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NOVATION

Critical Studies of Innovation

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Critical approaches to innovation and alternative policy models for innovation

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About Us

The international journal *NOvation: Critical Studies of Innovation* was launched to contribute to the rethinking and debunking of innovation narratives in STS (Science, Technology and Society) and STI (Science, Technology, and Innovation). There is a need to critically examine studies of innovation and obtain a clearer portrait of innovation than the depiction this field has been accustomed to. The journal questions the current narratives of innovation and offers a forum for discussion of some different interpretations of innovation, not only its virtues, but also its implications. In this sense, NO refers to non-innovative behaviors, which are as important to our societies as innovation is. Failures, imitation and negative effects of innovation, to take just some examples of non-innovation or *NOvation*, are scarcely considered and rarely form part of theories of innovation.

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Rethinking Innovation Beyond the Fable

Critical Pathways and Alternative Policy Models

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In recent decades, innovation has achieved an extraordinary position in political, economic, and cultural discourse. It has come to be seen as a universal remedy—a panacea capable of addressing social, environmental, economic, and political challenges while simultaneously driving growth and competitiveness. As highlighted in the call for this thematic issue and as critically framed by several authors already, this belief rests on a powerful modern narrative: a fable of progress driven by science and technology, a promise that the future will inevitably be better than the present because innovation will carry us there. Yet this fable has obscured the social, political, and environmental consequences of innovation systems designed around market logics, competition, and technological determinism. It has eclipsed alternative imaginaries of collective flourishing and dismissed deeper questions about who benefits from innovation, who bears its risks, and what other futures might become possible.

In response, the field of *Critical Studies of Innovation* has emerged to interrogate these assumptions. Building on the foundational work of Godin, Vinck, Pfotenhauer, and others, scholarship has exposed the ideological character of "innovationism" (Oliveira, 2011)—the belief that innovation is inherently good, that more is always better, and that societal problems are ultimately innovation deficits. The contributions gathered in this issue extend this critique, while also advancing conceptual and empirical foundations for alternative pathways. They address the contradictions of innovation regimes, expose the limits of 'x-innovation' (Gaglio *et al.*, 2019) rebrandings, analyse the politics of governance and directionality, and foreground community-based, solidaristic, and human-centered approaches that disrupt dominant models.



This issue has been deliberately structured to move from *historical-epistemic critique*, to *sectoral and institutional analysis*, to *territorial experimentation*, and finally to *conceptual and methodological tools* for rethinking innovation. Each article contributes a distinct lens, yet together they build a coherent argument: that the current innovation paradigm, rooted in neoliberalism, technological determinism, and a narrow economic rationality, is neither inevitable nor desirable, and that viable, situated alternatives already exist, albeit often marginalised or invisible.

1. DECONSTRUCTING THE ORIGINS OF PRO-INNOVATION EPISTEMOLOGY

The opening article by **Ryan T. MacNeil**, *Modelling innovation as toxic (techno-economic) positivity*. Some consequences of SPRU's attack on "The Limits to Growth", establishes the historical and epistemological foundation for the entire issue. In a meticulous reconstruction of the 1972–73 debate between the Club of Rome's *Limits to Growth* team and the newly formed Science Policy Research Unit (SPRU), MacNeil shows how SPRU's critique—ostensibly methodological—had long-lasting consequences for how innovation would be conceptualised, modelled, and governed. What SPRU defended was not merely better data, but a worldview anchored in *precision fetishism* and *techno-economic optimism*. Their response helped consolidate a belief in continuous technological progress capable of postponing or overcoming planetary limits. This stance, what MacNeil terms "toxic positivity", has since permeated innovation studies, reinforcing an ideology of growth, masking uncertainties, and marginalising precautionary or degrowth-oriented perspectives.

MacNeil's article thus performs a dual function within the issue: it exposes the epistemic roots of the pro-innovation bias and invites readers to reconsider the foundations upon which contemporary STI policies have been established. It signals that innovation is not a neutral or purely technical category, but a historically situated discursive formation with political effects. This sets the stage for the remaining papers, all of which, in different ways, challenge the assumptions inherited from this epistemic legacy.

2. INNOVATIONISM IN CULTURE AND TECHNOLOGY: POWER, AESTHETICS AND CONTRADICTIONS

If MacNeil describes the ideological foundations of innovationism, the second article examines how this ideology materialises in cultural and technological practice. **Yuri Gabriel Campagnaro**, in *Innovationism between Art and Technology: Technological determinism in the controversy around Vantablack*, turns to the widely publicised dispute involving Surrey NanoSystems, the artist Anish Kapoor, and his opponent Stuart Semple. Here, innovation appears not as a broad policy narrative but as a lived and contested cultural logic shaping material practices and symbolic meanings.

Campagnaro demonstrates that all actors involved—corporate, artistic, intercultural—remain entangled in the same innovationist regime. Surrey NanoSystems frames Vantablack as a breakthrough rooted in technological inevitability; Kapoor reinforces the association between novelty, exclusivity and artistic authority; Semple, despite his democratic rhetoric, relies on similar branding, spectacle and market strategies. The controversy thus reveals how deeply innovationism operates beneath divergent political and aesthetic claims. Importantly, Campagnaro shows that even attempts to resist innovationist logics may inadvertently reproduce them, highlighting the resilience of the dominant paradigm and the difficulty of constructing alternatives within the very cultural economy it shapes.

This article provides a bridge between abstract epistemic critique and concrete sociotechnical controversy. It demonstrates how technological determinism is enacted and reproduced in everyday practices, how exclusivity and marketization shape the cultural meaning of innovation, and how contradictions emerge within attempts to democratize access to technological materials.

3. CREATIVITY AS POLICY, AND THE INSTITUTIONAL CAPTURE OF ALTERNATIVES

The third contribution turns towards urban innovation policy. In *Curation, Compliance, Consolidation. Understanding the Limits of Innovation Policy's Turn to Creativity*, **Nadine O. Osbild** and **Sebastian Pfotenhauer** investigate Munich's creative districts—spaces ostensibly designed to foster alternative, experimental forms of innovation. Drawing on an STS-informed ethnographic approach, they identify three mechanisms—*curation*, *compliance*, and *consolidation*—through which creativity is domesticated and instrumentalised.

Rather than enabling radical experimentation, Munich's creative districts reinforce a conservative regional innovation culture, privileging high-tech, economically legitimised activities while marginalising subcultural, social, or politically contestatory forms of creativity. Creativity becomes a branding tool, a form of soft power deployed to increase attractiveness and competitiveness, rather than a space for democratic or convivial alternatives. Osbald and Pfothner thus expose a pattern familiar across many global cities: the rhetoric of creativity conceals the reproduction of exclusionary structures and elite-driven innovation agendas.

Their article marks the transition, in this thematic issue, from epistemic critique to institutional analysis. It demonstrates how the innovation paradigm not only shapes discourse but also reconfigures urban spaces, governance mechanisms, and the distribution of opportunities.

4. ALTERNATIVE INNOVATION PATHWAYS: DIRECTIONALITY, KNOWLEDGE SYSTEMS AND TERRITORIALITY

The next two articles shift focus to national and territorial contexts, examining how alternative innovation policies emerge, circulate, and are appropriated by diverse actors.

In *Steering the Course. Negotiating Directions in Alternative Research and Innovation Policies for Transformative Change*, **Gabriela Bortz** and **Ayelén Gázquez** offer an empirically rich and conceptually sophisticated analysis of two long-term Argentine initiatives—*Yogurito* and the *Paraná River Aquarium*. Drawing on an expanded *Knowledge Systems* (KS) approach, they show how innovation trajectories are not linear or predetermined, but *negotiated across actors, knowledge bases, institutional arrangements, and shifting political priorities*. The authors identify competing directionalities—competitiveness, poverty reduction, sustainable development, and transformative change—each shaping how innovation is enacted. Their work demonstrates that alternative innovation policy frameworks require flexible, contextually grounded governance arrangements capable of accommodating ambiguity, contestation and learning.

In the subsequent article, *Translating Transformative Innovation Framework in Colombia*, **Nicolás Garzón Rodríguez** and **Janaina Pamplona da Costa** analyse the transfer and translation of the Transformative Innovation Policy (TIP) framework into Colombia's STI governance system. They show that TIP did not arrive as a ready-made model but was reinterpreted through the country's long-standing traditions of social

innovation and Science and Technology Appropriation (SASTI). The result was a territorialised, bottom-up version of TIP focused on niche-building and inclusive participation. While this translation empowered regional actors and marginalised groups, it also limited TIP's transformative potential by confining it to small-scale experiments disconnected from mainstream policy instruments. The authors reveal the politics of translating global frameworks into peripheral contexts, highlighting both the opportunities and the structural constraints that shape alternative innovation models.

Together, these two contributions foreground a crucial insight: *alternative innovation policies are not imported, but co-produced (or at least should be) through local histories, territorial dynamics and institutional arrangements*. They illuminate the complexity of designing and governing transformative STI systems, as well as the need to understand innovation directionality as a dynamic and contested process.

5. GRASSROOTS INNOVATION AND THE SOCIAL SOLIDARITY ECONOMY

While Bortz and Gázquez, and Rodríguez and Pamplona da Costa examine alternative innovation at the level of national systems and territorial governance, **Les Levidow, Theo Papaioannou, Zühre Aksoy and Özlem Öz** turn to grassroots practices. In *Grassroots Innovation Ecosystems. Alternative Agri-Food Networks (AAFNs) in Brazil and Turkey*, they develop a tripartite framework—*Inclusive grassroots innovation, agile solidarity, and transformative resilience*—to analyse Social Solidarity Economy (SSE) ecosystems in agri-food networks. Their comparative study shows that SSE-based AAFNs do not simply provide technical innovations, but co-create *sociotechnical alternatives* grounded in mutual aid, care, democratic governance and territorial embeddedness. During crises such as Covid-19, these networks exhibited rapid adaptation, sustaining livelihoods, expanding access to healthy food and mitigating inequalities. Women's networks, agroecological circuits and community-supported agriculture played vital roles in constructing inclusive innovation pathways. Yet these ecosystems remain vulnerable to structural constraints, from neoliberal food regimes to the erosion of supportive public policies.

Levidow and Papaioannou thus offer perhaps the most direct counterpoint to mainstream innovation models within the issue, as they demonstrate that *radically different innovation ecologies already exist*, often operating at the margins of visibility. Their article demonstrates that alternatives need not be hypothetical futures—they can be found in the solidaristic practices that sustain communities today.

6. HUMAN AND SOCIAL FACTORS IN INNOVATION: A MULTILEVEL ANALYTICAL TOOL

Closing the issue, **Eduard V. Patrakov**, **Rafael de Brito Dias**, **Rodrigo F. Frogeri** and **Lioudmila I. Baturina** provide an integrative and forward-looking contribution. *The Human and Social Factors of Technological Innovations: Risks and Resources Analysis Model* build a conceptual bridge between critical innovation studies, psychology, philosophy of technology and risk analysis. The authors argue that innovation systems have neglected the psychological, emotional, and cultural dimensions of innovation—dimensions that profoundly shape how innovations are created, adopted, and governed.

They propose a *three-level analytical model*—macro (society), meso (organizations), micro (individuals)—for identifying both *risks* and *resources* associated with innovation processes. This model serves as a practical tool for policymakers, organizations, and researchers seeking to design human-centered innovation policies that are attentive to trust, values, anxiety, identity, autonomy, and well-being. In doing so, the article synthesizes many themes raised by earlier contributions—directionality, governance, inequality, techno-determinism—while offering a concrete methodological framework for moving beyond critique.

7. CONVERGENCES AND OVERALL CONTRIBUTION OF THE THEMATIC ISSUE

Although diverse in methods, geographies, and theoretical frameworks, the seven articles converge on several key points that define the intellectual contribution of this thematic issue:

1. **Innovation is not neutral:** it is historically situated, politically charged, and deeply ideological. It distributes risks and benefits unevenly. It shapes, and is shaped by, power relations.
2. **The dominant model of innovation is failing.** Across culture, urban development, national governance, rural economies, and psychological experience, we observe that innovation regimes reproduce inequalities, marginalize alternative knowledge systems, and prioritize economic competitiveness over social and environmental well-being.

3. **Alternatives already exist.** Whether through SSE-based agri-food networks, territorially based TIP frameworks, creative subcultures, feminist networks, agroecology, or knowledge-system approaches, the issue demonstrates that plural innovation pathways are not only possible but are also underway.
4. **Alternative innovation requires rethinking directionality.** Innovation must be guided by explicit social aims—such as equity, sustainability, care, justice, and conviviality—rather than by the implicit imperatives of growth and competitiveness.
5. **Governance matters:** territorial structures, institutional arrangements, funding mechanisms, policy instruments, and cultural norms all shape innovation trajectories. Transformative models depend on inclusive, negotiated, and flexible governance architectures.
6. **Human experience is central.** Innovation cannot be understood or governed without considering the psychological, emotional, and cultural dimensions through which individuals and communities engage with technological change.

Collectively, the articles in this issue take critical innovation studies a step further: not only diagnosing the problems of *innovationism*, but also identifying and theorising the diverse ecosystems, practices, and policy approaches that can support more just, sustainable, and democratic forms of innovation. They invite scholars, practitioners, and policymakers to rethink innovation beyond the narrow confines of competitiveness and technological progress, and to engage seriously with the question of what kinds of futures innovation should serve.

8. A CLOSING REFLECTION

The narrative of innovation as a self-evident good—whether framed as progress, competitiveness, or modernity—has reached a point of exhaustion. As we did remind in the framing text for this issue, innovation has become “the jewel in the crown of neoliberalism,” a myth that encourages movement without direction and faith without reflection. To move beyond this fable, we must cultivate epistemic humility, institutional imagination, and democratic governance. We must ask anew: innovation for whom, by whom, and toward what ends?

This thematic issue demonstrates that such questions are not merely theoretical. They are present in urban struggles over creative districts, in artistic controversies over material monopolies, in rural networks that feed cities, in national STI systems that shape territorial futures, and in the psychological landscapes through which individuals navigate technological transformation. By bringing these diverse perspectives together, the issue aspires to contribute not only to academic debate, but to the ongoing project of designing *alternative innovation regimes* grounded in justice, solidarity, sustainability, and care.

We hope this collection serves as both an invitation and a provocation: an invitation to explore the multiplicity of innovation pathways that exist beyond innovationism; and a provocation to reimagine the role of innovation in building the collective futures we desire.

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