A no longer reproduces C, which can then be secured only by correctives that work against A’s prevailing incentives. Second, those correctives stay local, isolated, or provisional, or they depend on resources that do not govern the architecture as a whole.

Third, A offers no reliable mechanism for dispersed local instances of C to compose at the scale at which democratic practice binds. Section 2.2 specifies composition by traceability, recognisability, and return.

Cost alone does not satisfy the second requirement. Correctives that work against prevailing incentives are almost always costly, so a cost criterion would add nothing to the first requirement. What matters is whether the corrective can become general and durable. A permanently funded public institution with system-wide reach would counter platform incentives and still leave foreclosure unestablished, because such an institution would be general in reach, durable in funding, and supported from within the governing architecture itself. Foreclosure requires that the corrective stay confined, temporary, or reliant on support that does not extend to the architecture itself.

Architecture needs a stable boundary. A designates the dominant technical and commercial configuration that selects, ranks, recommends, and distributes communicative content, together with the property and governance structures that determine its optimisation objectives and the data inputs on which that determination operates. The term does not take in every law, public institution, or civic practice that affects communication. Its environment is the surrounding legal and political order, which may reproduce, constrain, or transform it.

Dominance is a matter of degree, so the boundary needs a rough threshold as well as a definition. A comprises the channels and infrastructures that carry the greater part of politically consequential communication to the greater part of the population at issue. In contemporary platform environments, this means the major platform services together with the ownership and governance structures fixing their objectives. A public-service institution that retains distributional control over a comparable share belongs to A for that share, producing a divided architecture. Divided architectures are especially informative because they separate variation in the intensity of foreclosure from the location of authority over that objective.

Regulation has no fixed position on either side of the boundary. Its status depends on whether it enters the durable operating constitution of the architecture or functions as a corrective imposed on an unchanged optimisation regime. I do not classify a measure retrospectively from outcomes, because redrawing the boundary around whatever succeeded would make foreclosure irrefutable. A measure enters the operating constitution when it binds independently of the operator's discretion: it must be durably binding under statute, regulation, judicial order, or another enforceable public instrument, funded without periodic renegotiation if funding is required, and directed at the objective governing curation itself. Measures aimed only at surrounding conduct do not qualify. Three layers have to be kept apart, since a measure can act at any of them. It can alter the objective, it can alter the inputs on which the objective operates, or it can regulate the conduct of those who use the architecture. Only the first satisfies the third criterion. Measures at the input layer, among them requirements governing who may enter the architecture and what is recorded about them, change the material the regime works with and leave intact the authority deciding what to do with it, which is why such measures can appear constraining yet enlarge the regime.

[23] Fraser, N. (2007): Transnationalizing the public sphere: On the legitimacy and efficacy of public opinion in a post-Westphalian world. *Theory, Culture & Society*, 24., (4.), pp. 7–30.

[24] Dahl, R. A. (1999): Can international organizations be democratic? A skeptic's view. In: Shapiro, I-Hacker-Cordón, C. (Eds.): *Democracy's edges*. pp. 19–36. Cambridge University Press.

[25] Gillespie, T. (2014): The relevance of algorithms. In: T. Gillespie, P. J. Boczkowski–K. A. Foot (Eds.): *Media technologies: Essays on communication, materiality, and society* (pp. 167–194): MIT Press.

[26] Napoli, P. M. (2019): *Social media and the public interest: Media regulation in the disinformation age*. Columbia University Press.

National and European instruments of this kind provide the empirical cases. Legal form matters only insofar as it fixes the operator's obligations. A negotiated consent judgment qualifies if its terms bind without renewed assent. A voluntary code does not. A measure meeting these criteria belongs to A whether or not it achieves what it was designed to achieve, and one failing them stays external whether or not it does.

The third clause needs a scale. The scale at which democratic practice binds is the level at which decisions are collectively binding on those affected and at which authorisation and removal of decision-makers occur. That level is ordinarily national. Some regulatory obligations, however, are set and enforced at European level. The binding scale follows the location of authority over the matter in dispute. The size of the public that forms around it is analytically separate. A capacity that composes reliably at municipal level and nowhere above it satisfies the third clause, because its level of composition is not the level at which the decisions in question bind. Divided authority requires composition to be assessed separately at each level, and two arguments identify the same difficulty. Fraser applies the all-affected principle directly to the framing of publicity: what makes people members of one public is their co-imbriation in a common set of structures, so for any given problem the relevant public should match the reach of the structures whose effects are at issue, and where those structures cross the borders of states the corresponding publics must be transnational[23]. Dahl states the cost of that matching. A smaller democratic unit gives the ordinary citizen greater opportunity to participate, a smaller unit is also more likely to leave matters of importance beyond the effective capacity of its government, and enlarging the unit reverses both terms [24]. The two arguments meet at the point that concerns foreclosure. Fraser fixes the level at which a public has to form, and Dahl explains why forming at that level weakens the channel by which its judgements would bind. Composition assessed at one level settles nothing about the others.

Algorithmic curation refers to the automated selection, ranking, recommendation, and distribution of communicative content by systems that use behavioural data to adjust informational environments in pursuit of specified outcomes [25; 26]. Recommender systems are among the technical instruments that perform such curation. Optimisation adjusts system parameters in pursuit of an optimisation objective, the outcome being maximised. In production systems that objective is typically a weighted composite of predicted behaviours: engagement, retention, predicted relevance or satisfaction, expected revenue, and constraints on prohibited or borderline material.

An operator is the party holding authority to set and revise those components and weights. Layered curation across device manufacturers, application stores, advertising intermediaries, and platform services may distribute that authority across more than one operator. Such layering complicates attribution and authorisation because strategic authority may sit at different levels at once. When a proxy measure governs performance, sustained adjustment may weaken or collapse the relationship between the proxy and the underlying goal [27; 28].

At the broadest level sits the optimisation regime, which comprises ownership and incentives together with data access, expertise, and institutional authority. Drawing the analysis closed at the first two levels is what Selbst et al. [29] call the framing trap, the error of setting the boundary of the system at the technical artefact and treating its setting as external context. Kitchin [30] treats algorithms as parts of larger sociotechnical assemblages and emphasises their contingent, ontogenetic, and performative character. Seaver [31] goes further and treats algorithmic systems as enacted through the practices that produce, maintain, and alter them.

Keeping these elements apart prevents technical components, operational purposes, and political control from collapsing into a single object. Put less formally, foreclosure occurs when a democratic capacity survives in specially protected settings, yet the ordinary workings of the public sphere no longer generate or connect it at scale. The definition separates possibility from reproduction, and reproduction from composition. A deliberative forum may work well without showing that its surrounding environment normally produces its conditions. A networked movement may mobilise millions without establishing durable channels to collectively binding institutions [32]. The issue is whether local, dispersed capacities become mutually consequential within a continuing public process.

[27] Strathern, M. (1997): “Improving ratings”: Audit in the British University system. *European Review*, 5., (3.), pp. 305–321.

[28] Manheim, D.–Garabrant, S. (2019): *Categorizing variants of Goodhart’s law*.

[29] Selbst, A. D.–Boyd, D.–Friedler, S. A.–Venkatasubramanian, S.–Vertesi, J. (2019): Fairness and abstraction in sociotechnical systems. In: *Proceedings of the Conference on Fairness, Accountability, and Transparency*. pp. 59–68. Association for Computing Machinery.

[30] Kitchin, R. (2017): Thinking critically about and researching algorithms. *Information, Communication & Society*, 20., (1.), pp. 14–29.

[31] Seaver, N. (2017): Algorithms as culture: Some tactics for the ethnography of algorithmic systems. *Big Data & Society*, 4., (2.), pp. 1–12.

[32] Tufekci, Z. (2017): *Twitter and tear gas: The power and fragility of networked protest*. Yale University Press.

[33] Warner, M.
(2002): *Publics and counterpublics*. Zone Books.

COMPOSITION AND NON-COMPOSABILITY

Composition is related to aggregation, though it does not reduce to the counting of preferences. Warner [33] clarifies the communicative premise involved. A public emerges through the reflexive circulation of discourse across linked interventions over time, and no single text, voice, genre, or medium can produce it alone [33]. Aggregation can occur at the moment of voting even without a durable relation connecting the settings in which judgements were formed. Composition turns on the prior and continuing articulation of publics, associations, and decision-making institutions, and it requires three relations to hold:

1. Local claims remain traceable as they move across scales.
2. Participants can recognise how those claims were reformulated in the course of that movement.
3. Institutional responses return to the public sphere in a form open to renewed judgement.

The three relations trace a sequence that foreclosure interrupts. A citizen's political judgement forms amid material she did not select: what circulates, in what framing, with what apparent support behind it. Dependence of this kind is ordinary. No political idea is formed in isolation, and treating solitary formation as the norm would render every mediated public sphere defective. The terms on which material circulates are terms of formation, and those same terms act back on the citizen who forms. A judgement, once formed, then moves. It is restated, condensed, absorbed into claims made by others, attributed, and contested along the way. It does not survive the journey intact. Transformation is ordinary too, and recognisability asks whether participants can follow what has happened to a claim, a weaker demand than fidelity. To bear on a decision, the judgement must be assembled with others into something an institution can act on. Claims must stay traceable across the scales they cross. The response must then return to the public sphere open to renewed judgement. That return makes the sequence iterative.

The interruption occurs at the first and third of these moments. An optimisation objective governs which material enters formation, and individuation removes the common object against which dispersed judgements could be assembled. The route from what citizens think to what binds them is therefore not reliably available. Whether their ideas are manufactured or unfree is a separate question about the content of thought.

Composition stands closer to the systemic literature on deliberative democracy than to aggregative models. No single forum can carry sufficient deliberative capacity for the system as a whole [34]. Deliberative quality depends on relations among differentiated sites, and decoupling occurs when reasons arising in one part fail to penetrate the others [34]. Transmission from informal publics to empowered institutions is a distinct achievement with its own requirements [35; 36]. Composition concerns the same systemic relation and asks whether an architecture supplies the required couplings. Standing channels must sustain traceability, recognisability, and return. Improvisation for isolated events does not qualify. Systematic failure in any one of the three leaves local achievement local whatever its quality.

Two things have to be true for local achievements to compose, and the three relations specify the second. The first is Dewey's: those affected by the indirect consequences of a shared transaction come to recognise themselves as so affected and thereby constitute a public capable of acting on its own conditions [3]. Recognition of this kind is what makes traceability matter to anyone, since a claim travelling intact through a population that does not take itself to be jointly affected arrives before no one for whom it is a claim. The second is linkage: traceability, recognisability, and return connect sites of deliberation so that their conclusions bear on binding decisions and the capacity belongs to the system, not to isolated sites [34; 37].

Composition can fail at either point. Non-composability, in the narrower sense, is the second. A public exists, but reliable relations of traceability, recognisability, and return do not carry its dispersed judgments into binding decision. A well-run deliberative forum whose participants never come to see themselves as a public fails both. One whose conclusions arrive at no decision point meets the first alone.

In nineteenth-century America, federated membership associations operated within an interlocking civic and communicative architecture. Postal subsidies reduced the cost of circulating newspapers and association publications. Association-based print connected local branches with state and national bodies and enabled geographically dispersed members to coordinate their activities [38; 39].

[3] Dewey, J. (1946): *The public and its problems*. Gateway Books. (Original work published 1927).

[34] Mansbridge, J.–Bohman, J.–Chambers, S.–Christiano, T.–Fung, A.–Parkinson, J.–Thompson, D. F.–Warren, M. E. (2012): A systemic approach to deliberative democracy. In: Parkinson, J.–Mansbridge, J. (Eds.): *Deliberative systems: Deliberative democracy at the large scale*. pp. 1–26. Cambridge: Cambridge University Press.

[35] Dryzek, J. S. (2010): *Foundations and frontiers of deliberative governance*. Oxford: Oxford University Press.

[36] Papadopoulos, Y. (2012): On the embeddedness of deliberative systems: Why elitist innovations matter more. In: Parkinson, J.–Mansbridge, J. (Eds.): *Deliberative systems: Deliberative democracy at the large scale*. pp. 125–150. Cambridge: Cambridge University Press.

[37] Dryzek, J. S. (2009): Democratization as deliberative capacity building. *Comparative Political Studies*, 42., (11.), pp. 1379–1402.

[38] Skocpol, T., Ganz, M.–Munson, Z. (2000): A nation of organizers: The institutional origins of civic voluntarism in the United States. *American Political Science Review*, 94., (3.), pp. 527–546.

[39] Tocqueville, A. de. (2000): *Democracy in America*. In: Mansfield, H. C.–Winthrop, D. (Eds. & Trans.). Chicago: University of Chicago Press. (Original work published 1840).

[38] Skocpol, T., Ganz, M.–Munson, Z. (2000): A nation of organizers: The institutional origins of civic voluntarism in the United States. *American Political Science Review*, 94., (3.), pp. 527–546.

[39] Sunstein, C. R. (2017): *#Republic: Divided democracy in the age of social media*. Princeton University Press.

[40] Habermas, J. (2022): *Ein neuer Strukturwandel der Öffentlichkeit und die deliberative Politik*. Suhrkamp. C. Cronin, Trans., Polity.

[41] Han, B.-C. (2022): *Infocracy: Digitization and the crisis of democracy*. Polity Press. (Original work published 2021).

Applying the three relations, subsidy kept a local claim traceable as it travelled, and the association press allowed members to follow its reformulation at state and national level. Return was carried by the federated tier structure, in which delegates elected at local level sat in state and national conventions that took the decisions, so a decision returned along the same structure that had carried the question upward [38]. The case matters because the three relations describe a historical form of coordination, which an ideal specification alone would not establish. The empirical issue is whether contemporary infrastructures reproduce functional equivalents.

Foreclosure and degradation concern different levels of damage. Degradation describes declining communicative quality. The underlying capacity remains ordinarily available, so stronger norms, more responsible conduct, improved mediation, or better platform design may correct the decline. Influential analyses of the digital public sphere vary in severity on this point. Sunstein treats fragmentation and polarisation as problems susceptible to incremental correction. Habermas combines proposals for regulatory and professional repair with a stronger concern that platformisation may transform the communicative infrastructure of the public sphere itself [39; 40]. Han's infocracy [41] offers a more encompassing diagnosis, treating algorithmically mediated communication as part of a transition from democratic discourse towards digital post-democracy. Foreclosure makes the narrower claim that democratic capacities may survive locally while the prevailing architecture ceases reliably to reproduce and compose them at the scale of binding political decision. The relevant failure concerns the structures that reproduce the capacity. Citizens can still deliberate and verify, reflect and contest. No standing infrastructure lets them do so as a matter of course, because each achievement now requires deliberate construction by particular actors bearing the costs themselves.

Reconstruction follows from this diagnosis. Norms, moderation, and appeals to conduct operate on behaviour within structures they take as given, so they cannot restore a reproductive capacity those structures no longer supply. Reconstruction requires durable rules that make deliberation recurrent by statute and connect it to decision. The Ostbelgien model is one such mechanism. Since 2019 the German-speaking Community of Belgium has maintained a permanent Citizens' Council selected by lot, which sets the agenda

for rotating Citizens' Assemblies whose recommendations parliament is obliged to receive and answer publicly [42]. The design addresses both conditions of composition. Sortition renews the recognition of shared affectedness across the population over time, and the parliamentary obligation creates the linkage that ad hoc consultation lacks.

Foreclosure presupposes a comparative baseline, that some earlier configuration under which the capacity was more regularly reproduced and more widely connected. Absent such a record, foreclosure is the wrong description and persistent democratic deficit the right one. Fraser [11] gives the strongest reason to take that possibility seriously, since the bourgeois public sphere secured its apparent coherence through exclusions that were constitutive and not incidental.

FORECLOSURE, COLONISATION, AND SECOND-ORDER DISORDER

Traceability, recognisability, and return have been approached from several directions in democratic theory. Two approaches come close enough to require differentiation: Habermas's colonisation thesis together with his model of communicative circulation, and Zurn's second-order democratic disorders. Both capture part of the same phenomenon. Neither isolates non-composability as such.

Colonisation is the closest established analogue. In "The Theory of Communicative Action", colonisation occurs when media of system integration enter domains whose reproduction requires communicative coordination, subordinating processes of mutual understanding to mechanisms organised through money and administrative power [43]. The pathologies that follow, loss of meaning, anomie, withdrawal of legitimation, arise within a lifeworld that persists [44]. Foreclosure shares the concern that capacities reproduced through communication can be weakened by institutions governed on a different logic. Without a sharper distinction, the term would add little to the Habermasian model.

The third clause supplies that distinction. Colonisation asks what happens to communicative coordination when steering media enter domains reproduced through communication.

[11] Fraser, N. (1990): Rethinking the public sphere: A contribution to the critique of actually existing democracy. *Social Text*, 25/26, 56–80.

[42] Niessen, C.–Reuchamps, M. (2019): Designing a permanent deliberative citizens' assembly: The Ostbelgien Modell in Belgium. *Centre for Deliberative Democracy & Global Governance working paper series* 6. <https://hdl.handle.net/2078.5/168636>

[43] Habermas, J. (1987b): The theory of communicative action: Vol. 2. Lifeworld and system: A critique of functionalist reason (T. McCarthy, Trans.): Beacon Press. (Original work published 1981).

[44] Habermas, J. (1987a): *The philosophical discourse of modernity: Twelve lectures*. MIT Press. (Original work published 1985).

[9] Habermas, J. (1996): *Between facts and norms: Contributions to a discourse theory of law and democracy*. W. Rehg, Trans. MIT Press. (Original work published 1992).

[11] Fraser, N. (1990): Rethinking the public sphere: A contribution to the critique of actually existing democracy. *Social Text*, 25/26, 56–80.

[45] Forst, R. (2015): Noumenal power. *Journal of Political Philosophy*, 23., (2.), pp. 111–127.

[46] Landemore, H. (2021): Open democracy and digital technologies. In: L. Bernholz, H. Landemore–R. Reich (Eds.): *Digital technology and democratic theory*. pp. 62–89. University of Chicago Press.

Foreclosure asks what happens to communicative achievements that survive intact and separately. The scope narrows accordingly. Foreclosure applies only to the failure to connect capacities that survive locally so that they can become mutually consequential at the scale of binding decision. Formative power over judgement formation is analytically separate and is better characterised by Forst’s concept of noumenal power [45].

A more demanding objection comes from Habermas’s own model of composition. The model of communicative circulation in “Between Facts and Norms” traces how opinion formed in the informal periphery passes through institutionalised procedures to become communicative power, with peripheral publics “besieging the parliamentary complex” without occupying it [9]. That model theorises the same connective relation and might suggest that the composition problem was never absent from the Habermasian framework.

The two models take different things for granted. The circulation model asks whether opinion already formed in the periphery arrives at institutions capable of converting it into binding decisions, and it attributes blockage to the passages between periphery and centre. Foreclosure begins one stage earlier. It asks whether the periphery generates anything capable of reaching those passages at all, and whether dispersed judgements formed across differentiated sites acquire traceability, recognisability, and return. Blocked circulation and failed composition are distinct failures requiring distinct remedies. Blocked circulation calls for reform of the passages. Failed composition lies in the architecture forming relations among peripheral publics, and downstream reform cannot correct it.

A methodological objection applies to both models at once. Landemore argues that the two-track account idealizes the sociological and technological conditions of the eighteenth-century public sphere. Her own model derives its institutional principles from an abstract conception of democracy as popular rule in which all are equally empowered [46]. This criterion retains the circulation model’s object but drops its historical baseline. It asks what a given architecture reproduces as a matter of routine, for which populations, and how the resulting achievements are connected. No earlier public sphere has to satisfy the criterion. Comparative historical evidence must determine whether those functions were previously reproduced, and Fraser’s [11] objection to the bourgeois baseline rules out a nostalgic reading.

Zurn's framework for understanding social pathologies as second-order disorders supplies the register for this problem. He directs attention to socially caused disconnects between first-order contents and their second-order reflexive comprehension [47]. Foreclosure extends that problem to the possibility that a political community may perceive a pathology in part yet remain unable to mobilise collectively against it. Foreclosure specifies the architecture producing that problem. Citizens may recognise fragments of platform power, journalists may document them, and parliaments or courts may articulate norms. The disorder persists if these perceptions and local competences never enter a shared process capable of defining the problem and imposing correction. A second-order vocabulary identifies a class of disorder but leaves open which architectures produce it and how one would know. Foreclosure adds a formal test of ordinary reproduction, the generality and durability of correctives, and scale. It also directs attention to the architecture connecting sites of perception and correction. If those clauses do not permit comparative inquiry into political composability, the more general vocabulary is preferable.

Habermas analyses the intrusion of steering media into lifeworld domains and the disturbances that follow in symbolic reproduction [43]. Foreclosure addresses a public sphere in which communicative practice and systemically organised curation are intertwined within a single technical environment. Users speak and interpret, associate and contest, and those same interactions provide behavioural data to an adaptive commercial architecture. Communicative capacity stays inside that architecture and is not replaced by it. It becomes an input to a mechanism that reshapes its own subsequent exercise. Non-composability captures this coexistence more precisely than a vocabulary of displacement.

A final difference is temporal. Colonisation can be diagnosed when systemic mechanisms expand into a domain. Non-composability may persist long after institutions of criticism and correction have formed. A democracy can possess audit expertise and legal doctrine, civic mobilisation and deliberative experiments, yet lack the links that turn them into a continuing capacity of self-government. The failure therefore lies in the architecture of democratic learning as much as in the initial subordination of communicative action. Composition must persist across historical time as well as across institutions.

[43] Habermas, J. (1987b): The theory of communicative action: Vol. 2. Lifeworld and system: A critique of functionalist reason (T. McCarthy, Trans.): Beacon Press. (Original work published 1981).

[47] Zurn, C. F. (2011): Social pathologies as second-order disorders. In: D. Petherbridge (Ed.): Axel Honneth: *Critical essays*. pp. 345–370. Brill.

[25] Gillespie, T. (2014): The relevance of algorithms. In: T. Gillespie, P. J. Boczkowski–K. A. Foot (Eds.): *Media technologies: Essays on communication, materiality, and society* (pp. 167–194): MIT Press.

[48] Yeung, K. (2017): “Hyper-nudge”: Big data as a mode of regulation by design. *Information, Communication & Society*, 20.,(1.), pp. 118–136.

[49] Mansoury, M.–Abdollahpour, H.–Pechenizkiy, M.–Mobasher, B.–Burke–R. (2020): *Feedback loop and bias amplification in recommender systems*. In: *Proceedings of the 29th ACM International Conference on Information & Knowledge Management*. pp. 2145–2148. Association for Computing Machinery.

[50] Bucher, T. (2012): Want to be on the top? Algorithmic power and the threat of invisibility on Facebook. *New Media & Society*, 14., (7.), pp. 1164–1180.

THRESHOLD PROPERTIES OF ALGORITHMIC CONTROL

Four properties explain how foreclosure can arise under algorithmic curation. Yeung’s hypernudge model shows how selection optimisation [48], recursive feedback and personalised informational choice environments, and one-to-many operation can work together within a design-based mode of control. The four properties below disaggregate that conjunction and connect each element to the literature that supports it.

Recursive behavioural feedback, or loop closure, comes first. Printed press and broadcasting registered audience response in slow and comparatively coarse signals such as circulation figures and audience measurement, or electoral results arriving weeks, months or years apart. Recommender digital systems use a tighter feedback loop. Recommendations shape what users encounter, and the resulting interactions update the profiles from which later recommendations are generated, producing a mutual dynamic evolution between users and the system [49]. Yeung characterises the same structure as a recursive feedback loop capable of reconfiguring an individual’s choice environment in real time [48]. The informational environment adapts to effects it helped produce and begins to shape political judgement as it develops.

An optimisation objective gives the loop its direction. Earlier media institutions pursued circulation and advertising revenue among other commercial ends, but they could not operationalise those ends by continuous adjustment at the level of individual interactions. Platform systems translate behavioural outcomes into actionable criteria. Gillespie shows that algorithmic relevance rests on evaluative judgements rather than an independent metric [25]. Bucher’s analysis of EdgeRank shows how assumptions about interaction and newsworthiness determine visibility [50]. The weighting of interactions can also reflect commercial incentives. Engagement and retention can consequently guide experimentation, and predicted attention becomes a criterion of distribution. Public visibility becomes a strategic variable within an adaptive process governed by identifiable operators.

Individuation removes the common object. Segmentation has a long history, since newspapers ran editions, broadcasters served regions, and periodicals addressed occupations and classes. What changes now is its granularity, variability, and, in the same time, opacity.

Yeung analyses informational choice environments that are continuously reconfigured and highly personalised [48]. Cheney-Lippold shows how algorithmically inferred identities guide targeted content and remain dynamically revisable, with new information capable of changing the meaning of the category itself [51]. Han's discussion of psychometrically optimised dark advertisements gives the political version of the same problem. Distinct groups receive different and sometimes contradictory messages that stay invisible to the public, weakening society's capacity to observe its own communication [41]. These processes produce distributions no participant can fully reconstruct. Editions could be counted, collected, and compared. The set of environments in circulation at a given moment cannot. Broadcasting constituted a comparatively common object despite its exclusions and inequalities, since different members of the public could in principle inspect the same programme or edition. Citizens may now know what appeared before them yet be unable to reconstruct what appeared before others. Collective scrutiny grows difficult once its object is distributed differently across the public.

Individuation creates a problem of comparability even when every citizen encounters a wide range of political positions. The difficulty lies in the absence of a vantage point from which distributions can be assessed against one another. Individuation also bears on political subject formation. Citizens encounter the political world within configurations shaped by prior conduct. Inferred categories and ranking rules then influence the content and visibility shaping subsequent conduct [50; 51]. Bail's social media prism traces a related process: users present versions of themselves, observe the reactions they receive, and revise their identities as the platform refracts both self-understanding and perceptions of political opponents [52]. This recursion matters because the object of analysis is formation. Remedies applied after an allocation is made arrive too late. What a citizen takes to be a live political question, a plausible ally, or a position worth holding is formed in the medium whose terms are at issue, so an architecture shaping those materials also shapes the judgements composed from them. The evidence does not establish that the political subject is constituted by the architecture strongly enough to render judgement unauthored by the subject. That stronger proposition would require additional evidence and would change the standpoint problem.

[41] Han, B.-C. (2022): *Infocracy: Digitization and the crisis of democracy*. Polity Press. (Original work published 2021).

[48] Yeung, K. (2017): "Hyper-nudge": Big data as a mode of regulation by design. *Information, Communication & Society*, 20.,(1.), pp. 118–136.

[50] Bucher, T. (2012): Want to be on the top? Algorithmic power and the threat of invisibility on Facebook. *New Media & Society*, 14., (7.), pp. 1164–1180.

[51] Cheney-Lippold, J. (2011): A new algorithmic identity: Soft biopolitics and the modulation of control. *Theory, Culture & Society*, 28., (6.), pp. 164–181.

[52] Bail, C. A. (2021): *Breaking the social media prism: How to make our platforms less polarizing*. Princeton: Princeton University Press.

[30] Kitchin, R. (2017): Thinking critically about and researching algorithms. *Information, Communication & Society*, 20., (1.), pp. 14–29.

[31] Seaver, N. (2017): Algorithms as culture: Some tactics for the ethnography of algorithmic systems. *Big Data & Society*, 4., (2.), pp. 1–12.

[53] Farrell, H.–Schneier, B. (2018): Common-knowledge attacks on democracy. *Berkman Klein Center for Internet & Society*. <https://cyber.harvard.edu/story/2018-10/common-knowledge-attacks-democracy>

[54] Cohen, J. E. (2013): What privacy is for. *Harvard Law Review*, 126., (7.), pp. 1904–1933.

[55] Richards, N. M. (2015): *Intellectual privacy: Rethinking civil liberties in the digital age*. Oxford University Press.

The weaker position is available from within the condition it describes. The stronger proposition is left open.

Rapid revision completes the threshold. Public institutions need time to identify an intervention, characterise its effects, and formulate a response, and journalism and political actors work under similar constraints. Algorithmic systems are ontogenetic and mutable, often running multiple versions, being repeatedly patched, and changing as they observe and learn [30]. Seaver likewise treats algorithms as collective products composed of human practices and sustained through ongoing maintenance [31]. Platform operators can therefore revise ranking parameters, data inputs, and experimental configurations before public procedures complete a cycle. Democratic control struggles to hold an object still long enough for collective assessment because the object keeps being revised.

Together, these four properties explain how algorithmic curation can produce foreclosure. They do not replace the formal definition, and the two can fail independently. Recursive behavioural feedback, an explicit optimisation objective, individuation, and rapid revision explain how an architecture capable of ordinary communication can cease to reproduce democratic capacities at scale. If any property proves absent or politically insignificant, the causal attribution needs revision. The definition of foreclosure still stands.

Three communicative dimensions expose this causal sequence to empirical test. Sustained attention is the capacity to hold a political object in view long enough to interpret it. Shared epistemic validation is the availability of publicly recognised objects and procedures that permit claims to be checked, and it relates to the common political knowledge supporting decentralised democratic coordination by providing a rough shared understanding of how public decision-making works and who its actors are [53]. Protected reflection is the capacity to inquire, hesitate, and hold provisional beliefs without expecting observation to alter what is examined. Cohen treats such breathing room as necessary for critical subjectivity and democratic citizenship [54]. Richards defines intellectual privacy as protection for thinking, reading, and confidential exchange before ideas are ready for public expression [55]. Warner’s counterpublics depend on a related condition at the level of address, since a discourse can circulate among strangers without requiring identified persons behind it.

Requirements conditioning access on verified identity act on both, which is why they belong under this dimension. All three are communicative conditions of political judgement, and an architecture either reproduces them in ordinary operation or fails to. Composition concerns what becomes of judgements once formed.

Adversarial recognition does different work. It is the capacity to encounter political opponents as legitimate adversaries whose defeat is sought through political means. The formulation is Mouffe's: democratic conflict converts the enemy to be destroyed into an adversary whose right to defend a competing position remains legitimate [56], thereby developing and displacing Schmitt's conception of the public enemy as a collective opponent whose relation entails the real possibility of combat [57]. Its carrier lies in organisations outside the communicative architecture under examination, so it cannot serve as a further test of foreclosure. It bears on the first condition of composition. A population whose members take one another to be removable from public life cannot recognise itself as jointly affected by a shared transaction, whatever the architecture transmits. Adversarial recognition therefore conditions the Deweyan requirement from outside and functions as a political precondition of the other three dimensions.

THE ARTIFICIALITY OBJECTION

Foreclosure contrasts capacities reproduced in ordinary operation with capacities requiring deliberate construction. Earlier printed media were themselves constructed institutions. Postal law and subsidy shaped the circulation of newspapers. Postal law admitted newspapers to the mails on unusually favourable terms and thereby subsidised their circulation[4]. Spectrum allocation and licensing, together with the public-interest standard, structured broadcasting [5]. More generally, the constitutional state legally institutionalised the public sphere through rights protecting public communication and political participation [10]. Democratic capacities have always required law and administration, public expenditure and collective practice. A public sphere that once sustained itself unaided is therefore the wrong baseline.

[4] John, R. R. (1995): *Spreading the news: The American postal system from Franklin to Morse*. Harvard University Press.

[5] Starr, P. (2004): *The creation of the media: Political origins of modern communications*. Basic Books.

[10] Habermas, J. (1989): The structural transformation of the public sphere: An inquiry into a category of bourgeois society (T. Burger, Trans.): MIT Press. (Original work published 1962).

[56] Mouffe, C. (2013): *Agonistics: Thinking the world politically*. Verso.

[57] Schmitt, C. (2007): *The concept of the political*. University of Chicago Press. (Original work published 1932)

[58] Curran, J.–Seaton, J. (2003): *Power without responsibility: The press, broadcasting, and new media in Britain*. Routledge.

[59] Fishkin, J. S. (2018): *Democracy when the people are thinking: Revitalizing our politics through public deliberation*. Oxford: Oxford University Press.

The boundary separates construction incorporated into routine operation from correction left external to the architecture's prevailing purposes. Public broadcasting depended on deliberate state action, yet legal obligations, universal-service commitments, and separation between political accountability and programme decisions made broad distribution and public-affairs provision part of ordinary operation [58]. Citizens encountered common informational objects because institutions reproduced them routinely. A contemporary mini-public may likewise be deliberately constructed through random sampling [59], balanced briefing materials, moderated small-group discussion, and access to competing experts. Its democratic capacities are exceptional so long as the architecture of mass circulation leaves its purposes unadopted and its outputs unconnected to the broader public sphere.

Historical evidence must establish that line. Postal systems lowered circulation costs, licensing converted scarcity into public obligations, and subsidy regimes supported journalism that markets alone would not have sustained. These interventions were often paternalistic and politically contested. Their democratic significance lay in the functions they regularised across public communication. Thus, comparison with digital platforms turns on how those functions are embedded now, how far they extend, and whether affected publics can hold the responsible institutions to account.

Foreclosure marks a threshold in institutional reproduction. A capacity crosses it when the structures sustaining it stay local or provisional or depend on resources that do not govern the architecture as a whole, and when no reliable compositional link carries local instances to the scale at which democratic practice binds. Deliberate construction is by itself no evidence of foreclosure. What matters is whether the construction belongs to the durable constitution of public communication or has to work continuously against an architecture organised around another purpose.

Historical support for the threshold is uneven across the dimensions. Public-service institutions demonstrably reproduced common informational objects in ordinary operation, and the nineteenth-century federated associations discussed above provide a comparable case for composition. Sustained attention and protected reflection have no equivalent historical baseline in the evidence considered. For those two dimensions, structural testing replaces historical comparison: an optimisation regime subjects each capacity

to pressure without establishing that an earlier architecture reproduced it. Readers who reject the historical premise can treat the first clause of the definition for those dimensions as a proposition about what the present architecture reproduces. The falsification conditions test that proposition directly.

The result is less pessimistic than it may first appear. Public law once built democratic purposes into earlier communication infrastructures, and analogous transformations are still possible under digital conditions. The obstacle is more specific than regulatory delay. Transparency and conduct rules can leave the governing objective intact. Voluntary interoperability is vulnerable to withdrawal or repricing by the infrastructure owner, as the 2023 restrictions that Twitter/X and Reddit imposed on third-party application programming interfaces illustrate [60]. Deliberative innovations stay project-based unless their mandates and links to public authority become durable. A fourth pattern has become common in national legislation and works differently. Measures addressed to who may speak, and to what must be known about them, respond to visible harms in the material circulating and leave untouched the objective selecting what circulates. Their political appeal lies in that asymmetry, since they are enforceable against users at a cost the operator does not bear. Each route keeps democratic corrections peripheral to the wider architecture even when they succeed locally. Because those objectives and property relations are historically instituted, political action can still transform them.

STANDPOINT AND FALSIFIABILITY

Foreclosure faces the objection Habermas pressed against Horkheimer and Adorno, and later against Foucault. A theory that leaves no undamaged position available refutes itself performatively, since the critic must occupy the very condition being described ([44], lectures V, IX–X). Citizens plainly retain the ability to recognise algorithmic power. Denying that ability would be empirically implausible and would exempt the critic from a condition imposed on everyone else. The failure is collective reflexivity. Individual understanding survives it.

The difficulty lies between individual perception and collective action and correction. Individuals grasp particular features of algorithmic power, researchers audit systems, journalists expose practices, and regulators document and punish harms.

[44] Habermas, J. (1987a): *The philosophical discourse of modernity: Twelve lectures*. MIT Press. (Original work published 1985).

[60] Ortutay, B. (2023): Twitter's plan to charge for crucial tool prompts outcry. *AP News*. <https://apnews.com/article/twitter-api->

[46] Landemore, H. (2021): Open democracy and digital technologies. In: L. Bernholz, H. Landemore–R. Reich (Eds.): *Digital technology and democratic theory*. pp. 62–89. University of Chicago Press.

[61] Honneth, A. (2014): *Freedom's right: The social foundations of democratic life*. Polity Press. (Original work published 2011).

[62] Jaeggi, R. (2018): *Critique of forms of life*. Belknap Press of Harvard University Press.

[63] Small, C. T.–Björkegren, M.–Erkkilä, T.–Shaw, L.–Megill, C. (2021): “Polis: Scaling Deliberation by Mapping High Dimensional Opinion Spaces.” *Recerca. Revista de Pensament i Anàlisi*, 26., (2.), pp. 1–26.

The uncertainty is whether these perceptions can be organised into shared problem definitions and carried into institutions able to alter the architecture. The gap between insight and effective correction gives the standpoint problem its political form. It is also the gap described by traceability, recognisability, and return.

An immanent standpoint makes critique possible without exempting it from correction. Honneth’s normative reconstruction is anchored in the historical development of institutions and requires empirical inquiry into how socially acknowledged values are realised and how far their institutional embodiments fall short [61]. Jaeggi likewise treats immanent criticism as interpretive rather than self-validating, its analysis neither simply discovers nor freely invents social contradictions, and its validity depends on practical problems, resistant experience, and rational learning processes [62]. I specify developments that would count against foreclosure. A stipulation is not itself open to refutation. The empirical question is whether the present architecture satisfies the three clauses of the definition and whether an optimisation regime explains that pattern. Five failure conditions follow. The first, third, and fourth bear on the definition. The fifth tests causal attribution. The second is different. Under the boundary test above, durable replacement of the governing objective changes A, so it tests whether the mechanism survives institutional transformation, not whether its prior attribution was false.

The first tests scaling. Foreclosure cannot survive evidence that deliberately designed digital infrastructures achieve broad, ordinary, and durable adoption and preserve the properties that make them democratic. Such development would demonstrate that dispersed local capacities can compose into a functioning public sphere. Taiwanese participation infrastructures, Polis-style consensus mapping, and digitally connected mini-publics are the candidate cases [63; 46].

The second targets the governing objective. If regulation durably replaces engagement-oriented curation with democratically authorised criteria that survive commercial and political pressure, the replacement enters A and the previous regime no longer governs curation. This defeats persistence after intervention, not the earlier attribution.

The third tests endogenous correction. Explanatory force is lost if engagement optimisation proves self-limiting at scale and users migrate, without public subsidy or regulatory intervention, towards environments that sustain attention, reduce affective activation, and support common procedures of validation. Corrective tendencies absent from the analysis would then be present in the architecture.

The opposite expectation follows from the alignment of authority and returns: the objective governing curation generates returns for those who hold authority over it. Endogenous correction must overcome that standing interest.

The fourth tests collective learning. The second-order pathology thesis fails if public understanding of platform operation develops through ordinary argument and generates shared problem definitions capable of binding correction. Convergence in public assessments of platform governance, explained by collective learning and not by partisan or elite cues, would be especially telling. No study known to me tests this directly, and the confounds are severe because partisan and elite cues move together with the assessments at issue. No design currently separates them. This states a research programme more than an available test and carries correspondingly less weight than the other four until such a design exists.

The fifth tests comparative variation. The attribution fails if platforms retaining the same engagement-oriented objective reliably reproduce sustained attention, shared epistemic validation, protected reflection, and composition across publics under some ownership and governance structures. Such cases would show the objective to be compatible with ordinary reproduction of the three dimensions under a favourable governance setting and would identify ownership and governance as the operative cause. The opposite expectation is more specific. The objective stays operative wherever it governs distribution. Media systems, party structures, and control over distribution modulate the intensity of its effects.

The five conditions differ in how quickly evidence can be brought against them. The second and fifth are open to assessment within a few years, since regulatory changes to those objectives and comparative variation across existing platform environments can be observed as they occur. The first, third, and fourth need longer horizons because adoption of alternative infrastructures, endogenous correction, and shared public understanding develop slowly. Their absence over a short period establishes little. This asymmetry limits what can be concluded now without making the criteria empty. Each specifies an observation that would require revising either the diagnosis or its causal account. The slower tests are also the ones on which work should start first, since a decade of adoption data or a trend in public understanding can only be read from a series already running.

Experimental evidence bears on these tests only indirectly, and section 3.2 sets out why. Those designs measure short-run attitude change under a modified feed and cannot register whether an architecture reproduces communicative conditions across a media system over years.

Together, the five conditions mark points at which either the diagnosis or its causal account requires revision. Longitudinal evidence defeats foreclosure if algorithmically optimised communication ordinarily reproduces sustained attention, shared epistemic validation, protected reflection, and composition across publics. Comparative evidence under a fixed objective tests attribution. Replacement of that objective tests whether the mechanism survives institutional change.

[8] Habermas, J. (1992): Further reflections on the public sphere. In: Calhoun C. (Ed.): *Habermas and the public sphere*. pp. 421–461. MIT Press.

[10] Habermas, J. (1989): The structural transformation of the public sphere: An inquiry into a category of bourgeois society (T. Burger, Trans.): MIT Press. (Original work published 1962).

[11] Fraser, N. (1990): Rethinking the public sphere: A contribution to the critique of actually existing democracy. *Social Text*, 25/26, 56–80.

[33] Warner, M. (2002): *Publics and counterpublics*. Zone Books.

[58] Curran, J.–Seaton, J. (2003): *Power without responsibility: The press, broadcasting, and new media in Britain*. Routledge.

[64] Anderson, B. (2006): *Imagined communities: Reflections on the origin and spread of nationalism*. Verso. (Original work published 1983).

From Re-feudalisation to Optimisation

A GENEALOGY OF CONCEPTUAL DECISIONS

With foreclosure defined and its conditions of refutation specified, causation remains unresolved. Digital communication as such is the obvious rival explanation. I test the attribution to an optimisation regime in two steps: a genealogy showing why existing theories of the public sphere stop short of the operative cause, followed by comparison with competing causal explanations.

The first one fixes the historical baseline. Habermas's history of the bourgeois public sphere shows how rational-critical publicity can revert to staged display, in which organised power presents itself before a public that acclaims and does not deliberate, a reversion he characterises as a refeudalisation of publicity [10]. He later qualified that thesis substantially, conceding that he had underestimated both audience resistance and the critical potential of mass-mediated communication [8]. Fraser and Warner press a prior objection aimed at the baseline itself. Bourgeois publicity was constituted through exclusions (Fraser, 1990, p. 62). Counter-publics developed as spaces of circulation whose participants contested dominant assumptions, protocols, and modes of address [11; 33]. The democratic loss at issue must be specified without appeal to a once unified and inclusive arena, since no such space existed to be lost. The viable comparison asks which communicative capacities a given configuration sustained routinely, for which populations, and whether the resulting achievements could bear on collective decision.

Applying that criterion, the sequence starts like this: eighteenth-century coffeehouses, salons, and the periodical press supported rational-critical exchange among a narrow propertied stratum. Novels and newspapers also furnished a technical form that allowed anonymous co-readers to imagine themselves moving together in calendrical time [64]. Repeated and near-simultaneous newspaper consumption made that relation socially palpable. Within Britain, for example, nineteenth-century industrialisation widened circulation but also raised capital requirements and made advertising increasingly decisive [58]. Curran and Seaton show that this expansion coincided with the eclipse or absorption of much of the radical press.

Radical papers had reached mass working-class publics and maintained reciprocal ties to political movements, yet undercapitalisation and advertising discrimination pushed them towards marginality, official sponsorship, or commercial adaptation [58]. The commercial turn redistributed reproductive capacity across the press. Twentieth-century broadcasting produced a shared temporal structure of address that made a national audience available to itself as an audience, under public-service mandates in Britain and, in the United States, a commercial broadcasting regime subject to public-interest obligations alongside professional journalistic norms of objectivity [65; 5]. That achievement carried its own exclusions and its own capacity for managed acclamation, the pattern Habermas diagnosed.

Networked communication dismantled much of the scarcity on which broadcast address depended. Benkler found its democratic promise in a distributed architecture, lower costs of speaking, and nonmarket social production that could widen the intake of observations, support watchdog activity, and develop peer-produced forms of filtering and accreditation [66]. He measured the promise against the concentrated commercial mass-media sphere, and no ideal public sphere entered the comparison. His later work retains the possibility of distributed agenda-setting and mobilisation but traces recurrent failures to weak organisational durability, institutional capture, and the conversion of digital infrastructures into systems of data-driven control [66]. Platform consolidation placed ranking and visibility functions in private intermediaries whose aggregate activity is governed by engagement objectives and not by any specification of what a public requires in order to be composed [67]. Each configuration reproduced some capacities for some populations and failed others. The comparison asks which capacities each configuration reproduced routinely and how those achievements were connected.

Seeliger and Sevignani analyse the present condition as a third structural transformation produced by the interaction of digitalisation, commodification, and globalisation [68]. Their Table 2 relates these processes to transparency, validation, and orientation or identity formation. Expanded access and a broader range of authors coexist with declining common attention, automated re-intermediation, and private switching points withdrawn from public negotiation.

[5] Starr, P. (2004): *The creation of the media: Political origins of modern communications*. Basic Books.

[58] Curran, J.–Seaton, J. (2003): *Power without responsibility: The press, broadcasting, and new media in Britain*. Routledge.

[65] Scannell, P. (1989): Public service broadcasting and modern public life. *Media, Culture & Society*, 11., (2.), pp. 135–166.

[66] Benkler, Y. (2006): *The wealth of networks: How social production transforms markets and freedom*. Yale University Press.

[67] Gillespie, T. (2018): *Custodians of the internet: Platforms, content moderation, and the hidden decisions that shape social media*. Yale University Press.

[68] Seeliger, M.–Sevignani, S. (2022): A new structural transformation of the public sphere? An introduction. *Theory, Culture & Society*, 39., (4.), pp. 3–16.

[40] Habermas, J. (2022): *Ein neuer Strukturwandel der Öffentlichkeit und die deliberative Politik*. Suhrkamp. C. Cronin, Trans., Polity.

[69] Habermas, J. (2006): Political communication in media society: Does democracy still enjoy an epistemic dimension? The impact of normative theory on empirical research. *Communication Theory*, 16., (4.), pp. 411–426.

[70] Castells, M. (2009): *Communication power*. Oxford: Oxford University Press.

Surveillance-based business models join these technical changes to commodification. Its importance lies in treating platform mediation as an institutional transformation with causes distinct from digital communication itself.

Habermas now attributes the difficulty to erosion of the editorial filter once supplied by the professional press and to fragmentation of the public into communicative spaces whose participants address one another as authors without passing through that filter [40]. His remedy targets the filter through regulatory support for the press as a public good [40]. Foreclosure instead identifies non-composability. A restored filter would improve the quality of what circulates. The capacities surviving across differentiated settings would still be unconnected because filtering governs entry into public attention, whereas composition depends on links that let sites of deliberation bear on binding decision. Filtering and composition are separable, and the second does not follow from the first. The divergence has deeper roots. In 2006 Habermas made the contribution of mediated political communication to deliberative legitimation conditional on two things: independence of a self-regulating media system from its social environments, and a feedback relation between informed elite discourse and a responsive civil society [69]. A note to the same lecture already registered dispersal of politically focused mass audiences into isolated issue publics and made the democratic value of online debate depend on its crystallising around the focal points of the quality press. Both conditions govern the independence and quality of what circulates. Composition was absent then as well.

Castells offers the closest precedent for identifying objective-setting as a form of power. He distinguishes four forms of power in networked societies and treats network-making power as paramount. It has two components: the capacity to constitute a network and program it in terms of assigned goals, held by those he calls programmers, and the capacity to control connecting points between strategic networks, held by switchers [70]. Communication networks occupy the decisive position because programming any other network depends on building constituencies for a project in the field of communication. Foreclosure takes this insight from Castells but gives programming a different technical meaning. His programmers are social actors, frequently actor-networks, with no requirement that a single individual or group occupy the role, and they assign goals to a network.

An optimisation regime maximises a weighted composite of predicted behaviours and revises its components and weights against measured outcomes. Authority over the objective is therefore exercised by continuous adjustment, and the actor holding it need not be able to state what the system is maximising at a given moment. This is a weaker form of intentional control than the language of programming suggests. The optimisation objective must also stay distinct from the encompassing regime of ownership, incentives, data access, expertise, and institutional authority in which objectives are set.

The second difference lies in counterpower. Castells holds that resistance operates through the same two mechanisms that constitute power, reprogramming networks and blocking switches, so the architecture concentrating network-making power also furnishes means of contesting it [70]. His study of the movements of 2011 reaches a more qualified conclusion than that symmetry would predict. He concedes that their short-term influence on policy is usually limited unless a systemic crisis forces political overhaul, and he assigns decisive change to the minds of the people [71]. The legacy he attributes to the movements is principally cultural. The new democracy he associates with them appears through principles explored in movement practice rather than through specified procedures for binding decision. Measured against the definition above, this describes capacities reproduced locally and provisionally without a mechanism carrying them to the scale at which democratic practice binds. Research on networked protest reaches the same result [32]. Counterpower can alter the goals of a network without creating a standing channel that carries public judgements into binding decision.

I make a second distinction between explanations that describe the transformation accurately and those that misidentify its cause. Sennett offers a more specific diagnosis than a generic decline of public life. An intimate society converts impersonal phenomena into matters of personality, recasts political conflict through personality, and substitutes credibility for accomplishment. The resulting ideology of intimacy transforms political categories into psychological ones [72]. Papacharissi charts a related relocation of civic activity into digitally equipped private environments and argues that evaluating these practices solely by the older public-sphere model risks misclassifying their political character [73]. The contrast is instructive. Personalisation of political engagement is well established descriptively and underdetermined causally.

[32] Tufekci, Z. (2017): *Twitter and tear gas: The power and fragility of networked protest*. Yale University Press.

[70] Castells, M. (2009): *Communication power*. Oxford: Oxford University Press.

[71] Castells, M. (2012): *Networks of outrage and hope: Social movements in the Internet age*. Polity Press.

[72] Sennett, R. (1977): *The fall of public man*. Alfred A. Knopf.

[73] Papacharissi, Z. (2010): *A private sphere: Democracy in a digital age*. Polity.

[41] Han, B.-C. (2022): *Infocracy: Digitization and the crisis of democracy*. Polity Press. (Original work published 2021).

[74] Postman, N. (2006): *Amusing ourselves to death: Public discourse in the age of show business*. Penguin Books. (Original work published 1985).

[75] Virilio, P. (2006): *Speed and politics*. Semiotext(e). (Original work published 1977).

[76] Han, B.-C. (2017): *Psychopolitics: Neoliberalism and new technologies of power*. Verso. (Original work published 2014).

[77] Porter, T. M. (1995): *Trust in numbers: The pursuit of objectivity in science and public life*. Princeton: Princeton University Press.

[78] Postman, N. (1993): *Technopoly: The surrender of culture to technology*. Vintage Books. (Original work published 1992).

A further group of explanations elevates a technical or medial form into the primary causal principle. Postman argues that a major medium restructures discourse by favouring particular uses of the intellect, definitions of intelligence, and forms of truth-telling [74]. In television, entertainment becomes the governing format even for serious public business. He avoids simple technological determinism by distinguishing an apparatus from the social and intellectual environment created through its use and by allowing the same technology to acquire different meanings in different governance settings. Virilio gives acceleration an explicitly political form. State power materialises as control over circulation. Modern power accumulates movement and can convert freedom of movement into an obligation to mobility [75]. Han shifts the explanatory unit from a medium to an information regime in which algorithms and artificial intelligence decide social, economic, and political processes [41]. Communication itself becomes the medium of surveillance (p. 4), and a data-based psychopolitics operates on pre-reflexive, instinctual, and emotive layers of behaviour preceding conscious action. *Psychopolitics* had already presented neoliberal power as recruiting freedom and communication into its operation [76], and emotion and play as further techniques of exploitation and control. His later phenomenology of accelerated information is acute about fragmented perception and shortened temporal horizons [41]. The framework is too encompassing for causal attribution. It identifies the texture of the regime but stops short of the ownership structures and governing objectives needed to predict stronger, weaker, or absent effects.

The same problem affects any explanation that elevates a medial form into a primary cause. Technical criteria displaced other grounds of judgement long before the platform era. Porter shows why quantification acquires authority when decisions cannot rest on personal standing alone: explicit and impersonal rules make judgement defensible before outsiders and turn numbers into a technology of trust [77]. Postman's *Technopoly* identifies the cultural assumptions more precisely. Efficiency becomes the primary goal, technical calculation is treated as superior to human judgement, subjectivity as an obstacle, and measurability as a condition of value [78]. His discussion of computer technology links that hierarchy to speed, volume, and a loss of confidence in judgement. Each author identifies the form of displacement but leaves unnamed the party setting the criteria.

Porter comes closest because institutional incentives drive his account, though his object is quantification. Platform objectives are set privately and answer to no equivalent public mechanism of authorisation. Under an optimisation regime, the ascendancy of technical criteria becomes a determinate structure: a particular owner sets a particular objective, applies it continuously, and revises it in response to measured outcomes. The displacement then has an author. That is what makes it contestable at all.

That is the decision at issue. Packet-switched networks do not entail an attention economy, and an idiom of participation, however accurately characterised, says nothing about what continuously structures the environments in which participation occurs. Continuous behavioural monitoring, engagement optimisation, and proprietary curation arise from a determinate political economy of data extraction and platform ownership. Srnicek analyses platforms as capitalist business models whose intermediary position produces strong incentives towards data extraction and consolidation [79]. Zuboff separates the technology from the economic imperatives directing it and traces conversion of behavioural surplus into prediction products and, later, means of behavioural modification [80]. Couldry and Mejias analyse data extraction within durable social relations that render human life available to capitalist appropriation and stop short of declaring a completed successor mode of production [81]. Across these differences, ownership and objective continue to operate as variables. Whether platforms instantiate a business model within capitalism, a new logic of accumulation, or a colonial extension of capitalist appropriation does not change that relation. The comparative advantage is clear: the medium and the idiom of engagement are widely shared, but variation in ownership and objective generates testable differences.

The same decision marks the limit of the re-feudalisation analogy. Representative publicity addresses a comparatively undifferentiated public before which political or economic power displays itself. Algorithmic curation constructs a different structure. The public is observed, divided into behavioural profiles, and reorganised in response to its own reactions. Citizens supply the signals that modify subsequent informational environments. This power operates inside the architecture of the public sphere, shaping both the environments in which political judgement forms and the channels that give judgements collective consequence.

[79] Srnicek, N. (2016): *Platform capitalism*. Polity Press.

[80] Zuboff, S. (2019): *The age of surveillance capitalism: The fight for a human future at the new frontier of power*. PublicAffairs.

[81] Couldry, N.–Mejias, U. A. (2019): *The costs of connection: How data is colonizing human life and appropriating it for capitalism*. Stanford: Stanford University Press.

[82] Mann, M. (1984): The autonomous power of the state: Its origins, mechanisms and results. *European Journal of Sociology*, 25., (2.), pp. 185–213.

[83] Rahman, K. S. (2018): The new utilities: Private power, social infrastructure, and the revival of the public utility concept. *Cardozo Law Review*, 39., (5.), pp. 1621–1692.

[84] Neckel, S. (2020): The re-feudalization of modern capitalism. *Journal of Sociology*, 56., (3.), pp. 472–486.

[85] Durand, C. (2024): *How Silicon Valley unleashed techno-feudalism: The making of the digital economy*. Verso. (Original work published 2020).

[86] Varoufakis, Y. (2023): *Techno-feudalism: What killed capitalism*. The Bodley Head.

[87] Morozov, E. (2022): Critique of techno-feudal reason. *New Left Review*, 133/134., pp. 89–126.

[88] Espeland, W. N.–Sauder, M. (2007): Rankings and reactivity: How public measures recreate social worlds. *American Journal of Sociology*, 113., (1.), pp. 1–40.

[89] Hacking, I. (1995): The looping effects of human kinds. In: Sperber, D.–Premack, D.–Premack, A. J. (Eds.): *Causal cognition: A multidisciplinary debate*. pp. 351–383. Oxford: Oxford University Press.

Mann’s infrastructural power names the state’s capacity to penetrate civil society, implement decisions across its territory, and coordinate social activity through its own organisational means [82]. The relational idea survives even when the subject exercising it changes. Rahman provides the private analogue: control over infrastructural interfaces and access can create relations of dependence and vulnerability [83].

The feudal vocabulary has meanwhile been applied well outside publicity. Neckel treats re-feudalisation as a paradoxical form of modernisation in which contemporary transformations reproduce pre-modern hierarchies and neo-feudal patterns in the distribution of wealth, recognition, and power without constituting a return to the past [84]. Durand develops the stronger techno-feudal hypothesis through the dependence created by proprietary platform infrastructures and capital’s preference for control over the organisation of economic activity [85]. Varoufakis states the discontinuity more categorically: markets and profits remain present but no longer occupy the system’s organising centre, displaced by digital fiefdoms and cloud rent [86]. Morozov contests the inference from these developments to a successor mode of production. He accepts re-feudalisation as the weaker description of recurring private and arbitrary power but treats intellectual property, user lock-in, and anti-competitive strategies as intelligible within continuing capitalist production and competition [87]. The dispute over mode of production is not decisive for this attribution because recursion is a property of the governing process. What a feudal domain extracts from its tenants does not systematically reshape subsequent action, because the levy does not depend on modelling conduct in advance. Manorial administration responded to what tenants did. It did not model them to alter their next move. Optimisation does. Today’s behaviour becomes an input into tomorrow’s informational environment.

This is reactivity in Espeland and Sauder’s sense, but here it operates continuously at individual resolution. Their cases rely on periodic publication of a measure [88; 89], on looping effects). Withdrawal from public justification and the conversion of citizens into spectators or tenants belong to this picture. The analogy fails at the move from representation before a public to recursive structuring of publics themselves.

COMPETING CAUSAL EXPLANATIONS

Any causal explanation of foreclosure must be narrower than a general theory of democratic crisis, and the empirical work of Benkler, Faris, and Roberts shows exactly why. They reject a uniform technological explanation of American epistemic disorder. The architecture of attention was already asymmetric in talk radio and cable news before Facebook became central, and their comparison of Fox News with internet use assigns greater explanatory weight to the former [90]. They treat the networked public sphere as the product of interactions among media institutions, political organisations, professional norms, commercial strategies, and technical infrastructures. A propaganda system emerges when these elements reinforce disinformation instead of correcting it. The result supports a relational interpretation of platform effects. Platform systems distribute and amplify material generated by parties and legacy outlets, movements, and political entrepreneurs. Optimisation selects which asymmetries and elite strategies acquire visibility. It does not generate those strategies.

The American authors also limit cross-national generalisation. American findings cannot be transferred without examining each country's media ecosystem, political institutions, and sources of resilience [90]. First, intensity should vary. More symmetrical partisan media institutions, stronger professional norms, or political elites less inclined to systematic delegitimation should produce different outcomes under similar technical platforms, and existing frameworks for cross-national resilience to online disinformation point the same way [91; 92]. Foreclosure should therefore vary with the broader media and party system even under similar algorithmic curation. Second, the causal pattern should persist wherever an engagement-oriented objective governs distribution. That objective selects which material acquires visibility and shapes the formation of judgement. Mass media, intermediary organisations, and ownership structures determine how far the effects propagate, but they hold no authority over the objective itself.

The two propositions apply to different objects. Invariance tracks the governing objective and obtains within the share of the architecture that objective governs. Variation applies to the architecture as a whole and reflects how large that share is and what surrounds it.

[90] Benkler, Y.–Faris, R.–Roberts, H. (2018): *Network propaganda: Manipulation, disinformation, and radicalization in American politics*. Oxford: Oxford University Press.

[91] Humprecht, E.–Esser, F.–Van Aelst, P. (2020): Resilience to online disinformation: A framework for cross-national comparative research. *The International Journal of Press/Politics*, 25., (3.), pp. 493–516.

[92] Hallin, D. C.–Mancini, P. (2004): *Comparing media systems: Three models of media and politics*. Cambridge University Press.

[93] Guess, A. M.–Malhotra, N.–Pan, J.–Barberá, P.–Allcott, H.–Brown, T.–Crespo-Tenorio, A.–Dimmery, D.–Freelon, D.–Gentzkow, M.–González-Bailón, S.–Kennedy, E.–Kim, Y. M.–Lazer, D.–Moehler, D.–Nyhan, B.–Rivera, C. V.–Settle, J.–Thomas, D. R.–Thorson, E.–... Tucker, J. A. (2023a): How do social media feed algorithms affect attitudes and behavior in an election campaign? *Science*, 381., (6656.), pp. 398–404.

[94] Guess, A. M.–Malhotra, N.–Pan, J.–Barberá, P.–Allcott, H.–Brown, T.–Crespo-Tenorio, A.–Dimmery, D.–Freelon, D.–Gentzkow, M.–González-Bailón, S.–Kennedy, E.–Lazer, D.–Moehler, D.–Nyhan, B.–Rivera, C. V.–Settle, J.–Thomas, D. R.–Thorson, E.–... Tucker, J. A. (2023b): Reshares on social media amplify political news but do not detectably affect beliefs or opinions. *Science*, 381., (6656.), pp. 404–408.

[95] Nyhan, B.–Settle, J.–Thorson, E.–Wojcieszak, M.–Barberá, P.–Chen, A. Y.–Allcott, H.–Brown, T.–Crespo-Tenorio, A.–Dimmery, D.–Freelon, D.–Gentzkow, M.–González-Bailón, S.–Guess, A. M.–Kennedy, E.–Kim, Y. M.–Lazer, D.–Malhotra, N.–Moehler, D.–Tucker, J. A. (2023): Like-minded sources on Facebook are prevalent but not polarizing. *Nature*, 620., (7972.), pp. 137–144.

[96] Gauthier, G.–Hodler, R.–Widmer, P.–Zhuravskaya, E. (2026): The political effects of X's feed algorithm. *Nature*, 652., (8109.), pp. 416–423.

A media system with a strong public-service sector reduces the governed share. The two propositions can diverge without either failing.

But invariance would be empty if it meant only that engagement optimisation works for engagement. Its content lies in control. A privately set objective revised without public authorisation leaves the capacity to alter it outside democratic control. A strong public-service sector can modulate the consequences of that objective but has no standing to change it. This gives the proposition empirical content. Cases in which that objective governs distribution and the communicative dimensions are nonetheless ordinarily reproduced would count against it.

Comparative research should concentrate on public-service media that retain distributional control. Settings with strong intermediary organisations and alternative ownership structures belong in the same comparison, since they maximise the modulating factors and expose the two propositions most directly.

The experimental literature on feed design imposes a second constraint, and its shape has changed since 2023. Replacing algorithmic feeds with chronological ordering, or reducing resharing, produced substantial changes in platform use and exposure but limited effects on political attitudes in the Meta studies conducted around the 2020 United States election [93; 94]. Nyhan et al. altered exposure more substantially: like-minded content fell from 53.7 to 36.2 per cent, and exposure to uncivil content and repeat misinformation sources declined [95]. Engagement patterns also changed. The pre-registered attitude estimates remained close to zero. Three later findings complicate any reading on which feed design leaves ideological positions untouched. Gauthier et al. [96] randomised active users of X to algorithmic or chronological feeds for approximately seven weeks in 2023. Switching onto the algorithmic feed shifted political opinion in a conservative direction on policy priorities and the war in Ukraine. The reverse switch produced no comparable effect, and neither direction moved affective polarisation.

Piccardi et al. [97] reranked participants' feeds for seven days within a ten-day field experiment during the 2024 campaign and moved out-party feeling-thermometer ratings by more than two points on a hundred-point scale. Bagchi et al. [98] documented that Meta introduced sixty-three temporary "break-glass" changes to Facebook's algorithmic news feed during the 2020 experimental window, changing the control condition.

Exposure patterns qualify the strongest version of the fragmentation thesis in the same direction. Facebook news exposure remained ideologically segregated and asymmetric, especially on the conservative side [99]. Linked survey and Twitter data show media-account distributions with more overlap than divergence across the most liberal and conservative groups, although exposure stayed asymmetric and substantial segments rarely encountered sources prominent on the other side [100]. Bruns reaches a similar conclusion at the level of the broader media environment, where clusters form around shared interests and identities but remain porous and interpenetrating [101]. Bail shifts attention to the identity and status dynamics that amplify extremists and mute moderates [52]. These results bear on individuation as specified above, since the difficulty lies in the absence of a vantage point from which distributions can be compared, and comparability can fail despite wide exposure.

I read the divergence between these results as evidence about the designs themselves. What each experiment measures is individual attitude change under a modified feed across a bounded interval, benchmarked against a baseline that the platform sets and can revise without notice. The institutional reproduction of sustained attention, shared epistemic validation, protected reflection, and composition across publics is a property of structures that persist over years. Interventions of this kind ran for weeks or months and altered a single platform. Participants remained embedded in a broader hybrid media environment throughout [102], and deactivation evidence makes the substitution problem concrete: withdrawal from one platform can redirect attention

[52] Bail, C. A. (2021): *Breaking the social media prism: How to make our platforms less polarizing*. Princeton: Princeton University Press.

[97] Piccardi, T.–Saveski, M.–Jia, C.–Hancock, J.–Tsai, J. L.–Bernstein, M. S. (2025): Reranking partisan animosity in algorithmic social media feeds alters affective polarization. *Science*, 390., (6776.), eadu5584.

[98] Bagchi, C.–Menczer, F.–Lundquist, J.–Tarafdar, M.–Paik, A.–Grabowicz, P. A. (2024): Social media algorithms can curb misinformation, but do they? *arXiv*.

[99] González-Bailón, S.–Lazer, D. M. J.–Barberá, P.–Zhang, M.–Allcott, H.–Brown, T.–Crespo-Tenorio, A.–Freelon, D.–Gentzkow, M.–Guess, A. M.–Iyengar, S.–Kim, Y. M.–Malhotra, N.–Moehler, D.–Nyhan, B.–Pan, J.–Rivera, C. V.–Settle, J.–Thorson, E.–... Tucker, J. A. (2023): Asymmetric ideological segregation in exposure to political news on Facebook. *Science*, 381., (6656.), pp. 392–398.

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[101] Bruns, A. (2019): *Are filter bubbles real?* Polity Press.

[102] Chadwick, A. (2017): *The hybrid media system: Politics and power*. Oxford: Oxford University Press.

[96] Gauthier, G.–Hodler, R.–Widmer, P.–Zhuravskaya, E. (2026): The political effects of X's feed algorithm. *Nature*, 652., (8109.), pp. 416–423.

[103] Allcott, H.–Gentzkow, M.–Wittenbrink, B.–Cisneros, J. C.–Crespo-Tenorio, A.–Dimmery, D.–Freelon, D.–González-Bailón, S.–Guess, A. M.–Kim, Y. M.–Lazer, D.–Malhotra, N.–Moehler, D.–Nair-Desai, S.–Nyhan, B.–Pan, J.–Settle, J.–Thorson, E.–Tromble, R.–... Tucker, J. A. (2025): The effect of deactivating Facebook and Instagram on users' emotional state. *NBER Working Paper No. 33697*. National Bureau of Economic Research.

[104] Achen, C. H.–Bartels, L. M. (2016): *Democracy for realists: Why elections do not produce responsive government*. Princeton: Princeton University Press.

towards others without removing participants from the wider media environment [103]. Both limits are acknowledged by Nyhan et al., who observe that social media constitutes only part of users' information diets and that their design cannot capture prior Facebook use or cumulative effects over years [103]. Bak-Coleman et al. generalise the objection as hysteresis: withdrawal studies cannot simply be read as inverse exposure studies because no empirical warrant exists for treating the two as symmetric [103]. Gauthier et al.'s directional asymmetry provides evidence consistent with that caution: switching onto the algorithmic feed shifted opinion, whereas switching away did not produce the inverse effect [96].

Reproduction of communicative conditions across a media system therefore lies outside what any of these designs can register, whatever the sign of the coefficient they report. Foreclosure would be undermined by longitudinal evidence that infrastructures governed by that objective preserve shared agendas and publicly inspectable objects. Evidence that such infrastructures also sustain durable organisations, and that transmission between informal publics and institutions remains effective, would settle the matter. Short-run attitude estimates stand in an indeterminate evidential relation to that structural claim in both directions. The five failure conditions specify what would alter the diagnosis or its causal account, two assessable within a few years and three requiring longer series.

Achen and Bartels pose a different challenge: group identity and partisan attachment explain much democratic behaviour more effectively than reflective political judgement does [104]. The weaker version holds that citizens do not deliberate before voting, which foreclosure does not presuppose. The stronger version reaches the communicative conditions directly. If group attachment does most of the work, dispersed judgement becomes largely epiphenomenal to identity, and even perfect traceability, recognisability, and return may change little. Identities, however, are themselves formed, hardened, and occasionally revised within communicative environments. Algorithmic curation organises the circulation and salience of identity-bearing claims and affects whether group attachments become mutually exclusive or stay open to competing interpretations of a shared political world. Political judgement covers interpretations and evaluations shaped by social identity and memory, emotion, and institutional trust.

The requirement is revisability and public justification, not dispassionate reasoning. An interpretation, however formed, must be able to meet a competing one, be checked against a common object, and be given up. No empirical assumption that citizens ordinarily deliberate before voting is required. Achen and Bartels weaken arguments grounding democratic legitimacy in widespread individual rationality [104]. They leave standing the question of whether political identities form within environments that permit mutual scrutiny and common action.

Three narrowings survive these objections. Elite strategies and partisan identities arise outside the architecture and have causes of their own, as do the asymmetries of a national media system. Short-run changes in feed design leave individual attitudes close to their prior positions. Optimisation selects which material produced elsewhere becomes visible, shapes the formation of judgement around it, and keeps that selection under an authority outside the democratic order. Intensity varies with media systems, party structures, intermediary strength, and control over distribution. Authority over the objective does not. That is narrower than a technological explanation of democratic disorder and more determinate than an appeal to the medium or to an idiom of participation.

Conclusion

Foreclosure identifies a specific pattern. Capacities may remain locally available while the prevailing architecture ceases to reproduce them ordinarily, or ceases to compose dispersed instances at the scale at which decisions bind. Three criteria carry the distinction. Possibility and reproduction mark off foreclosure from degradation and blocked circulation. Non-composability, the third clause, distinguishes it from colonisation and second-order democratic disorder. Adversarial recognition remains an external precondition of composition.

The causal scope is correspondingly limited. Algorithmic curation matters because recursive behavioural feedback, governing objectives, individuation, and rapid revision make the allocation of visibility part of an adaptive regime whose purposes are selected by identifiable private institutions. Elite strategies and partisan identities arise outside that regime and have causes of their own, as do the asymmetries of legacy media and the long decline of intermediary organisations [90].

[90] Benkler, Y.–Faris, R.–Roberts, H. (2018): *Network propaganda: Manipulation, disinformation, and radicalization in American politics*. Oxford: Oxford University Press.

[104] Achen, C. H.–Bartels, L. M. (2016): *Democracy for realists: Why elections do not produce responsive government*. Princeton: Princeton University Press.

Optimisation selects among material produced in those settings and makes their effects mutually consequential. Media systems, ownership structures, public-service institutions, and intermediary strength modulate the intensity of foreclosure without displacing the causal sequence. Similar technical platforms should therefore produce different degrees of foreclosure across governance settings. Cases in which engagement-oriented optimisation reliably reproduces these capacities would count against the attribution.

The thin evaluative commitment introduced at the outset can now be stated more precisely. An architecture whose governing objective is set privately and revised without authorisation leaves the conditions of judgement formation beyond the reach of those whose judgements are at stake, and the speed of revision shields it from correction. Some measure of control over those conditions belongs to democratic self-government. Foreclosure establishes a loss without settling its magnitude. A defence of the present arrangement must therefore establish that authority over the governing objective is itself indifferent to self-government, a heavier claim than any showing about the effects observed so far.

The empirical and normative questions remain open. Sustained attention, shared epistemic validation, protected reflection, and the composition of dispersed judgement must still be tested in contemporary settings, as must the reach of existing European regulation into that causal structure. Any shortfall then requires evaluation under competing democratic standards and against a defensible requirement of public control over the purposes governing communicative infrastructures. Identification of the structure precedes exposure to evidence, and both precede any judgement about what democracy requires in response.

To be continued in Part Two