

The Political Economy of Shared Experience

Interpretive Infrastructure, Preference Formation, and Value Capture

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Abstract

Shared experience can generate meanings, trust, reputation, practical knowledge, attention, and demand-relevant orientations. Firms, platforms, credentialing bodies, and other institutions make selected products of these relations portable through narratives, metrics, classifications, rankings, references, and interfaces. This paper develops a preliminary political economy of that conversion. Its philosophical and interdisciplinary review connects commodity form and alienation, culture industry, taste and distinction, adaptive and endogenous preferences, signaling and valuation devices, value co-creation, presumption, free and affective labor, branding, platformization, classification, ranking, epistemic injustice, and relational accounts of alienation. The paper proposes *interpretive infrastructure* as the sociotechnical arrangement through which shared experience becomes legible, portable, comparable, actionable, and revisable. A formal stage architecture then separates relational production, encounter design, trace selection, interpretive framing, preference formation, observable action, value realization, benefit allocation, and future relational conditions. Two exact countermodels establish limited identification results. Observed action and self-report can fit both stable-preference and preference-formation models. Equal realized total value can fit coalition models with reversed contribution attributions. A model-relative contribution set and benefit profile therefore replace a single contribution estimate. A recursive dynamic represents hosting, measurement, classification, ranking, and later experience design; convergence follows only under an explicit contraction condition and carries a separate normative status. Constructed cases involving branded celebration, platform communities, and credentials illustrate the framework. The paper concludes with a plural diagnostic for interpretive appropriation, ethical research designs, institution-level response options, and revision conditions. The contribution is a conservative, revisable compositional framework whose scope is narrower than a general theory of commodification or platform power.

Keywords: shared experience; political economy; interpretive infrastructure; endogenous preferences; value co-creation; platformization; relational contribution; value capture; alienation

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Statement on the use of language models. Drafting, literature search, structural review, formal reconstruction, and argumentative criticism were conducted in dialogue with ChatGPT (OpenAI). The author bears responsibility for the claims, definitions, formal constructions, selection of material, argument, and position taken. References included in the bibliography were checked against publisher, journal, university, DOI, or responsible repository records during preparation.

Companion papers. This paper belongs to a programme on co-experience knowledge, transmission, preservation, institutional translation, political economy, and AI mediation. Earlier papers develop the general ontology and continuity of co-experience knowledge, transmission power and responsibility, generative linguistic continuity, cultural preservation and experiential reconstruction, and institutional translation of situated experience. The present paper owns preference endogeneity, interpretive infrastructure, relation-sensitive contribution, value realization and capture, and recursive experience-ranking loops. A later paper retains AI-specific mediation, provenance, and linguistic-generativity effects.

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1 Introduction

This section introduces the paper’s object, motivation, research question, limited thesis, contribution, method, and structure. It begins with a recurring conversion from lived relations into portable institutional objects, then specifies the analytical distinctions and evidence burden that govern the paper.

Economic life frequently moves relational products across forms. Years of working with colleagues become a reference or credential. A restaurant visit, celebration, or travel encounter becomes a rating, memory, brand association, and repeat purchase. A community develops jokes, norms, identities, reputations, and practical knowledge; a platform records selected traces, classifies them, ranks their visibility, and realizes advertising, subscription, transaction, or asset value. A cultural practice becomes a narrative, designation, tourism product, funding category, or institutional reputation. These movements can support recognition, coordination, discovery, employment, preservation, and collective benefit. They can also concentrate authority over meaning, visibility, access, and value realization.

The central research question is therefore stage-specific: through which mechanisms can control over shared-experience design and interpretive infrastructure affect preference formation, value realization, benefit distribution, and future relational capacities? The question contains several distinct inquiries. One concerns causal formation: whether an institutional environment changes preferences or expresses relatively stable preferences under changed information and opportunity. A second concerns contribution: which participants and institutions make which counterfactual difference to a declared value. A third concerns distribution: which actors receive economic, reputational, epistemic, and access benefits or burdens. A fourth concerns institutional power: who can select, frame, rank, authorize, revise, and port the resulting meanings. A fifth concerns normative evaluation: which additional conditions support judgments of appropriation, manipulation, alienation, exploitation, injustice, responsibility, or liability.

The paper advances a conservative position. Shared experience can generate economically consequential meanings and orientations. Institutions can organize their portability through interpretive infrastructure. Control across several stages can create a pathway from relational production to concentrated interpretive and economic power. Each modal term matters. Participant uptake, resistance, plurality, institutional investment, public value, competition, and alternative infrastructures can interrupt or redirect the pathway. A credible application therefore traces the full mechanism and preserves unresolved coordinates.

The relevant literatures already contain close and powerful antecedents. Marx analyzes commodity form, social labor, and fetishism [18]. Horkheimer and Adorno analyze organized cultural production and consumption [14]. Bourdieu connects taste, classification, class, and distinction [4]. Elster and Bowles examine preference genesis under adaptation and institutions [8, 5]. Marketing and consumer research develop both constructive and critical accounts of value co-creation [28, 29]. Digital-labor and prosumption literatures analyze contributed activity, culture, affect, and value [26, 23, 2]. Platform studies and informational-capitalism scholarship analyze infrastructure, classification, intermediation, governance, and datafied feedback [22, 19, 27, 7, 6]. The present contribution lies in composition: a typed sequence joining these concerns, two exact identification limits, a model-relative contribution method, a recursive feedback result, and a plural institutional audit.

The method combines conceptual analysis, bounded interdisciplinary reconstruction, formal counter-models, constructed mechanism cases, causal-design specification, and institutional design. Formal

analysis occupies a substantial but limited role. Its principal function is to expose assumptions and underidentification. Estimated social effects and a universal contribution metric remain outside the present formal results. Constructed cases support mechanism comparison and generate empirical questions. Their evidential role is illustrative; findings about named firms, platforms, credentials, and populations await empirical study.

The paper proceeds in thirteen further sections. Section 2 reconstructs the theoretical inheritance. Section 3 defines the analytical vocabulary. Section 4 develops the stage and control architecture. Section 5 analyzes preference formation and causal identification. Section 6 treats relational contribution, value realization, and benefit allocation. Section 7 models recursive institutional dynamics. Section 8 compares three constructed cases. Section 9 develops the diagnostic and normative architecture. Section 10 specifies an empirical programme. Section 11 organizes institutional responses. Section 12 addresses objections and scope conditions. Section 13 states open problems and revision conditions. Section 14 concludes.

2 Theoretical Inheritance

This section locates the proposal among antecedent traditions and clarifies the limited originality claim. It moves from commodity and cultural form through taste, preference, valuation, co-creation, platform power, interpretation, and institutional alternatives. Table 1 summarizes the resulting division of labor.

2.1 Commodity Form and Cultural Organization

This subsection establishes the political-economic starting point. It distinguishes the appearance of social relations in portable objects from the contemporary mechanisms through which institutions design, classify, rank, and circulate shared experience.

Marx’s analysis of the commodity form gives a foundational warning against reading economic objects as self-contained carriers of value. Products of social labor acquire an objective appearance in exchange, while the social relations involved in their production become difficult to perceive [18]. The present paper inherits attention to form, production, circulation, and appearance. It preserves a narrower commitment concerning value theory. Shared meanings, recommendations, reputations, and community activity vary in their status as labor, gifts, leisure, expression, care, exchange, and institutional participation. Their political economy requires a declared object and institutional setting.

Horkheimer and Adorno supply a different antecedent through the culture industry. Their analysis directs attention to standardized production, administration, entertainment, and the shaping of reception [14]. Contemporary platforms and brands operate through mechanisms and histories that require their own evidence. The durable insight concerns the organization of culture and consumption by institutions with concentrated economic power.

Frank’s history of advertising and business engagement with counterculture shows that commercial institutions can participate actively in the production and circulation of apparently oppositional cultural meanings [11]. Arvidsson’s account of brands treats them as institutions for organizing meaning and economic value in media culture [1]. These analyses come close to the present discussion of an interpretive grammar supplied through architecture, service ritual, scarcity, celebrity

Table 1: Theoretical traditions, inherited objects, and P026 extension boundaries

Tradition	Inherited object	Manuscript use	Extension boundary
Commodity and alienation	commodity form, social labor, fetishism, disturbed appropriation	distinguish relations, portable objects, realized value, and alienation warrants	limited composition across contemporary interpretive stages
Culture, brand, and taste	culture industry, advertising, branding, distinction, symbolic judgment	analyze organized meaning, status, uptake, and demand-relevant orientation	stage-specific control and resistance remain empirical
Preference genesis	adaptation, institutional formation, social influence	define causal contrasts and rival preference models	observational-equivalence countermodel and design burden
Valuation and signaling	signals, judgment devices, rankings, classifications	separate history, proxy, valuation device, and allocation consequence	relation-sensitive contribution remains model-relative
Co-creation and prosumption	service relations, consumer work, free labor, affective relations	compare enabling and critical accounts of contributed value	contribution, benefit, and entitlement remain distinct
Platform and infrastructure studies	datafication, intermediation, ranking, governance, reactivity	represent stage control and recursive institutional feedback	shared-experience sequence and plural audit
Epistemic and social philosophy	interpretive inequality, self-world relation, agency	discipline appropriation and alienation classifications	further normative warrants remain explicit
Commons and social production	institutional diversity, collective governance, alternative production	expand governance options across ownership forms	shared meaning requires a separate commons warrant

symbols, recognition, and narrative. They also make a strong originality limit necessary: the paper’s brand case contributes a compositional illustration within an established literature on cultural appropriation through branding.

2.2 Taste, Preference, and Social Formation

This subsection connects demand to socially and institutionally formed evaluation. It preserves distinctions among classed disposition, adaptation, persuasion, learning, opportunity, and identified causal preference change.

Bourdieu’s *Distinction* analyzes taste as socially structured practice embedded in class relations and symbolic classification [4]. The relevance to shared experience lies in the relation among disposition, social position, lifestyle, judgment, and distinction. A luxury encounter or reputational category operates within prior histories of taste and status. Institutional design enters an already structured field.

Elster’s adaptive-preference analysis asks how wants can adjust to feasible options and why their genesis matters for rationality and ethics [8]. Bowles surveys how markets and other economic institutions can shape preferences, motivations, and cultural traits [5]. These works support a general departure from exogenous-preference assumptions. They also counsel mechanism specificity.

Adaptation to constraint, identity formation, social learning, persuasive communication, habit, signaling, emotional association, and strategic response can generate similar observed actions.

The paper therefore treats preference formation as an empirical and philosophical problem. A change in purchase, contribution, or self-report can reflect changed access, information, social expectation, price, measurement, or preference. Section 5 constructs two models with the same observables and different preference counterfactuals. This limitation protects inquiry into preference formation from becoming an interpretation imposed on every change in demand.

2.3 Signals, Judgment Devices, and Classification

This subsection reconstructs how portable representations organize uncertain markets and consequential allocations. It links credentials, references, ratings, brands, rankings, and scores while retaining their different inference targets.

Spence’s job-market signaling model provides an antecedent for credentials that convey information under asymmetric information [25]. A credential can shape access and wages even when its relation to target competence remains contested. The previous companion paper analyzes proxy validity and professional formation. The present paper studies labor-market power, status conversion, and value realization after relational histories become portable signals.

Karpik analyzes markets for singularities whose multidimensional quality and uncertainty are coordinated through judgment devices such as labels, brands, guides, critics, and rankings [16]. Fourcade and Healy analyze data collection, scoring, classification situations, stratification, and moralized judgments in markets [10]. Espeland and Sauder show how rankings can change the institutions they measure through commensuration and self-fulfilling processes [9]. Together these works replace a passive picture of information. A device can reveal, compress, coordinate, classify, distribute attention, and recursively change conduct.

The present framework uses *interpretive infrastructure* to connect these functions across shared experience. A rating scale makes an encounter comparable. A reference turns a working relation into an authorized statement. A platform ranking orders participant-generated traces. A brand narrative frames an encounter through a repeatable vocabulary. The shared term supports comparison, while the paper preserves distinct source objects, decision makers, standards, and effects.

2.4 Co-Creation, Prosumption, and Relational Value

This subsection compares constructive and critical accounts of participant contribution. It identifies the literature closest to the paper’s source intuition and fixes the boundary of the contribution claim.

Vargo and Lusch develop a service-centered marketing logic in which intangible resources, relationships, exchange processes, and value co-creation become central [28]. This perspective highlights institutional coordination and mutually beneficial service. It prevents the political-economy analysis from presuming that every structured invitation to participate is extractive.

Zwick, Bonsu, and Darmody offer a critical analysis of co-creation as consumer work and marketing governmentality [29]. Terranova identifies free labor as central to digital cultural economies [26]. Ritzer and Jurgenson theorize prosumption as the combination of production and consumption, with distinctive forms of control and unpaid activity in digital capitalism [23]. These theories already

locate productive activity inside participation and consumption.

Arvidsson and Colleoni address value in online prosumer platforms through affective relations, reputation, and financial realization [2]. Their analysis is especially close to the source intuition that participants create relationships, norms, memories, aesthetics, identities, and attention whose value a platform can realize. P026 therefore locates relational value creation and appropriation within established scholarship. Its narrower extension distinguishes relational production, coalition contribution, value realization, observed benefit, and distributive entitlement, then models their evidential separation.

2.5 Platforms, Infrastructure, and Recursive Power

This subsection reconstructs the institutional mechanisms that connect participant activity to classification, circulation, and future activity. It prepares the stage-specific control and feedback models.

Plantin and colleagues connect infrastructure studies with platform studies, showing how platforms can acquire infrastructural characteristics and how infrastructures can be reorganized through platform logics [22]. The combined perspective captures enablement and constraint. Shared systems provide access, coordination, standards, and reach while distributing control over interfaces, rules, and dependencies.

Nieborg and Poell analyze the platformization of cultural production and the increasing contingency of cultural commodities under platform governance and datafied feedback [19]. Van Dijck, Poell, and de Waal place platform mechanisms within struggles over public values and responsibility across sectors [27]. Cohen analyzes datafication, intermediation, platform authority, and the legal construction of informational capitalism [7]. These works locate platform power in institutional configuration as well as discrete decisions.

Bucher develops a relational account of algorithmic power through classification, sorting, ranking, situated practices, and world-making [6]. The present paper adopts this resistance to technological determinism. An algorithmic ranking enters a sociotechnical relation involving designers, commercial policy, data, participants, moderation, culture, competitors, regulators, and everyday interpretation. Its effect remains conditional on uptake and context.

The paper's recursive sequence can be stated in ordinary language: host, measure, classify, rank, shape later visibility and encounter, receive new traces, and revise. Espeland and Sauder's reactivity supplies a close institutional analogue. Nieborg and Poell supply datafied cultural feedback. P026 adds a common dynamic surface and a deliberately weak stability result. It treats stability, concentration, learning, diversity, and justice as separate properties.

2.6 Interpretive Inequality and Alienation

This subsection connects political-economic mechanisms to demanding philosophical classifications. It distinguishes unequal interpretive resources and disturbed self-world relations from the descriptive fact of institutional mediation.

Fricker's analysis of testimonial and hermeneutical injustice identifies wrongs connected to credibility and unequal shared resources for making sense of social experience [12]. P026's source discussion distinguishes epistemic alienation, interpretive alienation, and generative alienation. Fricker's work

supplies an antecedent for inequalities in interpretive resources and standing. The proposed concept of interpretive appropriation adds a political-economic mechanism involving control, circulation, realized benefit, and weak contestability. Similarity between the concepts leaves their standards distinct.

Jaeggi reconstructs alienation as a disturbed relation of appropriation to self and world [15]. This approach supports analysis of social relations and agency while avoiding a fixed human essence as the sole standard. It also raises the threshold for a responsible alienation claim. Influence, unequal benefit, preference change, opacity, or platform dependence can contribute evidence. A full diagnosis requires a theory of the impaired relation and its conditions.

The manuscript therefore uses *alienation* as a research hypothesis with several coordinates. Epistemic difficulty concerns resources for understanding experience. Interpretive asymmetry concerns authority to frame and revise meaning. Generative influence concerns the organization of conditions under which knowledge, desire, and value emerge. Each coordinate can occur without the others. Each can also appear within beneficial institutions and contested social relations.

2.7 Institutional Diversity and Alternative Production

This subsection broadens the solution space. It uses social production and commons scholarship to motivate institutional comparison while preserving the specific requirements of knowledge, cultural, and relational resources.

Benkler analyzes social production in networked information environments and its possible effects on markets, freedom, cultural diversity, and justice [3]. The analysis makes participant production visible and places legal and institutional design inside the political economy of networks. It also preserves contingency: network architecture and policy can enlarge or restrict participation and expression.

Ostrom demonstrates the diversity of institutions through which communities govern common-pool resources and cautions against universal state-market prescriptions [20]. Shared meanings differ from subtractable natural resources, and platform communities differ from the long-enduring resource systems in her cases. The relevant lesson concerns design-sensitive collective governance, rules in use, monitoring, conflict resolution, and institutional variety.

These alternatives prevent the diagnostic from implying a single remedy. Corporate stewardship, public regulation, cooperative governance, community infrastructure, interoperability, fiduciary duties, contractual rights, competition, commons, and hybrid arrangements can each perform useful roles under some conditions. Section 11 treats them as candidate components within a constrained design set.

2.8 Compositional Contribution

This subsection consolidates the literature comparison and states the paper’s extension in its most modest form. It identifies what the framework adds if its component traditions remain intact.

Table 1 shows that every principal component has established antecedents. The proposed contribution is the typed connection among them. It asks researchers to identify the relational product; map experience design and trace selection; specify the interpretive infrastructure; test preference mechanisms against rivals; define coalition contribution models; distinguish value realization from

Table 2: Analytical registers and their independent warrants

Register	Central object	Required warrant	Typical error
Descriptive	stages, actors, traces, institutions, outcomes	provenance, coding, process observation, uncertainty	treating a conceptual path as an observed mechanism
Causal	effects of defined interventions	counterfactual target, design, assumptions, measurement, interference	reading preference effects from demand association
Contributive	counterfactual marginal value	coalition feasibility, baseline, horizon, outcome, solution rule	deriving contribution from total revenue
Distributive	actor-indexed benefits and burdens	accounting boundary, units, externalities, risk, uncertainty	identifying revenue with total social benefit
Normative	autonomy, justice, alienation, exploitation, legitimacy	substantive moral standards, standing, alternatives, history, consequence	deriving wrongness from inequality or influence alone
Legal	rights, duties, remedies, liability	jurisdiction, doctrine, facts, procedure, authority, remedy	converting a philosophical diagnosis into legal liability

benefit allocation; inspect recursive effects on later relations; and apply separate normative and legal standards.

The framework earns its place only if this composition changes research practice. It should produce sharper causal questions, identify missing evidence, prevent invalid transitions among contribution and entitlement, and support stage-matched institutional responses. An existing framework that already performs these functions with greater precision would justify substantial contraction of P026.

3 Analytical Vocabulary

This section defines the paper’s principal objects and separates six analytical registers. It begins with shared experience and interpretive infrastructure, then distinguishes preference formation, value realization, benefit capture, relational contribution, and interpretive appropriation.

Table 2 provides the paper’s principal firewall. Evidence can connect registers, while every transition needs an argument appropriate to the receiving register.

Definition 3.1 (Shared-experience configuration). *A shared-experience configuration is a temporally situated arrangement of participants, roles, relations, histories, practices, material and symbolic conditions, feedback, and institutions within which epistemic, affective, practical, reputational, or economic products can emerge.*

The definition emphasizes configuration over proximity. People can share a setting while acting independently. Distributed participants can sustain a dense shared practice. The relational product must be declared: mutual trust, a recommendation, a practical routine, a community norm, a collective memory, a status meaning, or another target. A claim of relational generation requires a counterfactual or process argument showing how the relation contributes beyond the selected individual inputs and common environment.

Definition 3.2 (Interpretive infrastructure). *Interpretive infrastructure is the organized set of symbols, metrics, classifications, defaults, narratives, interfaces, protocols, and institutional rules through which shared experience becomes legible, portable, comparable, actionable, and revisable for specified actors and purposes.*

The definition includes enablement and control. A common rating scale supports comparison. A reference format makes a work history usable across employers. A moderation and ranking system helps users navigate large volumes of content. A brand narrative coordinates expectations across encounters. These functions also allocate authority over selection, visibility, categories, and correction.

Interpretive infrastructure differs from interpretation as an event. A person can interpret a conversation once. An infrastructure recurrently organizes interpretation and downstream action. It includes material and institutional elements: data fields, interface positions, eligibility rules, review processes, authorized roles, retention periods, and appeals.

Definition 3.3 (Preference formation). *Preference formation is a target-indexed change in an evaluative orientation or disposition through experience, interpretation, social interaction, institutional practice, learning, adaptation, persuasion, or another specified mechanism.*

The definition leaves the moral status open. Education can form informed preferences. Friendship can transform taste. Deception can alter desire. Habit can stabilize convenience. Oppression can adapt aspiration to constrained options. Ethical analysis requires mechanism, transparency, agency, relationship, alternatives, vulnerability, and consequence.

Definition 3.4 (Value realization and benefit capture). *Value realization is the institutional conversion of a potential or relationally supported value into a declared economic, reputational, access, epistemic, or organizational measure. Benefit capture is the receipt or control of an identified share of realized benefits by an actor under a declared accounting frame.*

Realization differs from production. A community can generate attention and meaning while a platform realizes advertising or asset value. A worker can develop competence through many relations while an employer realizes productive benefit. A credentialing institution can realize fees and status while employers realize screening benefits. Several actors can realize different values from the same history.

Capture is descriptive in this definition. It includes ordinary wages, returns on investment, public revenue, community resources, or concentrated private gain. A normative classification needs standards concerning entitlement, bargaining, risk, investment, need, rights, background structure, harm, and institutional purpose.

Definition 3.5 (Relational contribution). *Relational contribution is an actor's or relation's counterfactual marginal role in producing or realizing a declared value under a specified coalition model, baseline, horizon, feasibility rule, and value measure.*

The definition makes contribution model-relative. A platform's servers, curation, security, and distribution can be essential complements. Participant content and relations can be essential complements. A community may persist after exit from one platform, or a platform may readily substitute users. These possibilities yield different coalition values. Section 6 represents the alternatives as an explicit model family.

Definition 3.6 (Interpretive appropriation of shared experience). *Interpretive appropriation of shared experience is an institutional arrangement in which an actor acquires materially asymmetric control over the selection, framing, circulation, or authorized use of meanings generated through shared relations, realizes benefit that depends on that arrangement, and leaves participants with comparatively weak capacities for contestation, revision, portability, or alternative circulation.*

This working definition names a mechanism profile. It gives the source idea a more demanding structure. Relational generation must be evidenced. Control must be stage-specific and effective. Benefit must depend on the arrangement. Participant contestation and alternatives must be assessed. The classification remains compatible with mixed effects, participant benefit, genuine institutional contribution, and public value.

Claim 3.7 (Register separation). *Relational contribution, value realization, benefit capture, distributive entitlement, and institutional legitimacy remain analytically distinct. Evidence for one coordinate supplies a reason to examine the others and leaves each further conclusion open.*

The claim disciplines the remainder of the paper. It prevents a move from participant activity to ownership, from firm investment to legitimate control, from preference change to manipulation, from benefit concentration to exploitation, or from dynamic stability to desirability. The paper uses formal countermodels to establish some logical separations and philosophical argument to preserve the rest.

4 Stage Architecture and Control

This section converts the vocabulary into a typed structural architecture. It first defines symbols and stage equations, then represents actor control through rights and effective capacities. The model extends a prior co-experience pathway by adding time, observable actions, value realization, benefit allocation, future conditions, and treatment versions.

4.1 Symbols and Domains

This subsection establishes the formal domains needed for continuous derivation. It gives every latent or observed object a declared role and preserves application-specific operationalization.

Let $i \in \mathcal{N}$ index participants, workers, communities, firms, platforms, institutions, intermediaries, and affected parties according to the application. At time t , let $R_t \in \mathcal{R}$ denote the relational configuration and $E_t \in \mathcal{E}$ the designed encounter. Let $Z_t \in \mathcal{Z}$ be a selected portable trace, while $\Gamma_t \in \mathcal{G}$ denotes the interpretive infrastructure. For actor i , let $P_{it} \in \mathcal{P}_i$ be a target-indexed preference state and $D_{it} \in \mathcal{D}_i$ an observable action. Let $V_t \in \mathcal{V}$ be a declared realized-value measure, $B_t = (B_{it})_{i \in \mathcal{N}}$ an actor-indexed benefit and burden vector, and $K_t \in \mathcal{K}$ the state of future capacities, alternatives, institutions, and relational conditions.

Let U_t^s denote a defined intervention at stage s . Background conditions W_t include price, law, culture, competitors, resources, social structure, and exogenous events. Disturbances ε_t^s collect stochastic or unmeasured inputs. These latent variables create research targets whose measurement requires additional indicators and assumptions.

4.2 Recursive Stage System

This subsection states the proposed causal system. It orders the conceptual stages while allowing empirical applications to add simultaneous, reverse, strategic, and multi-level relations.

$$E_t = f_E(R_t, U_t^E, W_t, \varepsilon_t^E), \quad (1)$$

$$Z_t = f_Z(R_t, E_t, U_t^Z, W_t, \varepsilon_t^Z), \quad (2)$$

$$\Gamma_t = f_\Gamma(Z_t, U_t^\Gamma, W_t, \varepsilon_t^\Gamma), \quad (3)$$

$$P_{i,t+1} = f_P(P_{it}, R_t, E_t, \Gamma_t, P_{-i,t}, W_t, \varepsilon_{it}^P), \quad (4)$$

$$D_{i,t+1} = f_D(P_{i,t+1}, A_{it}, Q_t, W_t, \varepsilon_{it}^D), \quad (5)$$

$$V_{t+1} = f_V(D_{t+1}, Z_t, \Gamma_t, U_t^V, W_t, \varepsilon_t^V), \quad (6)$$

$$B_{t+1} = f_B(V_{t+1}, U_t^B, W_t, \varepsilon_t^B), \quad (7)$$

$$K_{t+1} = f_K(K_t, R_t, E_t, \Gamma_t, D_{t+1}, B_{t+1}, U_t^K, W_t, \varepsilon_t^K), \quad (8)$$

$$R_{t+1} = f_R(R_t, K_{t+1}, U_t^R, W_t, \varepsilon_t^R). \quad (9)$$

Here A_{it} represents feasible access and options, while Q_t represents prices and other choice conditions. Equations (1)–(9) describe a recursive political economy. Relations enter encounter design and trace production. Interpretation enters preference formation. Preferences enter action together with access and price. Actions and traces support value realization. Benefit allocation changes future capacities and relations.

Each equation represents an open empirical object. A brand can influence encounter design through architecture and service ritual. A platform can influence Z_t through recording and moderation and Γ_t through metrics and ranking. Employers can use credentials in the access function A_{it} . Participants can alter Γ_t through collective interpretation and resistance. Regulators can change benefit allocation, portability, and revision. The architecture avoids assigning a single sovereign actor to the whole chain.

Hypothesis 4.1 (Composed control pathway). *For selected institutional arrangements, control across encounter design, trace selection, interpretive framing, ranking, and benefit allocation produces causal and distributive effects that a single ownership or revenue variable leaves unresolved.*

This hypothesis states the paper’s empirical ambition. It could fail. Ownership may dominate all relevant variation in some domains. Competitive pressure, participant mobility, professional norms, regulation, or technical architecture may distribute effective control. A stage audit can reveal either result.

4.3 Stage-Specific Control

This subsection represents control as a plural institutional position. It distinguishes access, observation, decision, revision, and exit across the stages displayed in Table 3.

Define the stage set

$$\mathcal{S} = \{R, E, Z, \Gamma, \text{rank}, \text{allocate}, V, B, K, \text{revise}\}. \quad (10)$$

Table 3: Stage-specific control positions and evidence sources

Stage	Control positions	Candidate evidence	Interpretive caution
Relational entry	membership, role, exclusion, counterpart access	terms, practice, interviews, network histories	formal entry can differ from effective participation
Encounter design	setting, timing, affordance, ritual, price, safety	design records, protocols, observation, versions	high design influence can coexist with participant improvisation
Trace selection	recording, omission, retention, format, ownership	schemas, moderation logs, provenance, deletion rules	comprehensive capture can create privacy and surveillance burdens
Framing and classification	categories, narratives, defaults, authorized interpretation	interfaces, manuals, discourse, appeals, user studies	audiences can negotiate or reject offered meanings
Ranking and allocation	metrics, weights, thresholds, visibility, access	policies, code audit, experiments, change records	ranking quality and ranking power require separate evaluation
Value realization	price, advertising, licensing, recognition, capitalization	contracts, accounts, market and asset records	realized value differs across accounting frames
Benefit distribution	wage, payout, fee, access, risk, reinvestment	actor-indexed accounts, contracts, burden studies	observed money omits learning, care, risk, and externalities
Revision and exit	appeal, correction, portability, interoperability, alternative circulation	procedures, outcome data, technical tests, exit costs	formal rights may lack practical usability

For actor i , define

$$\mathbf{C}_i = (C_{is})_{s \in \mathcal{S}}, \quad C_{is} = (a_{is}, o_{is}, d_{is}, r_{is}, x_{is}), \quad (11)$$

where the coordinates record access, observation, decision authority, revision capacity, and exit or portability. Table 3 identifies evidence that can support each coordinate. Effective capacity should accompany formal rights because a participant can possess an appeal on paper and lack the information, time, language, or security needed to use it.

The vector resists premature aggregation. Two institutions can have equal scalar “control” while occupying very different positions. One controls recording and ranking while supporting easy portability. Another leaves visibility to participants while controlling monetization and retaining all historical traces. Their causal and normative profiles differ.

Control also differs from causal efficacy. A firm can choose a narrative that audiences ridicule. A platform can change ranking weights and observe weak behavioral response. A credentialing body can define categories that employers ignore. Evidence of authority identifies a possible intervention point. Evidence of effect requires the causal analysis developed next.

5 Preference Formation and Causal Identification

This section defines causal preference questions and demonstrates a basic identification limit. It first specifies policy-sequence contrasts, then constructs stable-preference and preference-formation rivals with identical observables. It concludes with measurement, interference, mechanism, and ethical-design requirements.

5.1 Policy-Sequence Estimand

This subsection translates broad language about shaping desire into a counterfactual contrast. It fixes outcome, population, horizon, and intervention versions before considering estimation.

For horizon T , let $\bar{u}_T = (u_0, \dots, u_T)$ and $\bar{u}'_T$ denote fully specified sequences of stage interventions. For target outcome Y_{iT} , define

$$\tau_Y(\bar{u}_T, \bar{u}'_T) = \mathbb{E} [Y_{iT}(\bar{u}_T) - Y_{iT}(\bar{u}'_T)]. \quad (12)$$

The outcome can be preference P , action D , benefit B_i , or future capacity K . A study of interpretive infrastructure might vary U_t^Γ while holding product information, access, and price to a declared policy. A ranking study might compare two exposure policies over time. A credential study might vary the visible credential field while preserving the underlying work sample.

Equation (12) identifies a causal question. Estimation from data requires a further identification argument. Pearl’s structural causal framework distinguishes observation from intervention and makes causal assumptions explicit [21]. Hernán and Robins emphasize well-defined intervention versions, target-trial specification, consistency, exchangeability, and positivity [13]. Social settings add interference because one participant’s exposure and action can change another’s experience. Attrition, endogenous participation, platform policy adaptation, and strategic response complicate longitudinal interpretation.

Assumption 5.1 (Application-specific identification). *Every empirical estimate of Equation (12) requires a declared treatment version, temporal order, measurement model, consistency argument, exchangeability strategy or justified design substitute, positivity assessment, interference specification, and sensitivity analysis.*

The assumption prevents the formal system from becoming causal ornament. A platform event study, survey experiment, randomized interface test, or qualitative process trace supplies different evidence. Each method should state which part of the pathway it identifies.

5.2 Preference-Source Equivalence

This subsection gives an exact counterexample. It shows why observed action and self-report can leave the causal source of preference unresolved.

Let an observed interpretive condition $G \in \{0, 1\}$ satisfy $G \sim \text{Bernoulli}(1/2)$. Suppose the observed action and self-report are $D = G$ and $S = G$. Consider two models.

In a stable-preference model M_S , set

$$P = 1, \quad D = G, \quad S = G. \quad (13)$$

The interpretive condition changes opportunity or feasible expression and frames the report while the latent preference stays fixed.

In a preference-formation model M_F , set

$$P = G, \quad D = P, \quad S = P. \quad (14)$$

The interpretive condition changes preference, which then changes action and report.

Proposition 5.2 (Preference-source observational equivalence). *Models M_S and M_F induce the same joint distribution over the observables (G, D, S) while assigning different causal effects of G on latent preference P .*

Proof. Under both models,

$$\Pr(G = D = S = 0) = \Pr(G = D = S = 1) = \frac{1}{2}. \quad (15)$$

Under intervention, the stable-preference model gives

$$P_{M_S}(\text{do}(G = 1)) - P_{M_S}(\text{do}(G = 0)) = 0, \quad (16)$$

while the preference-formation model gives

$$P_{M_F}(\text{do}(G = 1)) - P_{M_F}(\text{do}(G = 0)) = 1. \quad (17)$$

The observable distribution therefore leaves the preference effect unidentified across these two models. $\square$

The counterexample is deliberately simple. It expresses a broad problem found in the study of endogenous social effects. Manski’s reflection problem shows how difficult it can be to separate peer influence from correlated and contextual effects [17]. P026’s witness targets a different distinction among preference, opportunity, and reporting. Its lesson is limited: demand and self-report alone can support rival mechanisms when measurement relations remain open.

The result also protects autonomy analysis. Preference formation is common to education, friendship, culture, deliberation, and personal development. The moral concern turns on how the change occurs and how it relates to a person’s evaluative agency. Evidence of changed action creates a reason for process inquiry. A manipulation finding requires an additional process and normative warrant.

5.3 Measurement and Mechanism Evidence

This subsection identifies evidence that can discriminate among preference rivals. It combines multi-indicator measurement, process evidence, longitudinal observation, and interventions while preserving uncertainty.

A research programme can begin by defining the target preference. Immediate liking, willingness to pay, identification with a status, intention to contribute, and long-run commitment are different outcomes. Measures can include repeated choices, incentive-compatible tasks, delayed choices, structured self-reports, qualitative accounts, behavioral traces, and physiological or attentional indicators where ethically and scientifically warranted. Each measure needs an interpretation and an error model.

Measurement invariance becomes central. If an interpretive intervention changes the meaning of a survey item, equal numerical responses can represent different evaluations and different numerical responses can represent a stable evaluation expressed through a changed frame. Cognitive interviewing, measurement-invariance testing, open-ended explanation, and cross-context validation can expose such changes.

Process evidence can identify intermediate mechanisms. Researchers can observe which symbols participants notice, which associations they draw, how peers respond, whether alternative narratives remain available, and how interpretations persist or decay. Negative cases matter: participants can reject an offered frame, enjoy an experience while refusing its product association, purchase for convenience while disliking the narrative, or adopt a meaning that the designer never intended.

Longitudinal design helps separate immediate priming from durable preference. Repeated measurement can examine persistence, generalization, substitution, and recovery. Panel attrition and repeated-measure reactivity require explicit analysis. Participant accounts can reveal whether the change feels like learning, discovery, conformity, aspiration, adaptation, persuasion, or pressure. Such reports provide evidence while remaining open to social desirability, retrospective construction, and unequal interpretive resources.

5.4 Ethical Experimental Design

This subsection defines a bounded experimental programme. It distinguishes low-risk variation in interpretive features from covert or high-stakes manipulation and places ethics inside study admissibility.

Low-risk experiments can vary transparent labels, ordering, explanatory context, or plural narratives within ordinary choice environments. Researchers can compare immediate and delayed evaluation, perceived meaning, action, and comprehension. Debriefing can reveal hypotheses where prior disclosure would invalidate the design. Withdrawal and data deletion should remain practical. High-stakes domains involving employment, health, credit, political participation, intimate vulnerability, or essential services demand stronger authority and safeguards.

Experiments should preserve real alternatives and avoid exploiting participant vulnerability. A study of scarcity framing can use hypothetical or low-stakes choices. A study of communal meaning can involve community review and compensation. A platform study can use sandboxed environments or prospective policy pilots with independent oversight. Deception requires a specific scientific necessity, proportionate risk, ethics approval, and effective debriefing.

Open Problem 5.3 (Preference-mechanism discrimination). *Develop a longitudinal, ethically admissible design that discriminates among stable preference under changed opportunity, information updating, social learning, status signaling, emotional association, adaptation, and institutional preference formation in one bounded shared-experience setting.*

6 Relational Contribution and Value Capture

This section formalizes relation-sensitive contribution and separates it from realized benefit and entitlement. It introduces a family of admissible coalition models, derives the Shapley efficiency identity within each model, constructs a contribution-reversal witness, and develops a sensitivity profile.

6.1 Admissible Coalition Models

This subsection specifies the assumptions required before assigning contribution. It treats coalition feasibility, baselines, outcomes, horizons, substitutes, and complements as evidential choices.

Let $\mathcal{N}$ be a finite set of relevant actors. Each model $m \in \mathcal{M}$ defines a characteristic function $v_m : 2^{\mathcal{N}} \rightarrow \mathbb{R}$. The value $v_m(S)$ is the declared value produced or realized by coalition S under model m . A model includes the baseline $v_m(\emptyset)$, time horizon, value unit, coalition feasibility, institutional rules, substitute availability, and external conditions.

The actor set should reflect the research question. A platform-community study might include participant groups, moderators, paid workers, the platform firm, advertisers, complementors, and an affected public. Treating every individual as a separate actor may be infeasible and conceptually misleading. Treating the entire participant population as one actor can erase internal inequality. The aggregation rule needs justification.

Coalition feasibility is historically and institutionally loaded. A participant community might migrate with its relations and archives. A platform might recruit substitute users. A brand might retain material infrastructure while losing a cultural scene. A credentialing body might remain effective only because employers coordinate around it. A coalition game makes these assumptions visible and still simplifies sequence, bargaining, law, and power.

6.2 Model-Relative Contribution

This subsection uses the Shapley value as one transparent allocation rule. It then converts a point attribution into a set across admissible models.

For actor i and model m , define

$$\phi_i(v_m) = \sum_{S \subseteq \mathcal{N} \setminus \{i\}} \frac{|S|!(|\mathcal{N}| - |S| - 1)!}{|\mathcal{N}|!} [v_m(S \cup \{i\}) - v_m(S)]. \quad (18)$$

Shapley's allocation averages an actor's marginal contribution over coalition orders under a transferable scalar worth model [24]. Define the model-relative set

$$\Phi_i(\mathcal{M}) = \{\phi_i(v_m) : m \in \mathcal{M}\}. \quad (19)$$

Proposition 6.1 (Within-model efficiency). *For every fixed model m under Equation (18),*

$$\sum_{i \in \mathcal{N}} \phi_i(v_m) = v_m(\mathcal{N}) - v_m(\emptyset). \quad (20)$$

Proof. For any ordering of the actor set, the sequence of marginal contributions telescopes from $v_m(\emptyset)$ to $v_m(\mathcal{N})$. Equation (18) averages these marginal contributions over all orderings. Summing across actors preserves the telescoping total. $\square$

The identity allocates the declared coalition surplus. Empirical access to v_m , selection of a defensible model family, and a distributive principle require additional evidence and argument. Other contribution or bargaining concepts may better fit sequence, network structure, nontransferable utility, externalities, power, or institutional rights.

6.3 Contribution-Reversal Witness

This subsection establishes the underidentification of relational contribution from observed total value. It uses two actors and identical grand-coalition value.

Let $\mathcal{N} = \{h, p\}$, where h represents a participant community and p an institutional platform. Set $v(\emptyset) = 0$ and $v(\{h, p\}) = 10$ in both models. In model m_1 , let

$$v_{m_1}(\{h\}) = 8, \quad v_{m_1}(\{p\}) = 0. \quad (21)$$

Equation (18) gives

$$(\phi_h(v_{m_1}), \phi_p(v_{m_1})) = (9, 1). \quad (22)$$

In model m_2 , reverse the singleton values:

$$v_{m_2}(\{h\}) = 0, \quad v_{m_2}(\{p\}) = 8, \quad (23)$$

which gives

$$(\phi_h(v_{m_2}), \phi_p(v_{m_2})) = (1, 9). \quad (24)$$

Proposition 6.2 (Grand-value underidentification). *Equal observed grand-coalition value is compatible with reversed actor contribution under admissible coalition models.*

Proof. Equations (22) and (24) share $v(\mathcal{N}) = 10$ and reverse the Shapley allocations. The observed total therefore fails to select between the contribution structures. $\square$

The witness can represent rival assumptions about substitution and persistence. Model m_1 treats community relations as largely portable and the platform as substitutable. Model m_2 treats the platform's infrastructure, reach, trust, and coordination as largely portable and the current community as substitutable. Real cases can lie between these extremes and contain more actors, externalities, histories, and nontransferable values.

The empirical task is to constrain the model family. Evidence can include migration outcomes, data and social-graph portability, substitute-platform performance, counterfactual product tests, infrastructure costs, participant retention, network dependence, moderation and safety work, brand persistence, and community continuity outside the institution. The output should report ranges and assumption sensitivity.

6.4 Benefit and Contribution Profiles

This subsection compares contribution with realized benefit under restrictive commensurability assumptions. It uses a set-valued gap to preserve model uncertainty.

Assume a declared accounting frame with nonnegative benefits b_i , total $B^+ = \sum_i b_i > 0$, nonnegative contributions, and positive surplus $\Delta v_m = v_m(\mathcal{N}) - v_m(\emptyset) > 0$. Define

$$s_i^B = \frac{b_i}{B^+}, \quad s_{im}^\phi = \frac{\phi_i(v_m)}{\Delta v_m}, \quad g_{im} = s_i^B - s_{im}^\phi. \quad (25)$$

The model-relative gap set is

$$G_i(\mathcal{M}) = \{g_{im} : m \in \mathcal{M}\}. \quad (26)$$

A positive gap means benefit share exceeds contribution share under one declared model and accounting frame. A gap that remains positive across defensible models provides a more robust distributive signal. It remains short of an entitlement conclusion. Investors can bear risk; institutions can coordinate essential complements; participants can receive nonmonetary benefit; affected nonparticipants can bear harms; equality, need, desert, bargaining, rights, and public purpose can support different allocations.

The scalar representation also has a narrow domain. Learning, belonging, reputation, privacy loss, exposure to abuse, cultural continuity, public knowledge, and future capacity can resist commensuration. Negative contributions and externalities complicate normalization. A plural benefit and burden vector becomes preferable in such settings.

Claim 6.3 (Contribution and entitlement separation). *A defensible relational-contribution estimate creates a relevant distributive consideration. Entitlement and institutional legitimacy require further principles concerning risk, investment, need, equality, bargaining, rights, consent, background structure, external effects, and public purpose.*

This claim protects both participants and institutions from automatic inference. Participant activity can be economically indispensable while the appropriate return remains contested. Institutional infrastructure can be indispensable while unilateral interpretive authority remains unjustified. Contribution evidence improves the argument by clarifying one consideration among several.

7 Recursive Institutional Dynamics

This section represents the recursive loop through which current measurement and ranking can shape later experience and value. It states a conditional stability result, distinguishes local dynamics from historical explanation, and separates stability from social evaluation.

7.1 State Update and Fixed Point

This subsection collects the stage variables into a dynamic system and derives convergence under a contraction assumption. The result serves as a transparent baseline for richer platform and institutional models.

Let

$$X_t = (R_t, E_t, Z_t, \Gamma_t, P_t, D_t, V_t, B_t, K_t), \quad X_{t+1} = F(X_t, U_t, W_t). \quad (27)$$

Fix policy and background regimes (u, w) . Suppose $F(\cdot, u, w)$ maps a complete metric space $(\mathcal{X}, d)$ into itself and

$$d(F(x, u, w), F(y, u, w)) \leq Ld(x, y) \quad \text{for every } x, y \in \mathcal{X}, \quad 0 \leq L < 1. \quad (28)$$

Proposition 7.1 (Conditional feedback convergence). *Under Equation (28), the system has a unique fixed point X^* and satisfies*

$$d(X_t, X^*) \leq L^t d(X_0, X^*). \quad (29)$$

Proof. The Banach contraction theorem gives existence and uniqueness of X^* and convergence of iterates. Repeated application of Equation (28) yields the stated bound. $\square$

For a differentiable finite-dimensional model, local analysis can inspect the Jacobian $J_F(X^*)$. A spectral radius below one supports local asymptotic stability under standard regularity conditions. The empirical meaning of the derivatives requires a scale, time step, policy regime, and measured state.

7.2 Institutional Interpretation

This subsection translates the formal update into platform, brand, and ranking mechanisms. It locates agency across sociotechnical feedback positions.

A platform can host interactions, define which traces are recordable, classify content and participants, rank visibility, allocate attention, and observe subsequent activity. Participants respond to the resulting environment. Creators adapt formats and topics. Moderators and firms revise policy. Advertisers and complementors change incentives. Regulators modify constraints. The next state therefore depends on several strategic and institutional actors.

A brand can also create feedback. Designed encounters generate stories, images, reviews, and status associations. Market research selects signals from those traces. Campaigns and service rituals adapt. Participants repeat, reinterpret, parody, or abandon the frame. A credential system observes employer uptake, applicant behavior, and institutional prestige, then changes categories and thresholds. Recursion is broader than computational recommendation.

Espeland and Sauder identify self-fulfilling prophecy and commensuration as mechanisms of ranking reactivity [9]. Nieborg and Poell describe cultural commodities continually reworked through platform governance and datafied feedback [19]. Bucher emphasizes the relational and situated existence of algorithmic power [6]. Equation (27) supplies a common surface for comparing these processes while retaining their empirical differences.

7.3 Stability and Social Evaluation

This subsection prevents a mathematical property from acquiring an evaluative conclusion. It distinguishes convergence, persistence, concentration, diversity, learning, autonomy, and regenerative capacity.

A stable configuration can support reliable coordination, safety, trust, discovery, livelihood, and community memory. It can also stabilize exclusion, dependence, narrow visibility, unequal benefit, or weak contestability. An unstable system can support experimentation and plural discovery or produce insecurity and arbitrary rule change. Convergence therefore carries an open normative status.

Likewise, a high feedback coefficient can represent rapid learning, amplification of popularity, reputational cascade, corrective adaptation, or destabilizing strategic response. A low coefficient can represent resilience, stagnation, weak measurement, or meaningful participant autonomy. The substantive coordinates must be measured separately.

The contraction assumptions can fail through thresholds, delays, strategic anticipation, multiple attractors, network interference, shocks, and policy changes. Historical power can also select the state space and feasible policies before the modeled dynamics begin. A local fixed-point analysis should therefore accompany institutional history and qualitative process study.

Open Problem 7.2 (Recursive political-economic identification). *Develop an empirically estimable*

Table 4: Constructed cases, conversion paths, and identification burdens

Case	Relational product and infrastructure	Value and feedback pathway	Central evidence burden
Branded celebration	intimacy, recognition, memory, status; space, ritual, scarcity, service, narrative	association → preference or signaling → purchase → brand learning and redesign	distinguish experience quality, prior taste, social signaling, meaning uptake, and preference change
Platform community	content, norms, humor, identity, reputation, ties; metrics, moderation, ranking, recommendation	participation → traces and data → attention, transaction, or asset value → ranked future encounters	identify ranking and policy effects under self-selection, interference, substitution, and rule change
Credential and reference	competence traces, trust, endorsement, reputation; forms, categories, issuers, employer conventions	relational history → portable signal → allocation → wage, access, or institutional prestige	separate target competence, signaling, status closure, issuer reputation, and labor-market demand

model that separates participant adaptation, ranking reactivity, firm policy revision, competitor response, and regulatory change while preserving network interference and heterogeneous exit costs.

8 Comparative Mechanism Cases

This section applies the architecture to three constructed cases: branded celebration, platform community, and credential conversion. The cases test whether one stage vocabulary can expose meaningful similarities while preserving different actors, institutions, values, and evidence requirements. Table 4 provides the comparative register.

8.1 Branded Celebration

This subsection examines an institutionally designed encounter in which participants bring intimate relations and a firm supplies material, symbolic, and service conditions. It separates co-produced meaning, preference formation, signaling, value realization, and participant benefit.

Consider a restaurant, hotel, luxury retailer, or event service designed around celebration. The institution supplies architecture, lighting, sound, food or product quality, service scripts, scarcity, recognizable symbols, and a narrative of care, distinction, belonging, or achievement. Participants supply their relationship, history, vulnerability, attention, conversation, occasion, and later memory. Staff contribute emotional, practical, and interpretive labor. Other customers and wider cultural conventions shape status and atmosphere.

The resulting meaning can be genuinely valuable to participants. Institutional design can help people mark transitions, express care, discover aesthetic forms, and coordinate expectations. The economic product includes service quality and material inputs as well as a supported relation. A political economy should preserve these contributions.

The same arrangement can attach participant-generated intimacy and memory to a commodity or brand. Photographs, stories, reviews, and repeated rituals circulate the association. Scarcity and

social recognition can connect the encounter to distinction. The firm can learn from participant traces, refine the ritual, and realize revenue or brand value. Arvidsson’s account of brands and Bourdieu’s account of taste and distinction provide important antecedents [1, 4].

Several rivals fit a purchase increase. Participants may receive higher quality information. The venue may reduce coordination costs. A prior preference may find an appropriate product. Public consumption may signal status. Emotional association may change willingness to pay. Peer expectations may alter the feasible social choice. A persuasive narrative may change the preference itself. Equation (12) requires the study to select one contrast.

An ethical study could compare transparent interpretive framings within otherwise similar low-stakes experiences. Outcomes could include enjoyment, perceived meaning, willingness to pay, recall, later preference, social-signaling inference, and narrative uptake. Open-ended accounts could identify resistance and unintended interpretation. Longitudinal follow-up could distinguish temporary association from durable orientation. The design should compensate participant time and staff labor, protect intimate data, and avoid engineering high-cost purchase pressure.

The interpretive-appropriation classification would require more. Researchers would need evidence that relationally generated meanings materially support value; the institution controls selection, framing, or circulation; realized benefit depends on that control; and participant alternatives or revision capacities are comparatively weak. A well-liked brand with transparent framing and many alternatives may have substantial interpretive influence while falling outside the proposed profile.

8.2 Platform Community

This subsection examines the source sequence in its clearest recursive form. It distinguishes the community’s relational products from the platform’s infrastructure, moderation, distribution, commercialization, and governance contributions.

Imagine a platform community whose participants develop specialized humor, mutual aid, reputations, aesthetic conventions, informal expertise, memories, disputes, and identity. These products depend on participant histories and relations. The platform provides hosting, interface, search, security, moderation, recommendation, payments, identity management, and reach. Paid and contracted workers maintain the service. Advertisers, creators, app developers, regulators, and affected nonparticipants enter the wider system.

The platform records selected traces. It measures views, replies, ratings, reports, purchases, follows, and retention. It classifies content and actors, ranks visibility, recommends future encounters, and enforces rules. Participants learn which forms receive attention. Creators adapt. Community norms change. The platform updates its systems. This is the host–measure–classify–rank–redesign loop represented by Equation (27).

Digital-labor, presumption, and platform literatures already analyze much of this process [26, 23, 29, 19]. The P026 analysis asks additional bookkeeping questions. Which relational product is under study? Which platform function supports it? Which traces are necessary for service and which support commercial realization? Which coalition counterfactuals preserve the community or infrastructure? Which benefits accrue as income, access, learning, reputation, data, attention, risk, or asset value? Which actors can appeal, revise, port histories, or move collectively?

The contribution-reversal witness is especially useful here. A platform-centered model emphasizes infrastructure, reach, security, moderation, and substitution among participants. A community-

centered model emphasizes portable relations, cultural products, moderation work, and the possibility of migration. Observed platform revenue remains compatible with both models. Migration studies, interoperability tests, policy shocks, community histories, infrastructure accounting, and substitute-service analysis can constrain the family.

Empirical identification faces interference. A ranking change alters what participants see and what creators produce; participants then change one another's environment. Platform policies often change simultaneously, and affected actors strategically adapt. A phased policy experiment, randomized exposure within defensible safety limits, or carefully analyzed rule change can identify selected short-run effects. Long-run community formation may require panel, network, ethnographic, and archival evidence.

Governance must also address content safety and third parties. Easy portability can carry harassment records, private communications, or harmful content. Participant control can reproduce dominant internal factions. Platform moderation can protect vulnerable participants while concentrating private authority. The relevant design object is a plural arrangement of rights, responsibilities, public values, audit, privacy, appeal, and alternatives.

8.3 Credential and Reference Conversion

This subsection examines how histories of situated work become portable signals and allocation devices. It keeps competence validity with the preceding institutional-translation paper and focuses on value, authority, labor-market access, and recursive status.

A professional reference converts a relation among worker, colleagues, supervisor, organization, and affected stakeholders into an authorized statement. A credential compresses education, assessment, institutional reputation, and sometimes practical experience into a category. Employers, clients, regulators, and funders use the portable object to allocate access. The resulting wage, role, prestige, or opportunity creates economic value for holders, issuers, employers, and intermediaries.

Spence's signaling model provides one mechanism [25]. Karpik's judgment devices provide another, especially for uncertain and multidimensional professional quality [16]. Bourdieu directs attention to cultural capital, classification, and social reproduction [4]. Fourcade and Healy show how classifications can produce market positions and moralized judgments [10]. These mechanisms can coexist.

The shared-experience contribution lies upstream. Competence and reputation can develop through many encounters, feedback relations, opportunities, and institutional supports. A reference selects part of this history. A credential authorizes a category. Employers realize screening and coordination benefits. Issuers can realize fees and status. Candidates gain or lose access. Past allocation changes future experience, which then changes later credentials and references.

The political-economic questions concern control and distribution. Who can obtain the relevant formative opportunities? Who can issue or contest the portable signal? Which relationships count as authoritative? Which institutional prestige enters the inference? Which actors benefit from credential requirements? Which alternative demonstrations of competence remain available? Which labor-market actors can coordinate around a new signal?

Credential validity and labor-market power should remain separate. A well-validated assessment can still support exclusion through price or access. A weak proxy can still coordinate a market effectively. An accessible credential can widen opportunity while increasing dependence on one

issuer. A reference can convey valuable situated information and reproduce unequal networks. The stage profile shows where evidence and remedy belong.

8.4 Comparative Result

This subsection tests the cross-case coherence of the framework. It states the common mechanism and the institutional remainder.

Table 4 identifies a shared sequence: relations produce a target object; infrastructure makes a selected representation portable; downstream actors use the representation; value and benefits are realized; use changes later conditions. The same sequence supports different theories in each case. Branded celebration emphasizes taste, ritual, association, and purchase. Platform community emphasizes datafication, ranking, labor, network effects, and governance. Credentials emphasize signaling, assessment, status, and labor-market allocation.

The comparison succeeds when it produces explicit disanalogies and sharper questions. It fails when “shared experience” replaces domain concepts or when one moral diagnosis spreads across all cases. The cases therefore remain constructed mechanism maps pending empirical selection and review.

9 Diagnostic and Normative Architecture

This section converts the descriptive and formal work into a plural diagnostic. It first defines an audit vector, then establishes the evidence profile for interpretive appropriation and the additional warrants required for preference, alienation, exploitation, and responsibility judgments.

9.1 Plural Audit Profile

This subsection states the diagnostic coordinates and their evidential roles. It retains unresolved and contested values through a vector profile.

For institutional arrangement j , define

$$\mathcal{A}_j = (R_j, C_j, I_j, T_j, \Phi_j, B_j, Q_j, X_j, K_j, O_j, W_j). \quad (30)$$

The coordinates record relational generation R ; stage-specific control C ; interpretive-authority distribution I ; identified preference effects T ; contribution uncertainty Φ ; benefits and burdens B ; contestability and revision Q ; exit, interoperability, and portability X ; future relational and regenerative effects K ; opacity and auditability O ; and external harms, public interests, and background inequality W .

Table 5 keeps evidence and evaluation adjacent while preserving their boundary. Every coordinate can be resolved, bounded, disputed, or open. The profile can compare institutional designs without a universal aggregation rule.

9.2 Interpretive Appropriation

This subsection operationalizes the paper’s proposed diagnostic term. It states component conditions and preserves mixed cases.

Table 5: Diagnostic coordinates, evidence states, and normative extensions

Coordinate	Evidence object	Permitted descriptive result	Further evaluative question
Relational generation	dependence process and counterfactual	target value depends on specified relations within bounds	standing, contribution, and affected-party scope
Control	documented rights and effective capacities by stage	actor can access, observe, decide, revise, or port	domination, accountability, and institutional purpose
Interpretive authority	framing, authorization, uptake, resistance, revision	authority is concentrated, distributed, plural, or contested	epistemic and interpretive justice
Preference effect	identified intervention contrast and mechanism evidence	target orientation changes under declared policy	autonomy, persuasion, adaptation, or manipulation
Contribution	model family and sensitivity range	contribution lies within a stated set	entitlement, bargaining, desert, need, and risk
Benefit and burden	actor-indexed plural accounting	distribution and concentration under declared frame	exploitation, equality, public value, and compensation
Contestability and exit	practical procedure and outcome evidence	participants can challenge, correct, port, or leave at stated cost	legitimacy, dependence, and freedom
Future conditions	longitudinal capacities, alternatives, and institutions	later generative conditions expand, persist, or contract	generative justice and intergenerational responsibility
External effects	evidence concerning nonparticipants and public values	specified external benefit or harm occurs	regulation, public law, and broader standing

A provisional classification of interpretive appropriation requires four evidenced components:

- (i) a declared meaning or interpretive product depends materially on shared relations;
- (ii) an actor possesses materially asymmetric effective control over selection, framing, circulation, or authorized use;
- (iii) the actor realizes a benefit whose production or realization depends on that arrangement; and
- (iv) participants possess comparatively weak effective capacities for contestation, revision, portability, or alternative circulation.

The components can vary in strength and interact. Strong relational generation with plural interpretive authority may produce co-governed value. Concentrated framing with easy exit and robust alternatives may produce limited dependence. High benefit concentration with transparent participant agreement may still raise distributional questions. Weak contestability can become especially important when reputation, social graph, historical trace, or community membership is difficult to port.

The term *appropriation* highlights the acquisition and exercise of control over a relation-generated interpretive product. It avoids an immediate property conclusion. Legal ownership can be present or absent. Participants can receive benefits. The institution can make essential contributions. A further wrongness judgment requires a moral account of authority, consent, fairness, autonomy, harm, background conditions, and alternatives.

9.3 Preference Change and Manipulation

This subsection separates descriptive influence from manipulation. It identifies evaluative dimensions without committing the paper to one complete manipulation theory.

Every social world shapes preference. Family, education, friendship, art, ritual, religion, media, markets, and politics contribute to evaluative development. A political economy should examine asymmetries and purposes while preserving beneficial learning and chosen transformation.

A manipulation assessment can examine deception, opacity, bypass of deliberation, exploitation of vulnerability, control over options, relationship-specific duties, targeting, reversibility, and the person's capacity to understand and contest the influence. Intention may matter in some accounts and less in structural analysis. The resulting profile can distinguish transparent persuasion, ordinary association, social learning, covert behavioral steering, adaptive preference under constrained options, and coercive influence.

The exact result in Section 5 also imposes epistemic humility. Researchers should establish a preference effect before classifying its mechanism. A troubling interface can deserve governance on transparency or consumer-protection grounds even while preference mediation remains unidentified. Conversely, an identified effect can be benign or beneficial under a defensible relationship and process.

9.4 Alienation Profiles

This subsection reconstructs the source discussion's three alienation dimensions and places them in dialogue with epistemic injustice and social philosophy.

Epistemic alienation concerns a participant's limited resources or standing for understanding an experience. Unequal vocabulary, education, information access, or credibility can contribute. Fricker's analysis of hermeneutical injustice provides a demanding nearby framework where structural inequality in interpretive resources creates a distinct wrong [12].

Interpretive alienation concerns disproportionate external authority over what an experience means and how that meaning can circulate or be revised. A platform category, brand narrative, professional classification, or public representation can become authoritative beyond participants' control. The classification requires attention to plurality because participants themselves can disagree and external interpreters can add legitimate insight.

Generative alienation concerns external shaping of the conditions through which knowledge, desire, value, and relational capacity emerge. The source hypothesis is strongest when design, interpretive infrastructure, and benefit realization align along a path advantageous to one actor. It remains an open concept. Every institution shapes generative conditions, and many do so constructively.

Jaeggi's account of alienation as a disturbed relation of appropriation to self and world provides a

philosophical test [15]. An adequate application should show how the institutional relation impairs an actor’s capacity to make the relevant practices, meanings, or transformations their own under a defensible account. Feelings of estrangement can provide partial evidence within that wider argument.

The three dimensions can diverge. A participant can understand a platform perfectly and face weak authority over its ranking. A brand can provide a useful interpretive vocabulary that participants freely revise. An institution can shape future conditions while distributing governance and benefit widely. The plural profile therefore remains primary.

9.5 Exploitation, Injustice, and Responsibility

This subsection locates stronger judgments beyond the paper’s core diagnostic. It states the additional work needed for political, moral, institutional, and legal conclusions.

An exploitation claim needs a theory of unfair advantage, vulnerability, domination, transaction, or structural relation, together with facts satisfying that theory. Contribution and benefit asymmetry can be relevant. Consent, alternatives, bargaining power, risk, background injustice, labor status, externalities, and institutional necessity also matter. The general generativity-exploitation paper series develops these questions at greater length. P026 contributes a shared-experience mechanism within that wider framework.

An injustice claim requires an account of the relevant good, standing, institution, distribution, procedure, and remedy. Epistemic injustice can concern credibility and interpretive resources. Distributive injustice can concern benefits and burdens. Relational injustice can concern domination or status. Generative injustice can concern access to future capacities and alternatives. One arrangement can occupy several registers.

Responsibility should follow role, power, knowledge, feasible alternatives, causal contribution, institutional authority, and remedy capacity. Designers, executives, moderators, professional bodies, employers, regulators, advertisers, participant leaders, and users can have different responsibilities. Forward-looking institutional responsibility can exist where individual culpability remains open.

Legal liability requires a named jurisdiction, doctrine, procedural setting, evidence, decision maker, and remedy. Data protection, consumer law, labor law, competition, intellectual property, fiduciary law, contract, discrimination, and sector regulation can become relevant. Jurisdiction-specific legal analysis remains a later stage of the research programme.

10 Empirical Research Programme

This section translates the framework into a staged empirical programme. It defines an admissible design intersection, then proposes process, causal, contribution, accounting, longitudinal, and governance studies with explicit ethics gates.

10.1 Admissible Design Set

This subsection states the joint conditions for a study to support the intended inference. It treats ethics, rights, and revision as methodological requirements.

Table 6: Empirical modules, estimands, and advancement gates

Module	Primary estimand or object	Method family	Advancement gate
Stage process	actor, sequence, control, interpretation, resistance	archival study, observation, interviews, interface and policy analysis	convergent evidence supports a bounded mechanism map
Preference formation	Equation (12) for preference and action	ethical field or survey experiment, panel, natural experiment	rivals, versions, measurement invariance, and persistence are addressed
Ranking feedback	short- and long-run state responses	phased policy change, randomized exposure, panel network analysis, event study	interference, simultaneous changes, and adaptation are modeled
Contribution family	$\Phi_i(\mathcal{M})$ and assumption sensitivity	migration study, substitute analysis, infrastructure accounting, coalition scenarios	model family is historically and institutionally defensible
Benefit distribution	plural B_i profile and externalities	accounts, contracts, surveys, risk and burden audit	units, boundaries, affected parties, and missing values are explicit
Governance intervention	contestability, portability, benefit, capacity, safety	pilot, cluster trial, comparative case, participatory evaluation	benefits survive privacy, safety, cost, and public-interest review

Let $\mathfrak{D}$ be a set of candidate studies. Define

$$\mathfrak{D}^* = \mathfrak{D}_{\text{target}} \cap \mathfrak{D}_{\text{causal}} \cap \mathfrak{D}_{\text{measure}} \cap \mathfrak{D}_{\text{process}} \cap \mathfrak{D}_{\text{ethics}} \cap \mathfrak{D}_{\text{rights}} \cap \mathfrak{D}_{\text{revision}}. \quad (31)$$

The sets require a declared object, population, and horizon; a credible causal or comparative design; valid measures; process evidence connecting stages; ethical review and proportionate risk; privacy, consent, withdrawal, and affected-party safeguards; and a revision or stopping rule.

Equation (31) supports graded interpretation. A rich ethnography can establish mechanisms and participant meanings while leaving average causal effects open. A randomized interface test can estimate a local exposure effect while leaving long-run community change open. Accounting can map benefits while leaving contribution open. A useful research programme combines methods according to their evidential roles.

Table 6 orders evidence through a plural-method architecture. A causal estimate should enter the stage process and benefit map as one evidential component.

10.2 Stage Process Study

This subsection defines the first empirical pass for any case. It maps actual practices before fitting the full formal architecture.

Researchers should select one bounded institution, value pathway, and time period. They can reconstruct design decisions, category changes, ranking policies, contractual relations, monetization methods, appeals, and exit conditions. Participant, worker, manager, moderator, customer, interme-

diary, regulator, and affected-party accounts can reveal different positions. Archival records and interface versions can identify temporal changes.

The study should seek negative and deviant cases. Offered meanings can fail. Communities can migrate. Metrics can lose authority. Firms can return benefits. Participants can gain new capabilities. Regulators can redistribute control. These cases test the pathway and protect the analysis from selecting only successful commercial influence.

The output is a stage map with evidence states. Each arrow should be labeled as observed process, association, participant interpretation, institutional claim, causal estimate, or unresolved hypothesis. The map can then determine whether a causal or contribution study is feasible.

10.3 Preference and Interpretation Study

This subsection proposes a mixed-method design for preference formation. It pairs controlled variation with longitudinal and interpretive evidence.

Select low-risk interpretive features within an existing environment. Randomization can vary framing, category, ordering, social-information display, or explanatory context while preserving price and access where feasible. Measure immediate evaluation, action, comprehension, perceived meaning, social-signaling inference, and later preference. Include open-ended reasons and opportunities to reject offered categories.

The analysis should compare several causal models: direct information updating, opportunity change, social norm inference, status signaling, affective association, and preference formation. Multiple indicators and delayed outcomes can improve discrimination. Pre-analysis should state the target, mediator ordering, treatment versions, attrition strategy, and interference assumptions.

Qualitative follow-up can examine whether participants experienced discovery, expression, persuasion, conformity, adaptation, pressure, or indifference. These categories should remain participant-contestable. Researchers should analyze differences by prior experience, resources, identity, and vulnerability while protecting privacy and avoiding stigmatizing interpretation.

10.4 Contribution and Realization Study

This subsection defines the evidence needed to constrain coalition models. It combines institutional accounting, counterfactual comparison, migration, substitution, and sensitivity analysis.

Begin with a declared value measure and horizon. Map the inputs supplied by participants, workers, institutions, capital providers, public infrastructure, communities, and external actors. Identify which inputs are complementary, substitutable, persistent, transferable, or legally constrained. Record coordination, safety, moderation, maintenance, and distribution costs alongside participant activity.

Candidate evidence includes community performance across platforms, platform performance across communities, service interruption, migration, feature removal, archive portability, creator or worker exit, substitute recruitment, pricing changes, and policy shocks. Some counterfactuals remain historically impossible. Scenario elicitation can supplement evidence while retaining wide uncertainty.

Construct a bounded family $\mathcal{M}$ and compute $\Phi_i(\mathcal{M})$. Report which assumptions drive the range.

Alternative contribution rules can test solution-concept sensitivity. A result should be expressed as a range, partial order, or robust qualitative conclusion when point precision lacks support.

Value realization requires a separate accounting study. Revenue, profit, asset valuation, market access, institutional prestige, user learning, community resources, and public value belong to different frames. A platform’s financial value can reflect expectations about future network effects. A credential’s value can be realized through wage differences and issuer status. A brand’s value can include price premium and resilience. The manuscript treats these as separate outcome families.

10.5 Recursive Feedback Study

This subsection specifies research on hosting, measurement, classification, ranking, and later experience. It combines causal variation with network and institutional process evidence.

A suitable case has recorded rule changes, measurable exposures, participant histories, and a defensible outcome horizon. Researchers can study a phased ranking change, a new rating display, a moderation threshold, or a revised credential classification. Short-run outcomes include visibility, action, and entry. Longer-run outcomes include content adaptation, relationship formation, concentration, exit, skill development, and alternative use.

Network interference belongs inside the design. One participant’s exposure can affect others through creation, imitation, reply, and competition. Cluster randomization, saturation designs, network exposure models, or policy-boundary comparisons may help. Each introduces assumptions. Platform adaptation during the study should be documented as part of the institutional process.

The contraction model provides a baseline question: does the observed response attenuate toward one regime under stable policy? Evidence of thresholds, path dependence, multiple stable configurations, or ongoing policy revision should motivate richer models. A successful study can reject the simple baseline and still advance the programme.

10.6 Participatory and Ethical Governance

This subsection places participants, workers, communities, and affected parties inside target construction and data governance. Its objective is both epistemic and protective.

Participant involvement can identify relational products and meanings that institutional records miss. Workers can identify hidden maintenance, safety, service, and moderation labor. Managers can identify infrastructure and risk. Affected nonparticipants can identify external harms. Their views can conflict. The study should record representation, authority, disagreement, and decision rules.

Data governance should specify lawful authority, consent where applicable, collection minimization, third-party protection, access, retention, correction, reuse, security, and deletion. Relational data implicate people beyond the direct participant. Social graphs, intimate messages, references, and community histories require special care.

Research on preference formation carries a reflexive risk: the experiment can perform the influence under study. Independent ethics review, low stakes, transparent alternatives, debriefing, withdrawal, and long-run monitoring can reduce harm. Community review can identify culturally inappropriate manipulations or extraction. Compensation should cover research contribution without becoming

high-pressure inducement.

11 Institutional Design

This section organizes possible institutional responses as a constrained design set. It links remedies to evidenced stages and compares transparency, participation, contestability, portability, benefit return, alternative infrastructure, privacy, and public-interest protections.

11.1 Constrained Response Set

This subsection defines admissibility for institutional interventions. It avoids treating diagnosis as an automatic policy command.

Let $\mathcal{U}$ be candidate responses and define

$$\mathcal{U}^* = \mathcal{U}_{\text{evidence}} \cap \mathcal{U}_{\text{participation}} \cap \mathcal{U}_{\text{contest}} \cap \mathcal{U}_{\text{portability}} \cap \mathcal{U}_{\text{benefit}} \cap \mathcal{U}_{\text{privacy}} \cap \mathcal{U}_{\text{public}} \cap \mathcal{U}_{\text{feasible}} \cap \mathcal{U}_{\text{revisable}}. \quad (32)$$

The intersection requires evidence, participant and affected-party standing, workable contestation, appropriate portability, benefit and burden review, privacy, public values, institutional feasibility, and revision. A response can be valuable while failing one universal version. Design remains contextual.

Table 7 places each intervention near a control position. A benefit-sharing rule addresses distribution and leaves interpretive authority open. Explanation addresses intelligibility and leaves portability open. Cooperative ownership can improve voice and still reproduce internal exclusion. Layered design is often required.

11.2 Provenance, Explanation, and Contestation

This subsection treats information and challenge as infrastructure. It specifies what an auditable record should contain and where disclosure can create competing risks.

A provenance record can state the source relation, selected trace, omitted fields, classification rule, intended use, retention, authorized decision maker, and revision history. A ranking explanation can identify major inputs, policy objectives, and appeal routes. A credential can disclose target competence, evidence basis, validity limits, period, and issuer authority. A brand or platform can explain commercial use of participant traces and meanings.

Explanation should be actionable. A lengthy technical statement can satisfy formal disclosure while leaving participants unable to correct error or change outcomes. Layered explanation, accessible language, examples, and support for challenge can improve practical value. Researchers should study comprehension and appeal outcomes.

Disclosure also creates risks. Detailed ranking rules can enable gaming. Provenance can expose private relationships. Moderation transparency can help abusers evade safeguards. Commercial secrets and security can carry legitimate weight. Independent audit, regulator access, confidential review, and aggregate reporting can provide alternatives to universal public disclosure.

Table 7: Stage-matched institutional response families and principal tradeoffs

Response family	Targeted position	Candidate benefit	Principal tradeoff
Provenance and explanation	trace selection, category, ranking, value use	intelligibility, challenge, research access	gaming, complexity, trade secrecy, cognitive burden
Contestability and correction	classification, reputation, credential, moderation	error repair, dignity, legitimacy, institutional learning	delay, cost, abuse of appeals, privacy exposure
Plural interpretation	narrative, category, authorized meaning	cultural and epistemic plurality, resistance to monopoly	fragmentation, coordination cost, harmful interpretation
Portability and interoperability	traces, reputation, social graph, archive, credential	exit, competition, community continuity, alternative use	privacy, security, context loss, third-party rights
Participant governance	rule, metric, moderation, benefit, revision	situated knowledge, voice, accountability	representation, capture, internal inequality, expertise and speed
Benefit return	revenue, wage, fund, infrastructure, community support	distribution, capacity, reciprocity, legitimacy	attribution uncertainty, administration, strategic behavior
Independent audit	causal effects, accounting, safety, rights, process	credible scrutiny and revision	access limits, auditor dependence, standardization pressure
Alternative infrastructure	cooperative, public, commons, federated, hybrid forms	plural pathways, reduced dependence, experimentation	scale, finance, maintenance, governance burden

11.3 Portability and Alternative Circulation

This subsection addresses dependency created by accumulated traces, reputation, relations, and history. It distinguishes technical export from meaningful collective mobility.

Portability can include content, data, social graph, reputation, references, credentials, settings, moderation history, and community archives. Technical export may preserve files while losing context, visibility, interoperability, or collective relations. Meaningful portability requires compatible standards, lawful authority, third-party safeguards, provenance, and practical receiving institutions.

Collective mobility raises distinctive questions. A community’s value can lie in the network and norms beyond individual data. Moving the graph can implicate members who prefer to remain. A platform’s moderation and safety history can be difficult to transfer. Governance should therefore distinguish personal data rights, collective archive stewardship, protocol interoperability, and institutional migration.

Portability can strengthen competition and exit. It can also spread harmful content, weaken privacy, or increase concentration around common standards. Pilot evaluation should measure actual switching, community continuity, safety, and distributional effects.

11.4 Participation and Benefit Return

This subsection examines voice and distribution without assuming a single contribution or ownership rule. It offers several institutional forms and identifies their evidence burdens.

Participant governance can include advisory councils, elected representation, co-determination, worker voice, community moderation, veto over selected uses, review of metrics, and authority over benefit funds. Representation requires attention to internal inequality, inactive participants, vulnerable minorities, paid workers, experts, and affected nonparticipants. Participation can become symbolic unless it changes decisions or creates accountable reasons.

Benefit return can include wages, fees, revenue shares, dividends, creator funds, community grants, infrastructure investment, training, portability support, public contribution, and compensation for specific uses. A contribution family can inform design while leaving the final principle open. Flat equal shares, activity-based allocation, need, risk, public purpose, and negotiated settlement can each be relevant.

Vargo and Lusch’s co-creation perspective highlights mutual value and relationship [28]. Critical co-creation literature highlights labor, control, and distribution [29]. A strong institutional design should ask both questions: which cooperative benefits become possible, and how are work, authority, risk, and return organized?

11.5 Commons, Public, Cooperative, and Hybrid Forms

This subsection expands the institutional menu and preserves design specificity. It treats organizational form as a bundle of rules and capacities.

Benkler’s social-production analysis identifies nonmarket and commons-based possibilities in networked information production [3]. Ostrom’s work demonstrates that durable collective governance depends on context-sensitive institutions and specific rules in use [20]. These traditions support experimentation with cooperatives, community archives, public digital infrastructure, open protocols, federated services, trusts, stewardship bodies, and mixed arrangements.

Each form distributes finance, maintenance, safety, expertise, authority, and accountability differently. Public ownership can support public values and face political capture. Cooperative governance can strengthen participant voice and face capital or representation constraints. Open protocols can support exit and create moderation or coordination burdens. Private firms can innovate and scale while concentrating control. Hybrid forms can combine strengths and inherit several weaknesses.

Institutional evaluation should therefore return to Equation (30). The relevant comparison concerns actual control, interpretation, benefit, contestation, portability, future capacity, public values, and revision under feasible alternatives.

12 Objections and Scope Conditions

This section subjects the framework to its strongest conceptual, empirical, formal, and institutional objections. Each subsection states a revision condition and clarifies which parts of the paper can survive the objection.

12.1 Theoretical Redundancy

This subsection addresses the possibility that the paper merely combines established concepts. It defines a contribution test based on research discrimination.

The literature review confirms extensive precedent. Co-creation, prosumption, free labor, affective value, branding, endogenous preferences, judgment devices, platformization, classification, ranking reactivity, epistemic injustice, and alienation already cover much of the terrain. A new label for their overlap would add little.

The proposed contribution survives only if the stage architecture changes inquiry. It should expose an invalid inference, specify a new identifiable contrast, locate a control position missed by a broader category, or guide a different institutional response. The two exact countermodels offer one contribution: they show why demand and total value leave preference and contribution unresolved. The plural audit offers another candidate contribution. A systematic review may show that existing frameworks already perform these tasks. Such a finding should narrow the paper and replace originality language with synthesis.

12.2 Relational Scope Inflation

This subsection addresses an excessively broad use of shared experience. It gives an admission rule for applications.

Every economy contains relations and social context. A framework that labels every activity relational loses discrimination. An application should therefore identify a bounded configuration, a target product, a process of relational dependence, and a conversion pathway. Shared exposure, parallel individual work, or ordinary market context provides a rival explanation.

Relational contribution should be tested against models using individual inputs, common environment, selection, and institutional resources. A finding that relations add little for the declared value removes the case from the paper's core while leaving standard political economy intact.

12.3 Participant Romanticization

This subsection addresses the possibility that participant-generated meaning receives an unwarranted positive status. It expands the actor and harm set.

Communities can generate exclusion, misinformation, harassment, conformity, status closure, and abusive norms. Participants can exploit workers, newcomers, vulnerable members, and outsiders. Popular meaning can damage public knowledge or minority rights. Relational generation therefore carries an open normative status.

The audit includes internal authority, affected nonparticipants, public values, external harms, and background inequality. Institutional curation and moderation can be valuable contributions. Participant governance requires minority safeguards, review, and responsibility. The same framework can analyze harmful community power and beneficial platform intervention.

12.4 Institutional Contribution and Risk

This subsection addresses the claim that participant-centered analysis obscures investment, coordination, curation, and risk. It places institutions inside the same counterfactual model.

Firms and institutions can supply capital, design, labor, safety, moderation, distribution, trust, legal compliance, dispute resolution, and long-horizon risk-bearing. These inputs can enable a relational product that would otherwise remain local, fragile, inaccessible, or harmful. Their contribution belongs in v_m and B_i .

The contribution family can yield institution-centered results when evidence supports portability of infrastructure and substitution among participants. It can yield participant-centered results when community relations persist and infrastructure is substitutable. A credible analysis should include paid and contracted workers separately where their interests diverge from the firm.

12.5 Preference Paternalism

This subsection addresses the risk of treating socially formed preferences as defective. It places autonomy in process, institutional relation, and reflective agency alongside preference origin.

Preferences arise through social life. Their complete independence from influence supplies an implausible standard. People can value transformative experiences, guidance, ritual, expertise, and shared taste. An institution can help participants discover values they endorse.

Normative analysis should therefore examine access to reasons, transparency, deception, coercion, vulnerability, alternatives, revisability, and relationship-specific duties. Participants' reflective endorsement matters and may remain contested or temporally unstable. The paper's preference effect is descriptive until a further autonomy argument is supplied.

12.6 Formal Precision and Counterfactual Fiction

This subsection addresses false precision in coalition and dynamic models. It defines sensitivity and abandonment rules.

Coalitions can be historically impossible. Social relations can be constitutive, sequence-dependent, and nontransferable. A scalar value can erase public goods, identity, care, harm, and incommensurable outcomes. The Shapley value also embeds axioms that need justification for the application.

The paper responds by making $\mathcal{M}$ primary and reporting $\Phi_i(\mathcal{M})$. Applications should test alternative coalition structures, baselines, horizons, value measures, and solution concepts. A model family too wide to support qualitative ordering should yield an underidentification finding and withhold numerical allocation.

The contraction model is equally modest. It offers a conditional baseline. Evidence of multiple attractors, shocks, delayed response, or policy adaptation should motivate richer dynamic or qualitative models. Mathematical simplicity earns a place when it clarifies an assumption or limiting case.

12.7 Governance Costs and Competing Rights

This subsection addresses tradeoffs created by transparency, portability, participation, and benefit return. It reinforces the constrained response set.

Transparency can expose private data and facilitate gaming. Portability can compromise third parties and safety. Participation can impose labor, slow urgent decisions, or empower dominant factions. Revenue sharing can create surveillance incentives and disputed attribution. Alternative infrastructures need finance, maintenance, and governance.

Equation (32) places these tradeoffs inside admissibility. Institutional pilots should measure safety, privacy, burden, performance, distribution, and public value. Rights and legal duties can constrain the option set before cost-benefit comparison. A response should remain revisable and matched to the evidenced stage.

13 Future Research

This section organizes the open programme into formal, empirical, comparative, normative, and institutional tasks. It closes with explicit conditions for revision or abandonment.

13.1 Formal Development

This subsection identifies mathematical extensions that can improve discrimination while preserving interpretability.

Sequence-sensitive cooperative games could represent path-dependent community formation. Network games could distinguish bridge actors, dense communities, moderators, and infrastructure. Nontransferable-utility models could preserve heterogeneous benefits. Externality games could include affected publics. Dynamic games could represent bargaining, exit, policy revision, and investment. Partial-identification methods could report contribution bounds under weak assumptions.

Preference models should allow plural and hierarchical evaluations, identity, social norms, uncertainty, and endogenous measurement. Dynamic causal models should represent time-varying exposure and interference. Feedback analysis should compare contraction, multiple equilibria, path dependence, and adaptive policy. Every extension should state which empirical distinction it enables.

Open Problem 13.1 (Relational contribution bounds). *Derive empirically interpretable upper and lower bounds on actor contribution when only selected coalition outcomes, portability constraints, and substitute costs are observed.*

Open Problem 13.2 (Sequence-sensitive value). *Develop a contribution representation in which the order and history of relational formation affect coalition feasibility and worth while retaining a transparent sensitivity analysis.*

13.2 Empirical and Comparative Development

This subsection identifies cases capable of testing the framework. It emphasizes contrast, mechanism failure, and participant-authored evidence.

The branded-experience branch needs research across price levels, cultures, product categories, and social settings. It should compare firm-designed ritual with participant-led ritual and ordinary service quality. The platform branch needs longitudinal studies of ranking changes, community migration, portability, moderation, and benefit distribution. The credential branch needs labor-market studies that separate competence, signaling, status, access, and issuer power.

Comparative selection should include enabling and constraining institutions, successful and failed framing, concentrated and plural infrastructures, high and low portability, and different governance forms. Multilingual and Global South research is essential because concepts of relationship, community, status, value, and appropriation vary across histories and institutions. Participant, worker, and community scholarship should shape target definitions and interpretation.

13.3 Normative and Legal Development

This subsection identifies the philosophical and legal work needed beyond the plural audit. It preserves the distinction between diagnostic mechanism and justified verdict.

Normative research should compare autonomy accounts of preference formation, theories of manipulation, relational and structural exploitation, epistemic injustice, domination, property, contribution, desert, equality, commons, cultural authority, and public value. It should ask whether interpretive control creates a distinctive wrong or reorganizes familiar wrongs. It should also examine beneficial dependence, chosen transformation, institutional care, and collective authority.

Legal research should select jurisdictions and domains. Consumer protection can address deceptive or unfair commercial influence. Data law can address collection, profiling, access, portability, and automated decisions. Labor law can address participant and worker status. Competition can address intermediation and switching. Intellectual property can affect archives and cultural products. Fiduciary or stewardship models can structure authority. Each route requires current doctrine, facts, institutional competence, procedure, and remedy analysis.

13.4 Revision and Abandonment Conditions

This subsection states conditions that should contract or defeat the framework. The conditions make the position paper revisable in substance.

The stage architecture should contract if established theories already supply the same discriminations with greater precision. Interpretive infrastructure should be revised if it combines materially different devices without useful common operations. Interpretive appropriation should be abandoned if its component profile fails to distinguish ordinary institutional mediation from troubling concentration.

Preference claims should remain exploratory where target constructs and measurements lack invariance. Contribution estimates should remain set-valued or qualitative where coalition evidence is weak. The formal contribution branch should be suspended where scalar transferable value erases the central object. Feedback claims should remain local where institutional change violates stable-policy assumptions.

A domain application should be withdrawn when affected-party review identifies unacceptable privacy, safety, surveillance, cultural, or distributive costs. Governance proposals should be revised when their burden exceeds supported benefit or when they entrench the control they were designed to contest.

The programme gains support if the architecture repeatedly identifies distinct mechanisms, prevents invalid inferences, guides empirical designs, and improves institutional comparison across several domains. It gains little from terminological spread alone.

14 Conclusion

This section consolidates the paper’s conceptual, formal, empirical, and institutional contributions. It restates the limited position and the evidence required for stronger claims.

Shared experience can produce meanings, trust, reputation, practical knowledge, attention, and evaluative orientation. Economic and institutional life makes selected products of those relations portable. Stories, ratings, rankings, references, credentials, categories, and interfaces help people coordinate and decide. They also allocate authority over visibility, interpretation, access, revision, and value realization.

The paper proposes interpretive infrastructure as the sociotechnical arrangement through which this portability becomes recurrent and actionable. Its stage model separates relational production, encounter design, trace selection, interpretive framing, preference formation, action, value realization, benefit allocation, and future relational conditions. The control profile identifies access, observation, decision, revision, and exit positions at each stage.

Two exact results discipline political-economic inference. Observed interpretive condition, action, and self-report can fit a stable-preference model and a preference-formation model with different counterfactuals. Equal grand-coalition value can fit contribution models with reversed actor attributions. Demand therefore leaves preference genesis open, and revenue leaves relational contribution open. A credible study needs interventions, process evidence, measurement assumptions, coalition models, and sensitivity analysis.

The dynamic model adds a recursive path. Hosting, measurement, classification, ranking, and later experience can form a feedback system. Convergence follows under an explicit contraction assumption. Social evaluation remains separate. Stability can support coordination or entrench pathology; instability can support innovation or create insecurity.

The three constructed cases show the framework’s intended scale. Branded celebration combines material service, participant relations, symbolic association, and possible preference effects. Platform communities combine participant-generated culture and relations with infrastructure, moderation, ranking, datafication, and commercialization. Credentials and references convert relational histories into signals that affect labor-market access and institutional status. Each case retains its own literature and evidence burden.

Interpretive appropriation is the paper’s principal proposed diagnostic. It requires evidence of a relation-generated interpretive product, asymmetric stage control, dependent realized benefit, and comparatively weak participant contestation, revision, portability, or alternatives. The classification remains compatible with genuine institutional contribution and participant benefit. Manipulation, alienation, exploitation, injustice, responsibility, and legal liability require further standards.

The practical proposal is an auditable political economy of shared experience. Researchers and institutions should state the relational object, trace, interpretive infrastructure, control positions, preference estimand, contribution model family, benefit frame, recursive effects, affected parties, uncertainty, and revision conditions. Responses should match evidenced stages through explanation,

contestation, plural interpretation, portability, participant governance, benefit return, independent audit, privacy, public-interest protection, and alternative infrastructure.

The framework is intentionally provisional. Its closest literatures already contain many of its component insights. Its value depends on whether composition produces sharper questions and better institutions. Systematic review, empirical comparison, participant-authored inquiry, domain expertise, and normative criticism should revise every part.

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