



Research as discovery or delivery? Exploring the implications of cultural repertoires and career demands for junior economists' research practices

Kody Steffy^{1,2} · Liv Langfeldt²

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Abstract

Recently, social scientists have begun to study the implications of increasing pressures in the early academic career. Studies focusing mostly on the life sciences have shown junior scholars making research decisions based on a productivity logic to increase their chances of career success. In this paper, we extend this literature to the very different context of economics, characterized by a dominant mainstream, a clear hierarchy, and an independent/small-team approach to scholarship. Adopting a culture-in-action framework, we analyze how cultural repertoires help early career economists deal with the sometimes competing career pressures associated with working in high-status departments. Drawing from in-depth interviews with tenure-track economists in three Scandinavian countries, we find that skillful use of *discovery-talk* and *delivery-talk* helps respondents respond to the challenges they face as junior academics. Implications for research include the avoidance of, e.g., interdisciplinary work and questions of only regional importance. Furthermore, the data indicate that discovery and delivery notions partly overlap and so contribute to preserving economics as a relatively coherent and homogenous field.

Keywords Academic careers · Early career researchers · Research practices · Cultural repertoires · Economics

Introduction

In recent decades, many changes have altered the path to and through an academic career. Factors such as internationalization, the expansion of assessment mechanisms, and the growing adoption of a tenure track model have converged such that junior researchers must

✉ Kody Steffy
ksteffy@indiana.edu

Liv Langfeldt
liv.langfeldt@nifu.no

¹ Department of Sociology, Indiana University, 1020 E. Kirkwood Ave, Ballantine Hall 744, Bloomington, IN 47405, USA

² Nordic Institute for Studies in Innovation, Research and Education (NIFU), PO Box 2815, Tøyen, 0608 Oslo, Norway

now navigate academic contexts characterized by hyper-competition (Fochler et al., 2016) and uncertainty (Sigl, 2016). Social scientists have begun to explore the implications of such demands for the working lives of researchers, including studies of career callings (Hakala, 2009), academic identities (Archer, 2008; Billot, 2010), and wellness (Gill, 2014). In this paper, we add to the emergent literature on the research implications of the conditions under which early career researchers work (Fochler & Sigl, 2018; Müller & de Rijcke, 2017). How do early career researchers adapt their research in response to career demands? What role do competing conceptions of research play? And does it matter how individual researchers relate to career success standards? To address these questions, we analyze data from in-depth interviews with early career economists in three Scandinavian countries. We argue that economics is a strategically important site of analysis both due to its influence on policy and because its research organization differs in theoretically meaningful ways from the life sciences, which have been the near exclusive focus of the extant literature.

In order to understand how researchers navigate the changing career structures of academia and what that means for their work, we make use of Swidler's culture-in-action framework (1986, 2001), which emphasizes how actors draw on the meanings available in their cultural repertoires to respond to institutional demands. Rather than assume tension between traditional academic and newer productivity-oriented logics, we instead examine empirically whether and how researchers make use of the various tools in their cultural repertoires. We investigate how junior economists identify and interpret the challenges they face in their careers and develop research practices to overcome them. Findings suggest that early career researchers creatively employ two ways of thinking about research—research as discovery and research as delivery. The ability to access both of these logics helps junior scholars navigate the sometimes overlapping and sometimes competing demands they experience on the tenure track. These co-existing conceptions of research help junior scholars navigate an “essential tension” of science (Hackett, 2005), where research is both a means of discovery and a key part of career advancement. Understandings of research as discovery, rooted in traditional conceptions of the academic profession, prime researchers to think about research for the sake of research—as a means of discovering new things about the social world and/or advancing the field. This is useful as researchers struggle to advance knowledge and make a significant mark on their fields. Understandings of research as delivery encourage researchers to think strategically and to adapt their research practices to career demands. This is useful as researchers deal with the realities of publication requirements for tenure. Because it is not always clear how best to maximize one's chances in the competitive field of economics, there is marked variation in how our interviewees construct strategies using this logic, with implications ranging from topic selection to methodological decision-making.

Implications of career demands for the research practices of junior academics

Changes brought to academia over the last several decades have deeply altered the experiences of early career researchers. A complex set of factors, including internationalization, the rise of extended temporary positions and academic precarity, and a concern with international status, have changed the experience of working as a junior academic (Altbach, 2015). Compared to prior cohorts, Altbach argues that today's early career scholars face increased pressures from expanded accountability and evaluation structures, waning

traditional academic autonomy, and an increasingly competitive job market. Hammarfelt and de Rijcke's (2015) study of Swedish humanities scholars suggests that at least under certain conditions, the research practices of junior scholars may be most susceptible to these sorts of pressures.

Such changes appear to have implications for how young academics approach their work. In a study of Finnish PhD students in four fields, Hakala (2009) asked whether junior scholars continued to identify with a traditional academic calling. In response to key questions concerning research practice, prioritization, career confidence, and professional futures, she argues that respondents often lacked coherence as traditional academic motivations converged with new interpretations of academic work.

Other studies have looked more directly at how career pressures shape research practice. A particularly relevant line of research explores these issues in the life sciences. Using an Austrian sample, Fochler and Sigl (2018) find that competitive pressures reduce epistemic flexibility among junior researchers, who often have to time their work in relation to contract lengths. Due to competition with peers, they often experience the negotiation of uncertainty and risk as individualized. In a study of junior Austrian life scientists on temporary contracts, Sigl (2016) shows that respondents cope with this risk in diverse ways, including relying on group leaders for protection, seeking support among peers, balancing risky and secure projects, and resisting conditions they consider unreasonable in order to pursue genuine research interests.

A number of studies have shown the salience of productivity concerns in shaping research practice. In a study of postdocs and junior group leaders in the life sciences in Austria and the Netherlands (Müller & de Rijcke, 2017), researchers reported choosing projects based primarily on their likelihood of producing quality publications quickly. This was true even among researchers who had already won prestigious fellowships—as well as among cancer researchers, whose work has clear real-world import. This study also found that the importance of first authorship as academic capital hindered collaboration and led to a more individualized work experience. After beginning work on a project, the scientists in their study often used the logic of “impact per time” in deciding how far to develop it or whether to target a higher impact journal.

In another study of Austrian life sciences, Fochler et al. (2016) compare the research decision-making processes of PhD students and postdocs. Among postdocs, they find a primary concern with productivity when selecting research topics, but also in relation to future career planning and social dynamics within the research group. PhD students drew from a wider range of logics in their decision-making, including productivity but also interest/curiosity and the common good. These findings suggest that career pressures in the life sciences become especially acute in the first job post-PhD.

Economics and the organizational context of research

While there are certainly important studies of the early academic career outside the life sciences (Laudel, 2017; Laudel & Bielick, 2018; Laudel & Gläser, 2008), research on the influence of career pressures on research practices has focused primarily on life science fields. The initial focus on life sciences makes sense for many reasons, including the clear social significance of the research, the central place of the life sciences in research policy (Fochler et al., 2016), the field's receptivity to metrics (Rushforth & de Rijcke, 2015), and the outpacing of externally funded temporary positions over permanent faculty roles (Stephan, 2012). Yet there is plenty of reason to expect that the influence of career pressures on research may be field-specific. Most importantly, research quality notions (Langfeldt et al., 2020) and epistemic

conditions vary by field (Gläser, 2019), such that “there is no singularity to (e)valuation in academia, but rather a multiplicity of (e)valuative practices and infrastructures” (Rushforth et al., 2019, p. 229). As evaluative practices vary both between and within fields, an important question is how researchers adapt their research under different evaluative regimes. Thus, one contribution of the present study is extending the literature to a very different evaluative context: the social science field of economics.

Among the most notable features of economics as a scholarly discipline is the relatively high degree of consensus and control within the field. With the notable exception of heterodox economics (Hylmö, 2018; Maio, 2013), the field tends to cohere around a “mainstream” approach characterized by highly technical methodologies emphasizing, e.g., mathematical modeling and assumptions concerning the rationality of human behavior (Fourcade et al., 2015; Hylmö, 2018). Dequech (2017) argues that the equation of rigor with mathematical formalization is the defining feature of mainstream economics, leading to the neglect of uncertainty, a rejection of institutional effects, and sanctions for those who violate this convention. The general consensus over this mainstream approach means that the field has a relatively homogeneous notion of research quality (Lamont, 2009), allowing for a relatively concerted approach to publication and hiring. The field has a clear journal hierarchy dominated by the “top-five,” which are tightly linked to prestige and other incentives, such as tenure and promotion (Heckman & Moktan, 2020). The job market is highly centralized, beginning with departments ranking their own students and culminating in coordinated interviews at the field’s most important annual conference (the AEA annual meeting, Fourcade et al., 2015).

These features of economics as a field mean that it differs in theoretically meaningful ways from the life sciences. Similar to economics, the early career in the life sciences is extremely competitive, as junior life scientists jockey to position themselves for group leader positions (Fochler et al., 2016). Yet differences in how research is organized between the fields lead to very different competitive dynamics. In the laboratory-based life sciences, there is much competition with local colleagues, for example, to work on the most promising projects and publications (Fochler et al., 2016) and to publish as first author (Müller, 2012). This contrasts with economics, where scholars usually work individually or on small teams, often in different fields from many of their local peers. While junior scholars in both the life sciences and economics are primarily concerned with publishing, differences in journal and incentive structures produce different dynamics. The pursuit of impact factor strongly shapes publication strategies in the life sciences, with PhDs sometimes needing a certain number of “impact factors” to graduate (Rushforth & de Rijcke, 2015) and research groups using “impact per time” as a guiding principle in deciding how far to develop papers (Müller & de Rijcke, 2017). These dynamics are very different from those in economics, where junior scholars must publish a small number of papers in the most prestigious journals, each of which may take years to complete. Beyond these differences, the lab-based life sciences are generally more resource-intensive than economics, which may make them more susceptible to pressures relating to funding and assessment. Such systematic differences in the organization of fields create very different contexts for the development of academic careers.

Cultural repertoires, institutional demands, and essential tensions in research

We introduce a conceptual approach to the study of academic careers that focuses on how actors navigate tensions created by competing institutional demands by skillfully drawing on their cultural repertoires. This approach allows us to attend to how traditional

conceptions of research interact with those facilitated by increasingly competitive career structures in the semantic space occupied by early career researchers—and the implications for research.

In her culture-in-action framework, Swidler (1986, 2001) argues that culture provides individuals with sets of discourses, narratives, skills, and dispositions and that from these repertoires, actors construct strategies of action through everyday life. This perspective emphasizes the means provided by culture rather than ends and thereby focuses on how actors use cultural repertoires to deal with challenges they face. Swidler argues that actors select tools and construct strategies based on demands created by social institutions. Because meanings are understood here as tools rather than underlying motivations, actors are able to draw freely from their repertoires. In a now classic study, Swidler (2001) explores how actors navigate competing demands embedded within the institution of modern marriage, which requires that individuals (a) form uniquely passionate bonds that (b) will last a lifetime. Individuals are supported in their pursuit of these two demands by two discourses of love—love as passion/romance and love as effort/sacrifice. These discourses can seem contradictory, but they exist side-by-side because they help individuals deal with distinct institutional demands. Importantly, individuals can and do make use of cultural tools even when they are not deeply felt or internalized, as when Swidler's respondents rejected the idea of romantic love but nevertheless drew on its logic in selecting a partner. So long as they work to fulfill institutional demands, individuals are generally happy drawing from cultural materials that may seem contradictory to observers.

Successfully navigating the early academic career requires attending to multiple demands including intellectual development, gaining reputation in the field, and securing good working conditions, which align to varying degrees depending on field and other contexts (Laudel & Gläser, 2008). A key institutional challenge junior scholars must contend with is publishing well enough to be awarded tenure, while still pursuing work that feels intrinsically rewarding. Hackett (2005) has argued that the need to approach research as a process of both discovering and delivering measurable output is an “essential tension” of science. Yet the relationship between *discovery* and *delivery* likely takes a special form in economics, given the need to publish in a restricted set of hyper-competitive journals for tenure and anticipate the desires of editors and potential reviewers to do so (Heckman & Moktan, 2020). Thus, we examine the degree of tension between these ways of approaching research in economics and how junior scholars navigate them. Applying a culture-in-action framework, we argue that just as individuals navigate the institution of modern marriage and its sometimes competing demands by drawing on co-existing notions of love, junior researchers navigate the academic career and its sometimes competing demands by skillfully drawing upon co-existing discourses of research.

We view our approach as compatible with and complementary to more explicitly critical approaches to academic careers, in that we have a different focus and proceed with a different set of assumptions. We situate our work within the emergent empirical literature reviewed above, which looks not at, e.g., identities (Archer, 2008), motivations (Hakala, 2009), or compliance (Teelken, 2012), but rather at the implications of career pressures for research itself. We are less interested in how researchers understand or feel about their work than in how they actually go about doing what is expected of them. Nevertheless, we understand that how one goes about their work is connected to issues of self and identity and therefore also analyze how respondents relate research to their sense of self. Importantly, we do not assume a priori that researchers experience “disconnect” between scholarly identities and demands of employers (Billot, 2010). As junior scholars have only experienced the present academic climate (Archer, 2008), we see this relationship as an

empirical question. Thus, we instead adopt the stance that researchers' orientations are primarily geared toward accomplishing the things they are supposed to accomplish. That is, we approach cultural practice as though it were organized from "the outside in" (Swidler, 2001, p. 111)—in response to everyday institutional demands. Indeed, we anticipate that the extent of disconnect will vary depending upon factors such as incentive structures and organizational features of fields.

Data and method

The present study is part of a larger project on research quality notions across three scholarly fields in Northern Europe. As part of this project, we conducted 41 interviews with economists in high-ranking economics departments in three Scandinavian countries. Each department is among the highest ranked in the respective country and thus internationalized in terms of publication, collaboration, and recruitment. While policy contexts may differ somewhat between the countries, they share much in common as well-developed Scandinavian science systems. As such, country differences are not the focus of the study.

We interviewed researchers across the career spectrum ranging from departmental leadership to PhD fellows. While all of these interviews have informed our interpretations, the analysis in this paper is primarily based on interviews with 15 pre-tenure economists (employed full-time post-PhD but yet to receive tenure),¹ roughly evenly distributed between the three departments. Their fields of research spanned a wide range of topics, such as macroeconomics, microeconomics, development, environment, labor markets, and political economy.

Interviews were semi-structured, covering the formulation and development of research projects, as well as perceptions of research quality notions in the local unit and the broader research field. We sought interviewees' accounts of how their research developed and their reflections about their choices and career concerns. Drawing from Gilbert and Mulkay (1984), our approach to the interviews took seriously that how scientists talk varies situationally. This includes "empiricist" language in formal contexts such as written papers, but also "contingent" language, which acknowledges the role of "personal or social circumstances" (Gilbert & Mulkay, 1984, p. 57) in science and is used in less formal contexts. Our interviews were designed to provide different contexts for interviewees to reflect on their work. First, our interview guide evoked the context of developing a new research idea by asking respondents to describe their most important current project and how it developed. Later in the interview, we evoked a different albeit related challenge by asking more specifically about career concerns. We asked, for example, *How is your research evaluated and rewarded in your department? What does it take to get tenure? Are particular institutions especially important for setting standards or defining what is valuable in your field?* Such questions were followed by probes about implications for respondents' research.

All interviews were recorded and transcribed. Facilitated by NVIVO, coding proceeded by moving iteratively between patterns in the data and the research literature. When first approaching the data, we expected to code primarily instances where respondents reported adjusting their research due to career demands. This coding was productive, as we identified various effects. Nevertheless, other patterns emerged via a careful reading of the transcripts. Most importantly, we noticed that the vast majority of respondents first discussed

¹ One participant responded to our questions via email due to pandemic-related time restrictions.

their research practice not in terms of productivity or career advancement, but in terms of the research itself. We coded these instances and returned to the literature to help us make sense of them. Drawing from the literature reviewed above (Hackett, 2005), we settled on the terms discovery-talk and delivery-talk (Felt, 2017; Murphy, 2014). We recognized *discovery-talk* when respondents emphasized developing research projects for the purpose of building new knowledge that could contribute to the academic literature and/or benefit society. We recognized *delivery-talk* when respondents discussed how they made research decisions to facilitate career advancement, typically meeting publication requirements for tenure. In the “Findings” section, we describe the interview contexts in which these discourses of research emerged. We further analyzed how respondents related career success standards to their self-concepts, paying particular attention to whether they view evaluative criteria as externally imposed or accepted them as measures of scholarly worth.

Findings

Continuing resonance of discovery-talk

Our interviews opened by asking respondents to describe their most important research projects and how they got started. Typically, in constructing these narratives, our respondents used discovery-talk and emphasized intellectual (and sometimes social) motivations for their projects. We consider this rather straightforward observation an important finding in light of concerns about the encroachment of delivery logic into academic life (Murphy, 2014). We find that discovery-talk sits alongside delivery-talk as they are both useful in meeting the demands of an academic career. Academics in high-status departments, such as our respondents, feel the need not only to produce but to make lasting contributions. Thinking of research as discovery facilitates that.

Respondents pointed to concerns with both academic and societal discovery when describing the development of their research projects, although the relative weight of these things varied. Some respondents emphasized a traditional academic motivation of advancing knowledge in the field, such as one researcher who was attempting to revive a dormant subfield:

I’m trying to bridge the gap between the theory of [concept] ... and applications. The main issue is that [subfield] has been neglected in the last 30 years. It is also considered a closed field and some people claim that it died but there is still a lot to be done. Actually, those that study more policy and these things they don’t anymore have the same competence because these things are not studied anymore in PhD programs. Which makes it interesting.²

This respondent, while concerned with policy applications, narrated her/his research as being primarily driven by filling gaps in the literature.

Similarly, some respondents emphasized that new projects emerge in the course of carrying out other projects. Some even found it difficult to think about where their interests came from in the first place:

² Details redacted at the respondent’s request to preserve anonymity.

I couldn't even, I mean, how it got started, I actually got started on this whole agenda during my PhD, about three years ago or so. I mean, the current projects that I am working on are just developed out of previous projects. Basically, you know, finishing up one project and sort of along the way you have the research idea for the next one and you continue collaborating with the same co-authors, yeah, basically.

This researcher narrates her/his research practice as being very much driven by curiosities that emerge in the course of doing research and thus driven by a very traditional research-as-discovery logic.

Other respondents described project selection using discovery-talk but emphasized how their discoveries could benefit society, including contributions to policy debate, programming, and technology. One researcher explained:

What I have been working on mostly in recent years is trying to understand what can help workers in developing countries achieve better labor market outcomes, which essentially amounts to helping them search for jobs more effectively.... We have been trying different interventions to see if we can help young job seekers get better jobs. And that is what has led to, I guess, probably the most important publication I have been producing for the last few years which I guess makes it the most important research topic.

Certainly this respondent is also interested in her/his research for the sake of career advancement, as s/he selected this as the most important project due to where it was published; nevertheless, s/he turns primarily to discovery-talk to describe the development of her/his research.

While discussing project selection, other respondents emphasized contributing to important policy debates as the primary impetus for their work. One researcher explained the development of her/his most important project this way:

It was initiated because me and my co-author were both interested in the effects of [country's] environmental policies in the European permit market... We went to a couple of breakfast seminars to try to understand basically the arguments of some people that we didn't agree with. We got down to the center of the argument, we realized that they do not care whether they are right or not basically. We started doing research and it ended up being this paper.

So while our respondents emphasized various things in describing how they chose their projects, most centered discovery for the sake of knowledge and/or society rather than career-related reasons.

Delivery-talk, career pressures, and implications for research

While our respondents continue to draw on traditional academic concerns in identifying projects and developing research trajectories, they supplemented conceptions of discovery-talk with delivery-talk when discussing career demands. This often became apparent in the interviews after respondents had first described their research primarily using the language of discovery-talk, when we were discussing publication practices, tenure requirements, and influential institutions in the field of economics. Importantly, career advancement at the highly regarded departments in our sample involved publishing in select journals that have become increasingly competitive in recent decades (Heckman & Moktan, 2020). From 1980 to 2013, Card and DellaVigna (2013) report the acceptance

rate for the top journals in economics fell from 15 to 6%. Our respondents made clear that this was the biggest institutional barrier they faced to tenure. Yet, the high level of uncertainty caused by this level of competition means that there is no blueprint for publishing in the top journals. Thus, our respondents displayed marked variation in how they applied delivery-talk to their work. Implications range from general research approaches to methodological choices.

We begin with a particularly illustrative example of a researcher who shared with us a spreadsheet by which s/he prioritizes projects based on a set of ten factors, including the following: the state of the project; whether it fits well into an established research agenda; where it could potentially be published; whether it involves a junior coauthor that could benefit; how passionate s/he is about the project; whether the project has a “clean identification strategy” that others would find convincing for “causal estimation”; whether the paper has a “wow” factor; level of uncertainty in the project; and whether there is a barrier that would prevent progress or if it is simply a matter of time. The researcher applies a formula to this set of variables to calculate a “priority level” score. S/he clarified in a follow-up email that s/he uses the spreadsheet in the following three ways:

- 1) When I get excited about something and find myself working on it, I use this to remind myself that I should be working on other stuff instead.
- 2) I try to make sure that at any given time, I am actively working on at least [one project in each of my research areas] and at least one project with clean identification.
- 3) Sometimes there’s something I really want to work on more than something else... Sometimes, I mess with the formula just to see what I would have to care about/prioritize in order to justify that decision. So for instance, the weight I would have to apply to “Passion” instead of “Upside” (where it might publish) to justify picking [one project] over [another] is just insane.

With this respondent, we can see rather explicitly how career considerations influence her/his research. And indeed, per the version of the spreadsheet s/he shared with us, highly prioritized projects were often not associated with passionate interest.

While no other respondent shared with us such a systematic approach to selecting projects, they did share concrete ways of adapting their research to increase their chances of career success. These concerned the types of research questions they pursued, the methods they used, and even the number of projects they worked on.

Several respondents described how needing to publish in top journals for tenure influenced their approach to research. One researcher, who worked on topics that are often pursued in interdisciplinary ways, reported that although s/he had done that in the past, s/he was no longer likely to do so:

I have occasionally discussed doing more interdisciplinary work but that makes it very hard to get into these types of journals because they have a very clear econ structure and econ rules. So, I think any more interdisciplinary work is not going to be easy to, it just makes it harder to publish there.

The inability to publish interdisciplinary approaches in journals that mattered for career advancement kept this researcher from pursuing them. Another researcher described her/his inclination toward theoretical work and detailed a question that s/he considered especially important but could not pursue pre-tenure because it would be difficult to publish in the highest-ranking journals.

Another researcher described how s/he had to adapt research because no journals in her/his subfield were considered top field journals by her/his unit. This meant that to qualify for tenure, s/he had to publish “in general economic journals, basically, or top field journals,” and avoid “go[ing] into projects that are very far away from the main economic fields.” Thus, the journals this respondent’s unit required for tenure directly shaped the types of questions s/he was able to pursue.

Another respondent reported that the need to publish in highly ranked international journals made it difficult to publish on regionally important topics:

There are topics that one may as an academic judge as being important and important from a regional perspective because we don’t have an answer to that in [Scandinavian country], but if one is aiming for international publications one may avoid those questions.

S/he went on to explain that the quality of data available in the country can be advantageous when trying to publish in international journals, but that making the paper more generally interesting often means “not working on topics that are core to understanding [Scandinavian country’s] society....but which in the international scope are very relevant.”

Methodologically, in addition to the importance of compelling identification strategies, as mentioned above, another respondent reported that her/his methodological choices were influenced by the preferences of high-status journals:

So, I think that field experiments and the type of work I do is appreciated in these journals....Lab experiments less. So, I have also been moving a bit away from that. I think that that is getting harder and harder to publish... Because you need a larger sample size and that is often restricted by lab work and also the external facilities.

In this sense, her/his perceptions of the methodological approaches most likely to be published in top journals (and thus most likely to advance one’s career) directly shaped her/his research choices. This decision also made her/him more likely to collaborate due to the administrative work associated with field experiments.

A number of respondents described the need to strategically balance the number and the quality of the projects they pursue to maximize their likelihood of receiving tenure. This was especially true in two of the three departments in which respondents reported tenure requirements that took the quantity of publications into consideration. One respondent explained:

So, I mean, I guess you can very simplified say that there are two strategies. You can either try to get into top five and that takes a lot of work and is a gamble or you can try to pursue a strategy in which you target sort of lesser journals, but write more papers. And I think both are viable strategies, but you cannot do both.

Another described a similar tension between quality and quantity considerations:

Since there is also a quantity threshold that we need to pass in the promotions, I need to think about, okay, should I write more papers than I otherwise would in order to meet the quantity requirements. Actually, there is a trade-off between quantity and quality and so currently I’m thinking that to some extent I might have entered too many projects to meet the quantity requirements, while in the ideal case if I were to work without such concerns I might actually have worked on fewer projects and developed these further.

And so while our respondents typically turned first to discovery-talk when they described their research and its development, as they talked in more detail, they made very clear that career pressures necessitated that they also think of research as a product and adapt their work accordingly. It is certainly valid to understand this way of thinking about research as a product of the entrepreneurial university (Hakala, 2009). Yet, for our respondents, having access to this alternative way of thinking about research serves as a cultural resource that helps turn their intellectual curiosities into products upon which to build careers.

Career standards as reflections of self versus external evaluation criteria

Another important question is whether the research standards we have been discussing must be felt deeply in order to be efficacious or whether they can also matter when they are seen as externally imposed. According to Swidler's (Swidler, 1986, 2001) culture-in-action framework, meanings do not need to be deeply internalized in order to influence action. Instead, it is enough that the meanings help individuals respond to institutionally defined ends, such as publishing in certain journals to get tenure. In this section, we explore variation in how deeply our respondents felt the standards associated with discovery- and delivery-talk and implications for research.

Some respondents seemed to deeply internalize the research standards associated with career success in economics and saw the ability to meet expectations as a reflection of their selves. This way of relating to career pressures is well illustrated by the following researcher's reflection on her/his experiences since graduating:

So, a part of this is career concerns. Parts of it is like purely intrinsically motivated. I finished my PhD three years ago, almost three and a half years ago and like this feeling of I just don't have enough papers. Like what have I been doing for three and a half years? And so much of your identity is tied up in your job. That's fucking painful. And so like, you know this guy that I know ... he's more senior than me, he has been a very good mentor to me. He's at [a prestigious department] and he said like, 'hey I can mention your name to our seminar people and see whether there's interest in having you out,' which is super generous. [His department] is one of the best departments in the world and to tell him that I just haven't put anything together recently... That's so painful. I work so hard and ... just to sit here and have like fucking nothing to show for it just sucks. And so, having stuff actually land in journals, having projects go from like here's the idea and look how cool it is and we're getting the data together to like here is a paper that I can show you that has my name written somewhere on it. That's a very meaningful feeling.

This passage illustrates how academic career standards can be emotionally laden. S/he has internalized the standards associated with both discovery-talk (putting together clever projects that contribute to the field) and delivery-talk (by accepting that publication success reflects the ability to make significant contributions). Given her/his relationship to these standards, it should come as little surprise that this respondent reported a systematic approach to project selection.

An alternative way of relating one's self to academic career standards was demonstrated by respondents who seemed to think of them as external evaluation criteria

rather than measures of self-worth. While reflecting on the role of career pressures in shaping research, one respondent had the following to say:

It's kind of a difficult question. I think it shapes it in a lesser extent now than before because personally I have realized at some point that it takes a lot of energy.... it affects my research less now than it did before because at some point I realized that all my inspiration was kind of sucked out by thinking about what journal I would publish in, if this research is good enough, etc. At some point I just realize that if I'm going to do research I need to research the thing I think is important and find inspiration from doing and then we will see whether it is enough to publish in these journals.

While explaining why s/he interacts with stakeholders extensively despite the strong pressures to publish as a junior researcher, s/he reflected:

It's kind of going back to this weighing between the same kind of decision that I made regarding the journal and publication stuff. I must do what gives me inspiration and what I think is important. I don't spend too much time thinking about if that would cost me my job in the end or not. Then I would just have to work somewhere else and I would probably be fine.

This way of thinking about the relationship between research success and the self stands in contrast to the researcher discussed immediately above, who had come to see research success as a reflection of self-worth. Not internalizing these standards made a fallback plan feel acceptable. Nevertheless, this respondent reported actively adapting her/his research in response to them. In addition to tailoring questions to increase the likelihood of top-five publication, s/he reported going to great lengths to try and get papers into journals that would help with tenure:

I think it's clear that in economics in general and for me in specific putting a lot of time and effort into writing good papers, presenting them 100 times to 100 different people, getting feedback very many places before I send in my paper to the journals, it is definitely something I do in order to increase the quality. And I need to publish only, in this seven-years tenure track position, I need to publish between three and five papers in the right journals. It definitely pushes towards quality to the extent that it's the same as good journals. For me, the only thing I can do to get my papers in to good journals is to get better quality.

And so while these two researchers relate to their research careers in very different ways, one internalizing the standards of discovery- and delivery-talk and the other thinking of them as standards that come with the position, both of them report adapting their research. As Swidler anticipates, failing to internalize the standards associated with discovery- and delivery-talk does not mean that one's research is not influenced by them.

Discussion and conclusion

In this paper, we set out to contribute to a growing literature concerning the implications of increasing competition and uncertainty in the early academic career. Much of the existing work we draw upon has shown how career pressures influence the work of junior scholars

in the laboratory-based life sciences. As a whole, these studies tend to find that productivity concerns drive research decisions (Fochler et al., 2016; Müller & de Rijcke, 2017), reduce epistemic flexibility (Fochler & Sigl, 2018), and hinder collaboration (Müller, 2012). Turning our analytical lens to the very different context of economics, we found that junior economists continue to be driven by traditional academic concerns but that they nevertheless adapt their research to meet publication requirements in a wide variety of ways. These include adopting fully systematic approaches to project selection, shying away from interdisciplinary work, avoiding questions that are too specific or could be viewed as only regionally important, and using only those methodologies judged as highly publishable in top journals.

Because early career researchers face multiple pressures that are sometimes in tension and sometimes aligned, we adopted a conceptual approach designed to understand how actors negotiate the multiple demands placed on them by social institutions (Swidler, 1986, 2001). Such an approach helps us to make sense of patterns that could be interpreted as incoherence (e.g., Hakala, 2009), as researchers non-problematically alternate between logics rooted in traditional conceptions of science and those that have emerged with current career demands. Our findings suggest junior economists make use of two co-existing notions of research: research as discovery, rooted in traditional conceptions of academic work, and research as delivery, rooted in managerial forms that have come to define the twenty-first century university. Our respondents discussed research as a process of discovery in narrating how they selected research projects and as a process of delivery as they discussed the challenge of meeting tenure requirements. Respondents reported adapting their research in a wide variety of ways; yet, because of the hyper-competitive nature of the journals our respondents need to publish in for tenure, there was no single blueprint by which to strategize. As such, it is important to understand the strategies we document as the specific adaptations of our respondents, which may or may not be generalizable to the broader field of economics. Yet overall, the data indicate clear implications for the research of young economists.

Moreover, the findings underscore that conceptions of research as discovery versus delivery are more aptly described as co-existing rather than (necessarily) competing. Individual respondents draw freely from discovery- and delivery-talk as they deal with different pressures. Echoing Swidler's work on the institution of modern marriage, we argue that having multiple conceptions of research available in their cultural repertoires helps early career economists in top departments navigate two related but distinct demands: producing top-notch research that will leave a mark on the field and publishing regularly enough to get tenure. Furthermore, consistent with culture-in-action theory (Swidler, 1986, 2001), we found that all respondents reported adapting their research in response to career pressures, even those who actively distanced their sense of self from scholarly success or critiqued the tenure system.

Overall, our findings suggest complex implications of career pressures for the research practices of junior economists. Similar to research on the life sciences, we find that strategic considerations enter into most research-related decisions, from the projects our respondents choose to spend time on each day to the methods they employ. Nevertheless, in this field characterized by individual and small-team research, a hyper-competitive and hierarchical journal structure, and relatively low levels of resource need, we find that respondents rely heavily on discovery-talk when explaining how new lines of research are developed. In economics, delivery concerns seem not to have supplanted discovery concerns among tenure-track researchers. Instead, they co-exist and partly overlap. One contributing factor to the resilience of discovery-talk may have to

do with the pivotal role the top-five journals play in advancing economists' careers. It may be that getting into these journals is so challenging (Heckman & Moktan, 2020) that junior scholars in high-status departments perceive they need to be fully dedicated to a discovery logic and make substantial contributions to have any chance of success. In this context, delivery is understood primarily as publishing in highly competitive journals rather than regular, lower-stakes production, which seems to reduce the tension between scientific and career advancement discussed in the literature. Indeed, the benefits of rigorous competition were invoked by some of the respondents in our broader study to justify the outsized role of the top five journals in the field. In other words, delivery and discovery overlap in the sense that the top journals, and the top five in particular, represent both delivery and discovery to our respondents. Publishing there is an indication of important advancement of knowledge (discovery) and what you need to do to boost your career (delivery). Notably, the standards of these journals are reported to impact the young economists' choices of, e.g., research topics and methods and may thereby help preserve economics as a relatively coherent and homogenous field.

To better understand the conditions under which delivery and discovery compete and/or overlap, it may be interesting to compare local evaluative contexts, for example, between units with different tenure requirements. Evidence from the present study suggests promotion criteria may create varying degrees of tension between discovery and delivery logics, but more work needs to be done. Beyond this, we see a number of other directions for future research. Especially interesting within economics would be studies of the effects of career pressures at other stages of the academic career. For example, economics graduate programs are highly competitive, with departments internally ranking their candidates before the job market opens each year (Fourcade et al., 2015). What does this mean for the research conducted by PhD fellows? How do they adapt their work to climb to the top of these rankings? At mid-career, once tenure is earned, how do local promotion policies influence research practice? We further think the literature would benefit from methodological diversity. Our use of retrospective interview data tells us much about the contexts in which researchers draw upon co-existing conceptions of research, but other methods such as diary-based or ethnographic studies could provide finer-grained observations of how these things play out in the everyday working lives of researchers. Finally, studies that continue to broaden the disciplinary coverage of the literature are needed, e.g., social science fields with less consensus around a mainstream approach and perhaps more diverse paths to career success. More generally, our study demonstrates the utility of analyzing how co-existing notions of research can help academics navigate the early career, and how this impacts their research. We hope future research will continue to examine the contours of such cultural practices and their implications in other fields and career contexts.

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Declarations

Competing interests The authors declare no competing interests.

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