

Adaptive Resonance Is a Design Hypothesis

Participant-centered systems stewardship, connection and governance, with a test path

Nova Resonance Research Series; AI-assisted working manuscript

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Working paper; not peer reviewed. No new participant data collected.

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Abstract

The Adaptive Resonance Framework proposes mapping an existing system, identifying dissonance between stated purpose and lived effects, protecting working parts, making targeted changes and learning iteratively. This paper situates the proposal in established research on commons governance, participatory power, design justice and AI risk management. The contribution is a constrained operational model and possible evaluation strategy, not an empirically validated universal theory or physical law.

1. The original company proposal

Nova Resonance is described in project sources as a creative technology company and collaborative ecosystem. Core Resonance is a proposed artistic testbed. The wider framework begins with Map - Detect dissonance - Preserve what works - Adapt - Test - Learn and should grow through actual participant experience rather than analogy alone.

The company has described a participant-centered ethical test: who has the least margin for failure, who absorbs invisible costs, and which barriers exclude people from participation? It also proposes creator-retained ownership, stewardship instead of status, and freely earned belonging. These are stated values and research directions, not measured social improvements or settled legal policy.

2. Prior work that limits the claims

Ostrom [1] shows empirically that common-pool resources can be governed under varied institutional arrangements, with success contingent on particular conditions. This is not proof that every creative community can self-govern; it offers variables to inspect: rules, monitoring, incentives and dispute resolution.

Arnstein [2] distinguishes different levels of civic participation in terms of participants' actual power. This warns against treating invitations to comment as equivalent to shared decision authority. Costanza-Chock [3] argues for design led by communities affected by it, foregrounding whose knowledge and control count. These perspectives challenge any system in which a benevolent founder retains all consequential choices while claiming participatory governance.

NIST AI RMF 1.0 (2023) [4] offers a voluntary risk-management framework organized around Govern, Map, Measure and Manage. UNESCO [5] emphasizes human rights, fairness, human oversight, transparency and inclusion. These are frameworks and normative guidance, not endorsements of Nova Resonance or evidence that its proposed system works. This paper reports no completed Adaptive

Resonance field pilot; its governance commitments are design proposals rather than ratified company policy.

3. A bounded operational model

Define a specific community or process, not "society" as a whole. Record its intended purpose, stakeholders, initial access barriers, resources, decision rights, liabilities, contested interests and harms. Map relationships and gaps using an inspectable graph or decision ledger, but do not collapse human experience into a single resonance score.

Let participants set locally meaningful indicators, for example ability to enter a creative workshop without fees, ability to decline AI features, confidence in ownership rights, continuity of access, fairness of payment and experience of belonging. Record harms separately from aggregate positive averages. Nonparticipation must not be classified as exploitation by default.

Adapt one reversible lever at a time where possible: an onboarding step, equipment lending rule, rights agreement, contribution recognition procedure, accessible interface, shared resource scheduling policy or grievance route. Record the change, who approved it, burden of participation, opportunities to dissent, and when the rule will be reviewed.

4. Proposed first pilot: a small creative commons

Run a voluntary pilot involving one real creative opportunity, such as a workshop with shared instruments or a collaborator session. Invite participants to determine what success means to them; the One-Person Principle (meaningful opportunity for even one participant) is a mission value, not a substitute for program-wide evaluation or financial sustainability.

Before/after and process measures: access barriers encountered; abandoned attempts; participant-defined agency and belonging; disagreements raised and resolved; hours and uncompensated burden; resource utilization and actual costs; documented rights/consent; and evidence of self-directed continuation beyond the organizing institution.

Use a comparison or staggered rollout only with consent and practical fairness. Include negative cases. Ask whether a participant would recommend the process and whether they retain rights and usable artifacts, not merely how much output was produced.

5. Failure modes and alternative explanations

Participants who already have resources may disproportionately benefit from free equipment and networks. Apparent reciprocity may conceal social pressure, underpaid essential work or unequal voice. A successful demonstration may reflect charismatic organizers, novelty or outside support, rather than the Adaptive Resonance mechanism.

The resonance metaphor is not a biological or acoustic law governing communities; importing "synchrony" too literally can suppress productive disagreement. Explicit dissent, independent grievance access, transparent finances and rights to exit are therefore key safeguards. A creative game study cannot, by itself, verify a healthcare, economic or governance intervention.

6. Defensible contribution and future tests

A first defensible paper would report participant-approved process design and measured local outcomes with known limitations. It may find no change, unexpected harms or a smaller effect than expected. Generalization requires multiple contexts, different organizations, resources and independent critical review.

Testable hypotheses: H1 targeted barrier removal improves entry or sustained voluntary participation compared with baseline; H2 visible decision rights improve trust more than consultation alone; H3 easier participation may require paid coordination rather than merely goodwill. All hypotheses are contingent and may be falsified.

Source provenance and research status

External literature establishes findings in related domains; it does not validate Nova Resonance implementations or outcomes. Project materials describe design intent. This paper reports no completed participant study or field pilot of the proposed system. The proposed protocols and hypotheses remain untested. No clinical, economic, cognitive or social effectiveness is established here.

Project provenance: this working paper draws on internal design briefs available to its editors. Those materials are not public evidence of runtime behavior or participant outcomes. Private operational details are omitted from this public working edition.

References

- [1] Ostrom, E. (1990). *Governing the Commons: The Evolution of Institutions for Collective Action*. Cambridge University Press. <https://doi.org/10.1017/CBO9780511807763>
- [2] Arnstein, S. R. (1969). A ladder of citizen participation. *Journal of the American Institute of Planners*, 35(4), 216-224. <https://doi.org/10.1080/01944366908977225>
- [3] Costanza-Chock, S. (2020). *Design Justice: Community-Led Practices to Build the Worlds We Need*. MIT Press. <https://doi.org/10.7551/mitpress/12255.001.0001>
- [4] National Institute of Standards and Technology. (2023). *Artificial Intelligence Risk Management Framework (AI RMF 1.0)*. <https://www.nist.gov/itl/ai-risk-management-framework>
- [5] UNESCO. (2021). *Recommendation on the Ethics of Artificial Intelligence*. <https://www.unesco.org/en/legal-affairs/recommendation-ethics-artificial-intelligence>