

Novelty and Inequalities in Science
International Research Symposium on Recognizing and Rewarding Novelty in Science
 October 8-9, 2026 in Prague, Czech Republic

PROGRAM

Day 1 Thursday, Oct. 8		Day 2 Friday, Oct. 9	
10:45-11:15	<i>Door open</i>	11:00-11:30	<i>Door open</i>
11:15-11:30	<i>Welcome</i>		
11:30-12:30	Erin Leahey (University of Arizona) Recognizing, Rewarding, and Promoting Novelty	11:30-12:30	Sotaro Shibayama (University of Tokyo) Heterogeneity and Reproduction of Scientific Novelty
12:30-13:30	<i>Lunchbreak</i>	12:30-13:30	<i>Lunchbreak</i>
13:30-15:30	Radim Hladík (Institute of Philosophy of the Czech Academy of Sciences), Marek Brabec Pursuing Excellence, Producing Similarity: Project Convergence Across the European Science Funding Landscape Petra Vidnerová (Institute of Informatics of the Czech Academy of Sciences), Roman Neruda, Jiří Šejnoha Measuring Scientific Novelty through Conceptual Distance and Knowledge Recombination Jonny Bunning (Leibniz Universität Hannover) Novelty in Economics: The Case of Gary Becker Maria del Rosario Martinez Ordaz (Institute of Philosophy of the Czech Academy of Sciences) The Institutional Compass: Measuring and Pursuing Novelty Sustainably	13:30-15:00	Mehmet A. Orhan (EM Normandie Business School), Matthijs Bal How Do Editorial Processes Stifle Novelty and Reward Reproduction of Form: Insights from Management and Organization Research Rodrigo Ito (University of Copenhagen), Andrew C. Herman, Ting Xiao, Jens Peter Andersen, Mathias Wullum Nielsen Pathways to print: Analyzing the Effect of Editors at Scale in the Social Sciences Jina Lee (University of Illinois at Urbana-Champaign) The Theory Penalty: Gender Bias in Recognition of Scientific Novelty
15:30-16:00	<i>Coffee break</i>	15:00-15:30	<i>Coffee break</i>
16:00-17:00	Sarah Otner (University of Sussex) Metascience Novelty Indicators Challenge	15:30-16:30	Roundtable discussion Novelty in Science Policy, Evaluation, and Funding Petra Lišková (Vice-Rector for Science, Charles University) Petr Štěpnička (Commission for the Evaluation of Research Organizations) Sebastian Winkler (ERC Executive Agency)
		16:30-16:45	<i>Closing</i>

Bunning, Jonny

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Novelty in Economics: The Case of Gary Becker

Abstract. Drawing on the qualitative history of science, this presentation explores the work of Gary Becker, a Nobel Prize winning economist widely understood to have transformed the boundaries of his discipline. Associated above all with the University of Chicago, Becker applied microeconomic theories to explain human behavior far beyond formal pecuniary exchange: topics including crime, drug addiction, reproduction, and education were treated as simple economic phenomena. Existing accounts of Becker have tended to see his work as prophetic or heretical, but my presentation will seek a more sociological explanation by focusing on novelty as a latent imperative for gaining academic reputation in modern science. By exploring how Becker was able to make novel arguments across a range of sub-topics, I suggest that novelty is not so much an attribute of individual scholars or their work, but is better seen as a social relationship. Specifically, I argue that Becker was able to redeploy the work of a previous generation to support provocative theories at a moment that economics was transforming as a field. To be successful, academic novelty cannot be entirely new.

Hladik, Radim; Marek Brabec

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Pursuing Excellence, Producing Similarity: Project Convergence Across the European Science Funding Landscape

Abstract. We examine whether the pursuit of research excellence, as promoted by the European Research Council (ERC), creates convergence in what funders across the European Research Area consider excellent – ground-breaking and novel – research. We analyze approximately 98,000 project descriptions and objectives funded by nine major European research funding agencies between 2009 and 2022. For each project, we identify its nearest ERC panel and measure its cosine similarity to ERC-funded projects within that panel, allowing us to trace changes in epistemic convergence, as reflected in linguistic and thematic similarity, over time. We find a robust and widespread increase in the similarity between nationally funded projects and ERC-funded projects, accompanied by increasing internal similarity among ERC projects themselves. These patterns are consistent with a process of convergence in which the project objectives funded by different agencies become increasingly aligned with those of the ERC-funded projects. A Bayesian hierarchical model further supports this interpretation: mutual similarity between ERC and national projects increases over time, while internal variation decreases even after accounting for both the funder and panel levels. The findings suggest that the ERC may be contributing to a practical, increasingly convergent definition of research excellence across the European Research Area.

Ito, Rodrigo; Andrew C. Herman; Ting Xiao; Jens Peter Andersen; Mathias Wullum Nielsen

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Pathways to Print: Analyzing the Effect of Editors at Scale in the Social Sciences

Abstract. How do journal editors' social ties affect who and what gets published? This paper investigates the implications to publishing in social sciences journals when a new editor takes over the position. Using a novel dataset that combines roughly 1000 social science journals' Wikipedia page revision histories, 3000 editors' professional CVs, and bibliometric data from Web of Science and SciSciNet, we investigate the publication, novelty, and disruption rates of editors' co-authors and departmental colleagues. We find a positive, small, and long-lasting increase in

the publication rates of co-authors and colleagues in the affected journals after the new editors take charge. Interestingly, publications from co-authors and colleagues also appear to be more conventional (less novel) and consolidated to the current scientific knowledge. Heterogeneity analysis shows variation across levels of journal impact, but also that these trends in publication, novelty, and disruption rates nevertheless describe what happens at both high- and low-impact journals. In particular, co-authors publish more in high-impact journals than in low-impact journals over the long run. We observe a different pattern for colleagues: in both the short and long run, they exhibit similar publication rates at high- and low-impact journals. In terms of novelty and disruption, we find that while colleagues' publications in low-impact journals appear more conventional, co-authors' publications in the same-level journals are likely more consolidated. We conduct a second heterogeneity analysis on the top journals in six social science fields. We find that editors' co-authors are more likely to publish in those journals than their departmental colleagues. We also observe that publications from co-authors and colleagues are more consolidated than disrupted, even in top journals.

Leahey, Erin

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Recognizing, Rewarding, and Promoting Novelty

Abstract. In this talk, I pose three questions and provide answers based on my collaborative work and the work of my former PhD student, Dr. Jina Lee. How do we recognize original contributions to science? Instead of presuming that the recombination of extant ideas generates new ones, and that novelty is unidimensional, we build on the work of qualitative sociologists to distinguish different types of novelty. How do we reward novelty? We reward it by citing it more, but at least in the natural sciences, women are less likely than men to claim novelty, thereby depressing their citation counts. How do we promote novelty? Although targeted, mission-oriented funding opportunities are critical for steering science into high-priority topic areas, they may be less conducive to novelty relative to unsolicited funding opportunities.

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The Theory Penalty: Gender Bias in Recognition of Scientific Novelty

Abstract. Are women's contributions recognized for the same kinds of novelty as men's? Moving beyond the size of gender disparities in scientific recognition, this study examines the kinds of novel contributions for which women researchers receive credit. I distinguish three types of novelty recognition (theoretical, methodological, and empirical) that differ in both epistemic status and interpretive ambiguity. Theoretical novelty carries the greatest epistemic authority, but it is also evaluated using the least standardized criteria. Drawing on citation-context data from 85,493 papers, I find a theory penalty: papers with women first authors are significantly less likely than comparable papers with men first authors to be recognized for theoretical novelty, while recognition for methodological and empirical novelty shows no statistically significant gender gap. Women are acknowledged as contributing new evidence and new methods, but are less often credited with contributing new theory. This pattern identifies a boundary condition for Status Characteristics Theory: gender bias is most likely to shape evaluation where criteria are highly ambiguous. The findings suggest that gender inequality in science extends beyond demographic representation to the unequal distribution of epistemic authority over whose ideas are seen as defining the direction of fields..

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The Institutional Compass: Measuring and Pursuing Novelty Sustainably

Abstract. Scientific institutions increasingly seek to promote and measure novelty as a central dimension of scientific progress. Yet the institutional pursuit of novelty raises a fundamental problem: indicators designed to identify and reward novel research can also reshape researchers' incentives, potentially encouraging short-term, spectacular, or easily measurable forms of novelty at the expense of more sustained and transformative forms of scientific development. This paper proposes the Institutional Compass as a framework for addressing this problem. Rather than treating novelty as a property that can be straightforwardly maximized through increasingly precise indicators, the IC approaches novelty as an institutional achievement that depends on the organization of scientific practices, incentives, and forms of evaluation. It provides a way of examining how institutional arrangements orient scientific activity toward particular kinds of novelty, while also making it possible to identify tensions between the pursuit of novelty and other epistemic and institutional objectives. On this basis, I argue that the Compass can serve not only as a tool for measuring how institutions foster novelty, but also as a practical framework for pursuing novelty sustainably: that is, for designing and revising institutional conditions under which novel scientific contributions can emerge and be sustained over time.

Orhan, Mehmet Ali; Matthijs Bal

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How Do Editorial Processes Stifle Novelty and Reward Reproduction of Form: Insights from Management and Organization Research

Abstract. Today, the space in top-tier journals is heavily dominated by elite scholars, who are publishing at higher rates than before. Several studies documented that despite growing rejection rates, the inequalities have only been rising in recent decades. While more and more scholars are expected to publish in top-tier outlets, publishing success does not only depend on the novelty of ideas and pluralistic methodologies but also on networks, ropes, and norms established within disciplines. To that extent, "Meet the Editor" sessions provide utmost help to Early Career Researchers (ECRs) to shape acceptable forms and norms so that they are informally socialized within the system of academic publishing. At the same time, despite more global representation in authorship, the style, content, methods in published research carry striking similarities. Borrowing from Yurchak's analysis of the post-Stalin Soviet Union, where official discourse was repeatedly reproduced even as its substantive meaning became increasingly hollow, the "reproduction of form" captures how academic work may appear novel while reproducing recognizable templates. To understand how reproduction of form encouraged through editorial sessions, we analyzed 10 different "Meet the Editors" sessions targeted predominantly ECRs using critical discourse analysis. Our findings illustrate (and also complement previous research in ways) that these sessions operate as informal sites of disciplinary socialization by teaching how to become publishable by conforming to established expectations of style, structure, theory, method, and epistemology instead of offering neutral guidance on how to contribute to the scientific progress. In other words, ECRs are encouraged to mimic the features of successful papers, package novelty in familiar terms, and avoid intellectual risk. The paper therefore argues that editorial processes play a central role in maintaining the reproduction of form, and undermining novelty in research.

Otner, Sarah

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The Metascience Novelty Indicators Challenge

Abstract. Traditional citation metrics fail to capture scientific novelty early, as they rely on post-publication recognition. To address this, the Metascience Novelty Indicators Challenge brought

together 30 international research teams to develop scalable computational approaches for evaluating novelty at the time of publication. Teams evaluated their methods against a novel benchmark dataset comprising over 41,000 expert assessments across 37,480 multidisciplinary papers. This presentation outlines the design and outcomes of the Challenge.

Shibayama, Sotaro

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Heterogeneity and Reproduction of Scientific Novelty

Abstract. Scientific novelty is unevenly distributed across researchers, yet how such heterogeneity emerges remains elusive. Drawing on my previous work on novelty, I examine early-career training as a key arena in which orientations toward novelty are shaped and transmitted across generations. This talk illustrates how early-career researchers acquire practices such as exploration and risk-taking through mentoring and interactions with senior researchers, with lasting consequences for their capacity to pursue novel work.

Vidnerová, Petra; Roman Neruda; Jiří Šejnoha

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Measuring Scientific Novelty through Conceptual Distance and Knowledge Recombination

Abstract. We propose a scalable text-based indicator for assessing the novelty of scientific publications at the time of publication. Novelty is central to research evaluation, yet it is often assessed through expert judgement, peer review, or retrospective citation patterns. These approaches are difficult to apply consistently at scale and may be influenced by disciplinary norms, author reputation, institutional prestige, or delayed recognition. A publication-time indicator can therefore support systematic analyses of how novelty is produced, distributed, and recognised across science. Our approach defines novelty through two complementary dimensions: conceptual departure from prior work and recombination of distant bodies of knowledge. Our work offers a transparent, computationally efficient indicator applicable without full-text access, enabling large-scale analysis of novelty and its relation to inequalities in scientific visibility and evaluation. We also address limitations: titles and abstracts only partially represent scientific contributions, and semantic distance should not be equated with epistemic value or long-term importance.

Roundtable Discussion on Novelty in Science Policy, Evaluation, and Funding

The panel will explore how scientific novelty is understood, assessed and supported within research policy, evaluation and funding systems. Roundtable participants will discuss institutional perspectives on novelty and connect them with the broader questions raised by the symposium: What counts as novel research? And who decides?

Petra Lišková

Vice-Rector for Research and Creative Activities of the Charles University, previously Vice-Dean for Grant Projects of the First Faculty of Medicine of the Charles University

Petr Štěpnička

Commission for the Evaluation of Research Organizations under the Research, Development and Innovation Council, an advisory body to the Government of the Czech Republic

Sebastian Winkler

European Research Council Executive Agency, coordinator of the ERC panel SH5 ("Texts and Concepts")